e-MSB 2020

Symposium program
Poster list

36th International Symposium on
Microscale Separations and Bioanalysis

27th–30th September 2020
Virtual edition

Agilent

Trusted Answers

Analytical Workflows from Discovery to Quality Control

Meet Agilent at the Virtual 36th International Symposium on Microscale Separations and Bioanalysis

Discovering and developing biopharmaceuticals is a costly and difficult process. That requires you to stay abreast of advances in knowledge and improvements in technology while constantly navigating a maze of business, and scientific, challenges.

Make sure to come to our booth to discover our solutions that help you streamline your analysis and speed your new biologic candidates through the approval process.

Don't Miss Out: Agilent eSeminar

28

Monday
28 September 2020
15:00-15:45

Contribution of capillary electrophoresis in the context of drug development

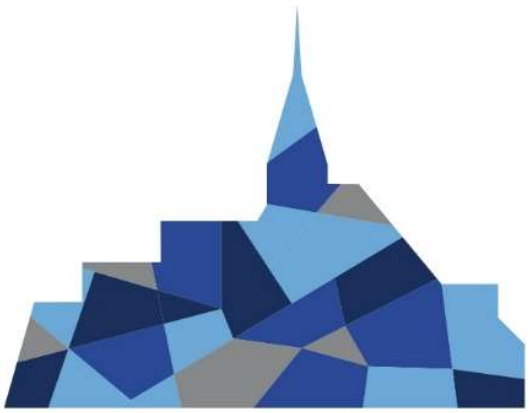
Marianne Fillet
Head Professor at University of Liege
Laboratory of the analysis of Medicines

In order to develop innovative and efficient therapies, there is a great need for accurate and cost-effective tools for high-throughput drug library screening. Capillary electrophoresis is widely recognized as a versatile and particularly efficient microscale separation technique. However, its use in the early stages of drug discovery is rather scarce most probably due to the prevalence of HPLC in the pharmaceutical industry and to the limited extent of CE specialists. In this context we wanted to emphasize the utility of CE in the field of drug discovery by presenting the latest approaches that CE can offer in different drug discovery frames, from affinity assays to activity assays and metabolism studies. It is important to underline that these developments rest on two important CE abilities. The first one is the capacity to measure non-covalent interactions in solution. Secondly, CE has the ability to use a portion of its capillary as a micro-reactor while the other one can be used in the separation of the reactions components.

Characterization and quantitative analysis of active molecules and drugs at each step of their development is also a critical issue, especially for the latest complex and innovative therapies, such as biopharmaceuticals including proteins and oligonucleotides and cell therapies including CAR T cells. We believe that CE has also an important role to play in those application fields thanks to its high ability, for example, to separate closely related compounds (ie protein variants, oligonucleotide n-1 and n+1 impurities...) and to analyze aggregates in native conditions that remains a big analytical challenge. For those kinds of complex QC, CE orthogonality compared to LC brings a real additional value. Furthermore recent technological improvements in interface design promise a great future for CE-MS coupling.

DE.0325694444

Content Program Book e-MSB 2020



We wish to thank you our sponsors for their generous support.

Platinum sponsors

Agilent Trusted Answers

SCIEX

VICI

Gold sponsors

CHROMATOTEC® GROUP

sebia

SHIMADZU Excellence in Science

Silver sponsors

adelis nicometrics

FLUIGENT SMART MICROFLUIDICS

GENGAZ générateurs de gaz pur

Bronze sponsors

ELVEFLOW PLUG & PLAY MICROFLUIDICS

MicroGEM

MS NOISE

PharmaFluidics

ROYAL SOCIETY OF CHEMISTRY

Waters THE SCIENCE OF WHAT'S POSSIBLE.™

Institutional sponsors

af sep

CCCTA

IUF institut universitaire de France

MNF GDR MICRO NANO FLUIDIQUE

université PARIS-SACLAY

Press sponsors

Analyst

Analytical Methods

Lab on a Chip

LC GC europe

ELECTROPHORESIS

WILEY

La gazette du LABORATOIRE

LABORATOIRE

SEPARATION SCIENCE

Welcome from the Chairs of e-MSB 2020

Dear Colleagues,

Welcome to the first MSB virtual edition!

With this virtual edition of MSB 2020, we present a complete, attractive, and dynamic program, with 80 oral presentations (including plenaries, award lectures and keynote presentations) and more than 85 posters.

The MSB philosophy, which guaranties both scope and quality, is met with this new-to-us format. We offer multiple opportunities for information and social interactions that we expect to be restorative. Even though virtual meetings are different than that offered by in-person meetings, the program we have concocted ensures a stimulating environment for this symposium.

The following innovative features are proposed:

- Poster presentations in a video format, live discussions with the contributors,
- Three remote short-courses on Sunday 27th of September, taught by our best scientific experts,
- A day-after-day presentation of the workshop “how to build a CE” by our experts in engineering,
- Web seminars and tutorial from our sponsors,
- Many awards to acknowledge best posters and oral presentations, which will be given during an online award and prizes ceremony,
- A participant challenge to stimulate interactions between peers, with a special prize for the winners!
- A Smile & Cheers special meeting on Sunday.

Organizing a virtual edition of an international conference raises challenges related to the different time zones. Be reassured, we organized the sessions based on a time rotation to fit with the working hours worldwide.

We would like to warmly THANK YOU, our loyal MSB community, for having immensely honored your commitment to attend or participate as a contributor to the virtual edition of MSB 2020.

We look forward to meeting you “maskless” at this very first MSB virtual edition, starting Sunday 27th of September 2020 at 10 am (Paris, CEST, GMT+2).

Prof. Serge Rudaz
Université de Genève
Switzerland

Prof. Myriam Taverna
Université Paris-Saclay
France

THE VICI TRUE NANO™ U/HPLC

AN ENTIRE CHROMATOGRAPHIC SYSTEM IN ONE SMALL FOOTPRINT

With True Nano™ 360µm fittings, flow rates as low as 10 nL/min, and pressures up to 1500 bar (22000 psi), this system provides split-free injections as close to the detector as possible.

Short transfer lines with ultra small diameters throughout the system reduce dead volume which speeds up analyses and significantly reduces band broadening.

- Allows use of high efficiency columns, packed with microparticles for an order of magnitude increase in theoretical plates and plate height.
- Pump options include single and multi pump configurations, isocratic or gradient, with integrated injector and selector valves.
- Each pump head features an integral pressure transducer to monitor and adjust pressure for each solvent.

Call or email for more info on the complete system. Components also offered separately to build your own system.

www.vici.com +41 41 925-6200 info@vici.ch

TRUE NANO™

Symposium History

Originally established as the International Symposium on High Performance Capillary Electrophoresis (HPCE), the first event was held April 10 – 12, 1989 at the Park Plaza Hotel in Boston, MA. The meeting was founded by Professor Barry Karger from Northeastern University, and sponsored by the Barnett Institute of Northeastern University, the Bay Area Chromatography Committee (BACC, predecessor of California Separation Science Society or CASSS), and chromatography instrument manufacturers. This first meeting featured oral and poster presentations that discussed the principles of separation in capillaries under high electrical fields; instrumentation development; and applications of HPCE, particularly in biotechnology. A summary of this meeting was published in Analytical Chemistry (Anal. Chem., 1989, 61, 413A–415A).

This symposium was introduced at the moment when capillary electrophoresis branched off from the HPLC community, giving the technology the necessary focus at a time when capillary electrophoresis instrumentation was first being commercialized by Applied Biosystems, Beckman (later Beckman-Coulter), and Hewlett-Packard (later Agilent Technologies). The symposium series was driven by the Scientific Advisory Board (SAB) under its diligent chairman Barry Karger until 2000, followed by Frantisek Svec. Leading scientists in the CE field were James Jorgenson, Frans Everaerts, Stellan Hjertén, Shigeru Terabe, Ed Yeung, and Heinz Engelhardt. The series was organized world-wide by Prof. Karger untill 2000 and later by CASSS in the USA. In Europe and Asia, the meetings were organized by separate bodies.

The SAB changed the name of these meetings at HPCE 2004 in Salzburg to MicroScale Bioseparations (MSB), since the attendees' interests expanded into the related techniques of micro- and nano-HPLC, microfluidic separations, and lab-on-a-chip applications while the fascination with pure CE slowly faded. The stylized logo was created at the same time, and captured the acronym MSB in a DNA helix motif given the prominent role that electrical driven microseparations have played in DNA sequencing and early completion of the Human Genome Project.

At MSB 2012 in Geneva, Switzerland, Beckman-Coulter established the prestigious Arnold O. Beckman Medal and Award for Outstanding Scientific Achievements in The Field of Electrodriven Separations Techniques, which has become an essential element of the series
Also, after the MSB 2012 symposium the SAB changed. Not just by including new members but especially by introducing new key concepts by which future meetings of the series will be organized (see Intent and Mission, MSB Essentials and MSB Core Format pages).The board also changed its name to "Strategic Program Committee" (SPC).
In consequence and in order to further broaden the scope of the series to a wider range of scientists, the SPC approved the acronym of MSB to refer to: "Microscale Separations and Bioanalysis"

In 2016, that name was used the first time as the official conference name for MSB 2016 in Niagara-on-the-Lake, Canada, April 3-7, 2016.

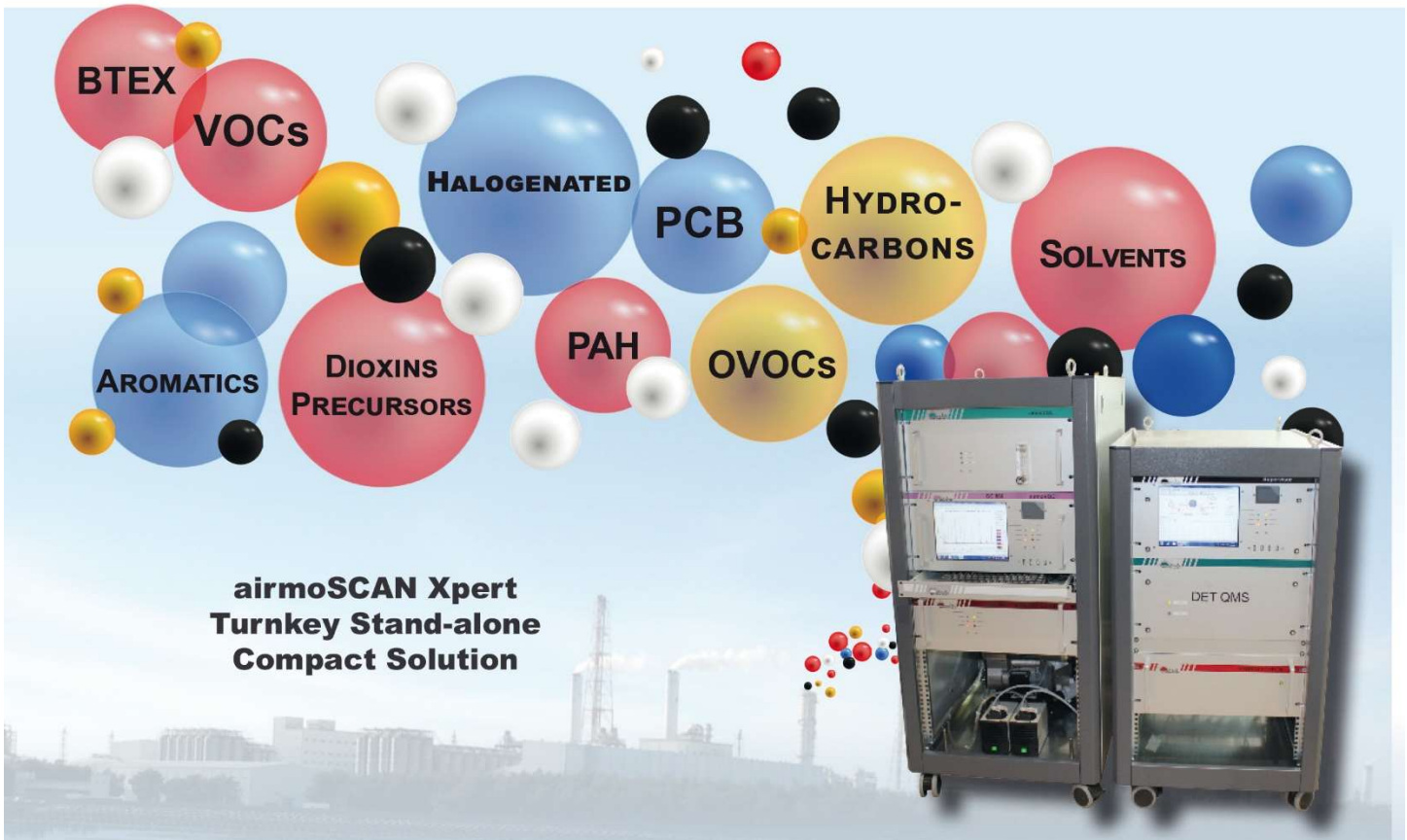
CHROMATOTEC® GROUP

Online Gas Analyzer Experts

Chromatotec® celebrates 1975 40 YEARS OF EXPERTISE 2015 In on-line instrumentation

VOCs ON-LINE MONITORING BY AUTO GC-MS

TRANSPORTABLE STANDALONE COMPACT SYSTEM



airmoSCAN Xpert
Turnkey Stand-alone
Compact Solution

Industrial or urban atmospheres

- Automatic GC-FID or GC-MS-FID analyzer for on-line monitoring
- Speciation of hydrocarbons, VOCs, ozone precursors
- Automatic identification of unknown compounds by GC-MS
- Cylinder free
- Sensitivity down to ppt

www.chromatotec.com - info@chromatotec.com

Previous MSB Meetings

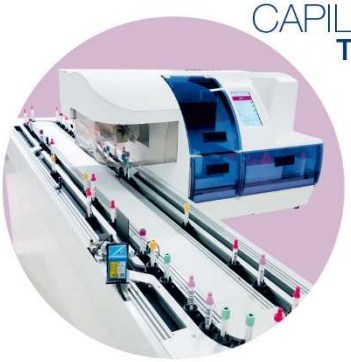
Year	Location	Chairperson(s)
2019	Corvallis, OR, USA	Vince Remcho, Karen Waldron
2018	Rio de Janeiro, BR	Marina Tavares, Emmanuel Carillho
2017	Noordwijkerhout, NL	Govert Somsen, Rawi Ramautar
2016	Niagara-at-the-Lake, CAN	Philip Britz-McKibbin, Karen Waldron, Sergey Krylov
2015	Shanghai, PRC	Amy Guo
2014	Pécs, HUN	Ferenc Kilár, Attila Felinger, András Guttman
2013	Charlottesville, USA	Jeff D Chapman, James P Landers
2012	Geneva, CH	Franka Kalman, Gerard Rozing, Jean-Luc Veuthey
2012	Shanghai, PRC	Rong Zeng
2011	San Diego, USA	Annelise E. Barron
2010	Prague, CZ	Frantisek Foret
2009	Boston, USA	Jonathan V. Sweedler
2009	Dalian, PRC	Hanfa Zou
2008	Berlin, DE	Andreas Manz
2007	Vancouver, CA	Robert Kennedy
2006	Amsterdam, NL	Gerard Rozing
2005	New Orleans, USA	Michael Ramsey
2005	Kobe, JAP	Y. Baba, K. Otsuka
2004	Salzburg, AT	Wolfgang Lindner
2003	San Diego, USA	Aran Paulus, Andras Guttman
2002	Stockholm, SWE	Douglas Westerlund
2001	Boston, USA	Barry L. Karger, William S. Hancock
2000	Saarbrücken, DE	Heinz Engelhardt
1999	Palm Springs, USA	Edward S. Yeung
1998	Orlando, USA	Barry L. Karger, S. Fanali
1997	Anaheim, USA	William S. Hancock
1997	Kyoto, JAP	Shigeru Terabe
1996	Orlando, USA	Barry L.Karger
1995	Würzburg, DE	Hans Engelhardt
1994	San Diego, USA	Shigeru Terabe
1993	Orlando, USA	Barry L. Karger
1992	Amsterdam, NL	Frans Everaerts
1991	San Diego, USA	James W. Jorgenson
1990	San Francisco, USA	Barry L. Karger
1989	Boston, USA	Barry L. Karger

CAPILLARYS 3
...beyond separation

Scalable lab automation to meet your needs

CAPILLARYS 3 OCTA / TERA

CAPILLARYS 3 TERA TLA



Optimized workflow and Productivity

Flexibility of solutions

Service & Support

Quality of results

Traceability and Security

Result interpretation software

CAPILLARYS 3 TERA MC

Multiparametric instruments with large range of tests*:

- Hb A1c venous blood & capillary blood
- Serum & Urine** Protein Electrophoresis
- Serum & Urine Immunotyping
- CDT/CDT$_{IFCC}$
- Hemoglobin electrophoresis on adult whole blood & newborn on dried blood spot**

** Check with your Sebia representative for test availability*
*** Under development*

C3-201810-ADS-EN - © sebia

sebia
www.sebia.com

Committees

Scientific Committee

- Philip Britz-McKibbin - McMaster University, Hamilton, Canada
- Hervé Cottet - University of Montpellier, Montpellier, France
- Stéphanie Descroix Centre de recherche de l'Institut Curie, Paris, France
- Lorena Diéguez - International Iberian Nanotechnology Laboratory, Braga, Portugal
- Marianne Fillet - University of Liege, Liege, Belgium
- Yannis François - University of Strasbourg, Strasbourg, France
- Ana M. García-Campaña - University of Granada, Granada, Spain
- Davy Guillarme - University of Geneva, Geneva, Switzerland
- Peter Hauser - University of Basel, Basel, Switzerland
- Hong Heng See - University of Technology Malaysia, Johor, Malaysia
- Alexander Ivanov - Northeastern University College of Science, Boston, USA
- Zhengjin Jiang - Jinan University, Ganghzou, China
- Christian Neusüß - Aalen University, Aalen, Germany
- Frédéric Robert - Sebia, Lisses, France
- Pham Hung Viet - Vietnam National University, Hanoi, Vietnam
- Vince Remcho- Oregon State University, Corvallis, USA
- Serge Rudaz - University of Geneva, Geneva, Switzerland
- Myriam Taverna - University of Paris-Saclay, Paris, France

Local Organizing Committee

- Víctor González-Ruiz - University of Geneva, Geneva, Switzerland
- Thierry Guermonprez - CEYZ, Nantes, France
- Thanh Duc Mai - University of Paris-Saclay, Paris, France
- Gerard Rozing - ROZING.COM Consulting, Karlsruhe, Germany
- Claire Smadja - University of Paris-Saclay, Paris, France
- Elena Tobolkina - University of Geneva, Geneva, Switzerland

SMSB board of directors:

- Michael Breadmore - University of Tasmania, Australia
- Philip Britz-McKibbin - McMaster University , Canada
- Isabelle Kohler (Secretary) - Vrije Universiteit Amsterdam, The Netherlands
- Jörg Kutter (Chair) - University of Copenhagen, Denmark
- Vince Remcho - Oregon State University, United States
- Govert Somsen - Vrije Universiteit Amsterdam, The Netherlands
- Myriam Taverna - Université Paris Saclay, France
- Karen Waldron (Treasurer) - University of Montreal, Canada
- Stephen Weber (Vice Chair) - University of Pittsburgh, United States

SCIEX

SCIEX Innovation Award 2020

The recipient of the SCIEX Innovation Award 2020 is

Prof. Dr. Detlev Belder

Institute of Analytical Chemistry
University of Leipzig (Germany)

Presentation title:
Ion mobility and mass spectrometry detection for chip-based separation devices

Detlev Belder is a full professor of analytical chemistry at Leipzig University. He earned his Ph.D. in chemistry in 1994 at the University of Marburg with experimental work done at the Max-Planck-Institut für Kohlenforschung in Mülheim an der Ruhr.

From 1995 - 2006, he headed the Department of Separation Science at the Max-Planck-Institut für Kohlenforschung.
In 2006 he was appointed as a professor of analytical chemistry at the University of Regensburg. In 2007 he accepted the offer as a chair of Analytical Chemistry at Leipzig University.

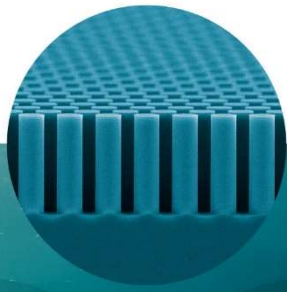
Belder's research is focused on lab-on-a-chip technology as an enabling science in chemistry. In the belder laboratories at the University of Leipzig, a broad field of research and application of lab-on-a-chip technology is carried out. The Belder Group is known for miniaturized separation techniques such as chip electrophoresis and chip HPLC. The Belder lab also works on detection techniques such as the coupling of microfluidic chips with mass spectrometry or ion mobility spectrometry, as well as on optical techniques such as fluorescence and Raman microscopy. A particular focus in recent years has been on integrated chip laboratories that combine chemical reactors and analysis units on one chip.

Professor Belder has been recognized with several awards, such as the Gerhard Hesse Prize (2015) and the Fresenius Prize (2019).

Website: https://analytik.chemie.uni-leipzig.de/start/ak-prof-belder/
Outstanding paper: 2D in seconds: coupling of chip-HPLC with ion mobility spectrometry.
Anal. Chem. 2019, 91: 7613-7620; first published May 13, 2019
https://pubs.acs.org/doi/10.1021/acs.analchem.9b00302

PharmaFluidics

The micro-Chip Chromatography Company



LOOK BEYOND THE SUPERFICIAL

Changing the ART of analytical chromatography with µPAC™.

These micro Pillar Array Columns feature a perfectly-ordered separation bed of free-standing pillars ensuring:

- excellent separation power
- unprecedented reproducibility
- unrivalled robustness

Why should you use µPAC™

Outperforming reproducibility
Due to the mask-based etching process

Increased sensitivity
Due to high degree of order

Unrivalled robustness
Due to the solid silicon backbone

Less column replacements
Due to the high number of injections

Less prone to clogging
Due to high column permeability

Excellent separation power
Due to the exceptional column length

Find the right product for your application

200 cm µPAC™
0.1 - 1.0 µL/min
For a deep coverage of very complex samples with long gradient times

50 cm µPAC™
0.1 - 2.0 µL/min
For faster high-throughput analyses while maintaining superior performance

µPAC™ capLC
1 - 15 µL/min
For routine analyses with increased robustness and high sensitivity

µPAC™ Trapping column
Up to 20 µL/min
Reduce the sample loading times for dilute samples

µPAC™-compatible EASY-Spray™ Emitter
Providing plug-and-play connectivity with Thermo Fisher Scientific EASY-Spray™ source-equipped mass spectrometers

Discover our products on **www.pharmafluidics.com** or contact us via **info@pharmafluidics.com**
Tel: **+32 9 241 56 57**

Short course 1

Facing the complexity of biopharmaceuticals characterisation

*by **Davy Guillarme**, University of Geneva, Geneva, Switzerland*
*& **Yannis François**, University of Strasbourg, Strasbourg, France*

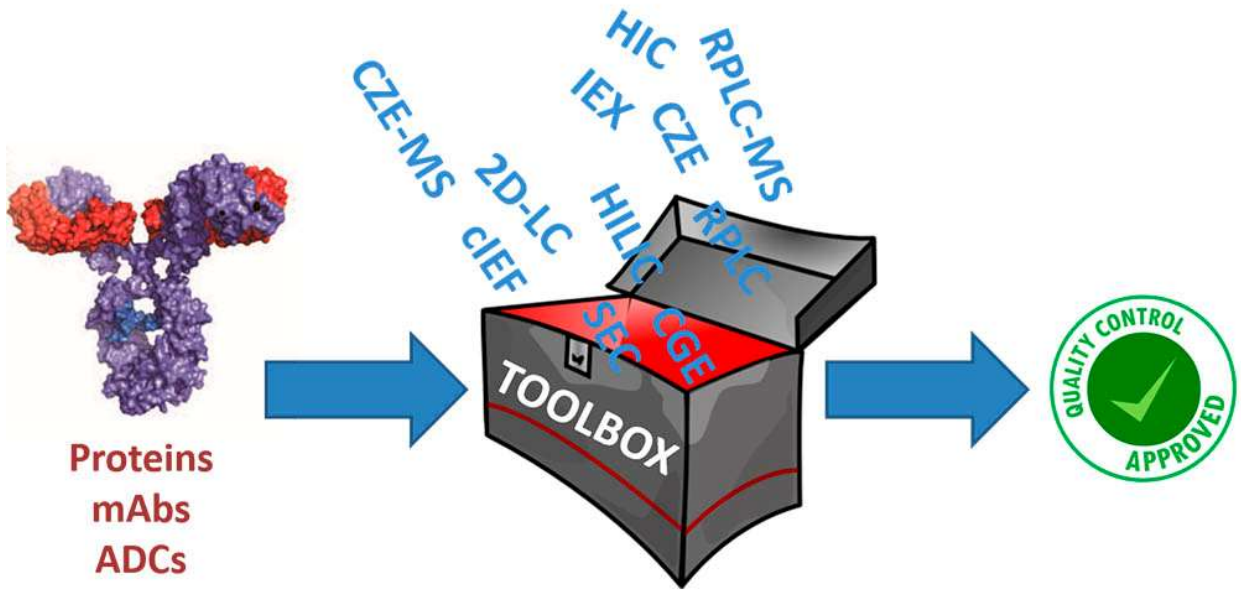
Protein biopharmaceuticals are macromolecules with a therapeutic effect, which are now more and more commonly used for the treatment of various diseases including cancer, diabetes, infection, inflammatory, and autoimmune disorders. However, protein biopharmaceuticals have a complexity far exceeding that of small molecule drugs.

The goal of this short course is to introduce the general concepts about therapeutic proteins and provide some useful information on the analytical platforms that have to be used for their characterization. Among them, liquid chromatography (i.e. ion exchange, size exclusion, hydrophobic interaction, hydrophilic interaction, and reversed phase liquid chromatography) as well as capillary electrophoresis (i.e. capillary zone electrophoresis, gel capillary electrophoresis, capillary isoelectic focusing), coupled or not with mass spectrometry will be largely covered.

Numerous applications to monoclonal antibodies (mAbs) and antibody-drug conjugates (ADCs) will be used to illustrate the advantages and limitations of these diverse analytical approaches.

This workshop will be suited for beginners in the field of protein biopharmaceuticals characterization, but with a good theoretical knowledge of liquid chromatography, capillary electrophoresis and their hyphenation to mass spectrometry. The workshop will also cover a number of advanced analytical approaches, which can also be of interest for more experienced users in proteins analysis.

Sunday, 27 September – 10.00 am



adelis

picometrics

ADELIS formely named Picometrics continues to offer its customers the largest range of high sensitive LED and Laser Induced Fluorescence detection technologies and develops innovative products for DNA size profiling.

Zetalif™ Detectors

Zetalif™ LED and ZetalifTM Laser detectors are ultra sensitive solutions for Liquid Chromatography and Capillary Electrophoresis systems with a large range of light sources, covering various applications fields.

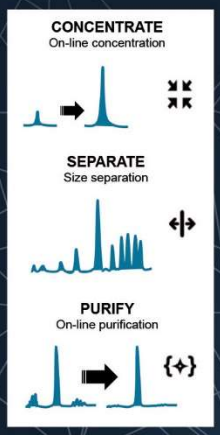
ZETALIF LASER

The highest sensitive detector with 13 lasers wavelengths from 266nm to 785nm

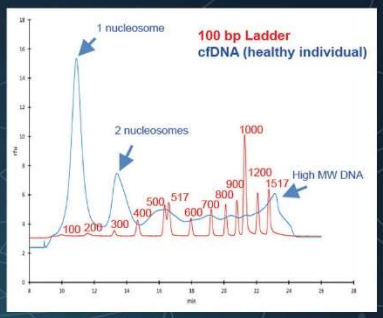
ZETALIF LED

The high sensitive and affordable detector with 5 wavelengths: 365nm, 450nm, 480nm, 530nm and 640nm

BIABooster Platform



The BIABooster solution based on µLAS technology enables to concentrate, separate and purify DNA fragments of interest. It provides unrivalled sensitivity and extended range of DNA size profiling.



CONTACT

Adelis Registered Office:
310 rue Louis Pasteur
34790 Grabels, France

Adelis Technical Laboratory:
478 rue de la Découverte, Miniparc Bât 1
31670 Labège, France

Tel: +33 5 31 61 50 90
info@adelis-tech.com
www.adelis-tech.com

Short course 2

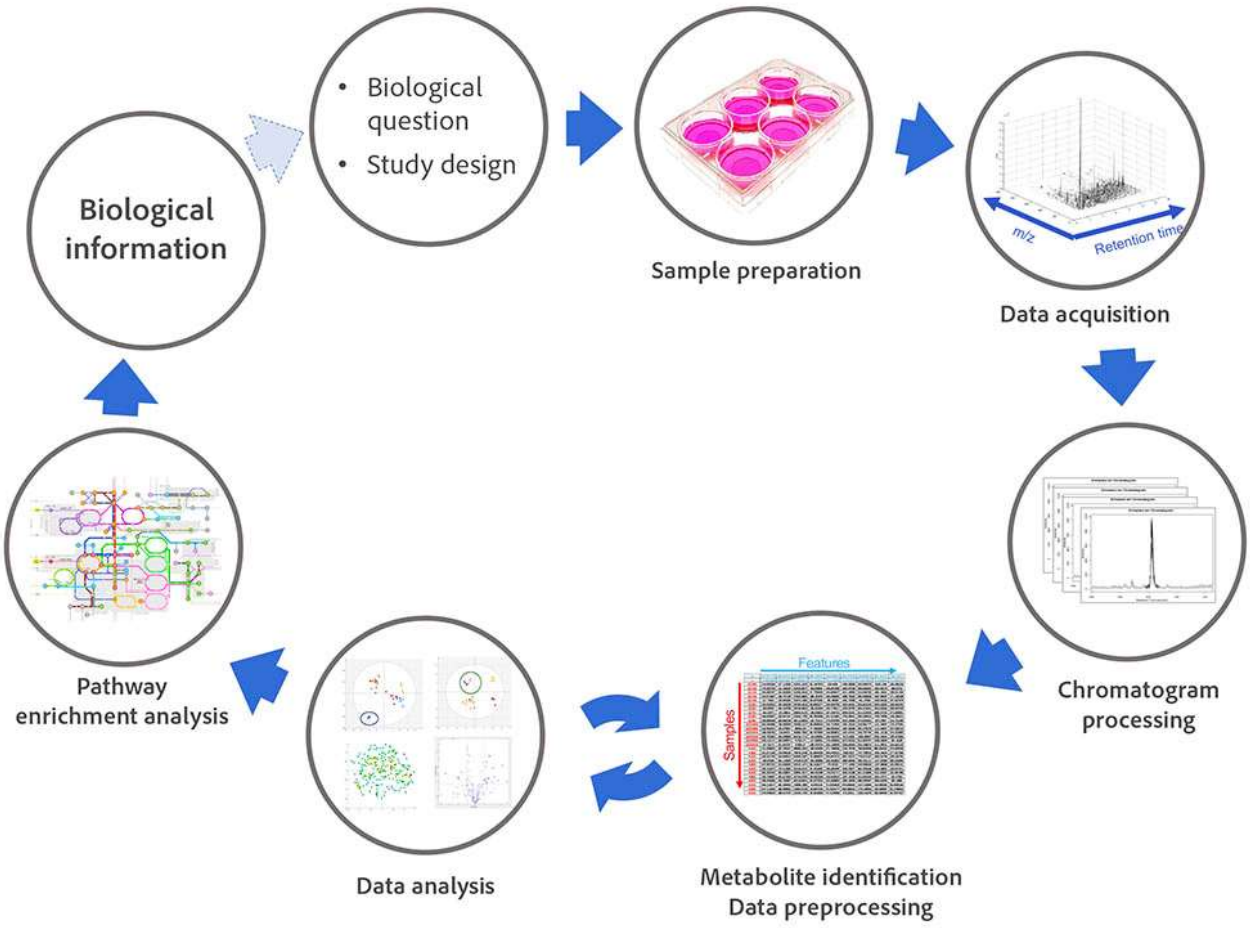
Introduction to metabolomics workflow

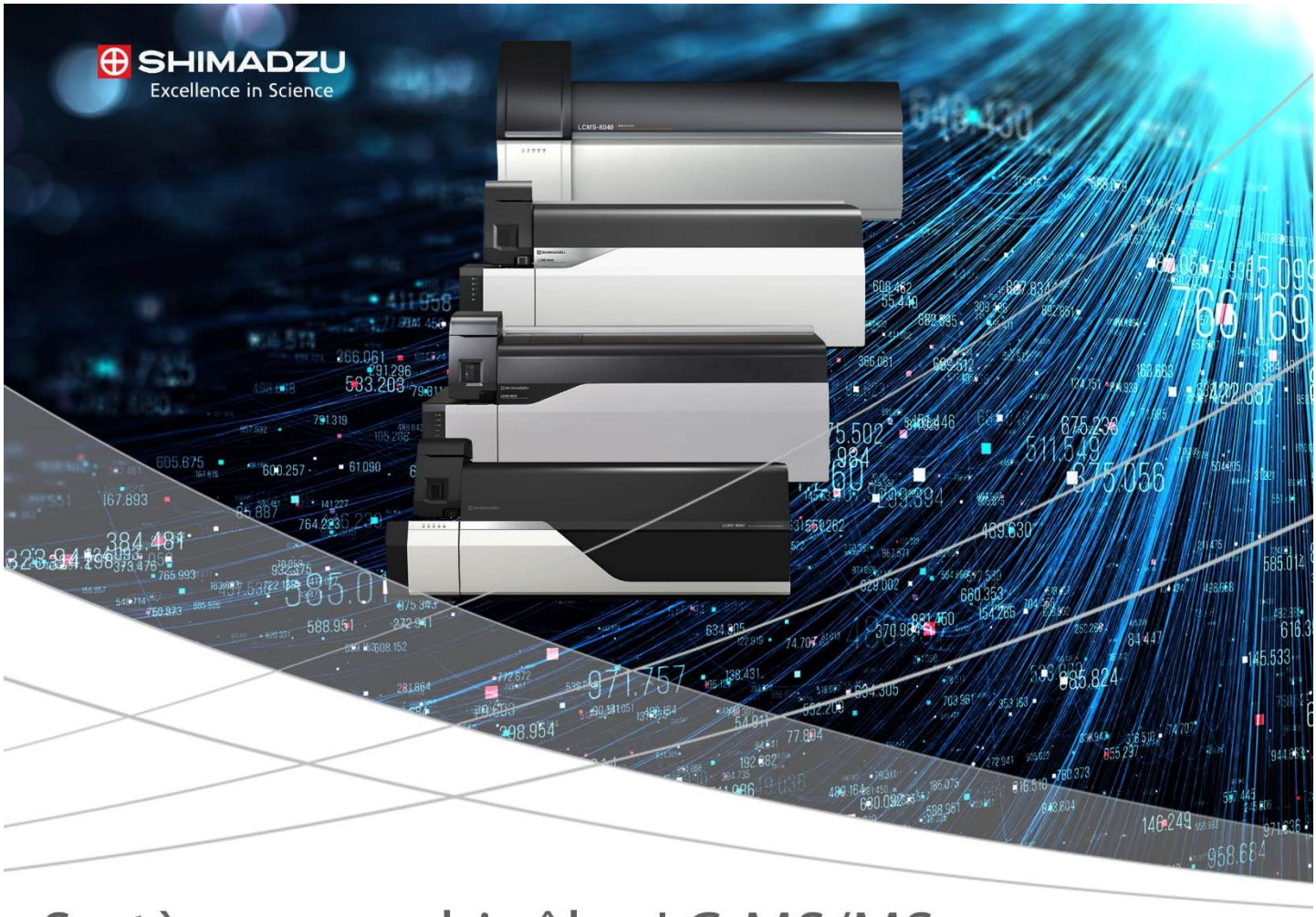
*by **Coral Barbas**, Center for Metabolomics and Bioanalysis (CEMBIO)*
Universidad San Pablo CEU - Madrid, Spain
*& **Serge Rudaz**, University of Geneva – Switzerland*

The untargeted analysis of all the metabolites that change under a pathophysiological situation, or any wanted or unwanted action produced on a biological system, requires specific tools. In this short course, we will introduce the general concept of Metabolomics and it's workflow. The main analytical platforms that are used, based on mass spectrometry will be presented, together with an introduction to the multivariate data analysis as well as Identification strategy of the instrumental signals to transform them into a name with a biological interpretation.

This short course will be suited for anyone interested in starting, improving or tailoring metabolomics workflows. Although a previous background on metabolomics is desirable, the workshop will cover the principles of each step on the workflow. During the workshop you will also have the opportunity to dicsuss advanced topics and specific refinements with the presenters.

Sunday, 27 September – 10.00 am





Systèmes quadripôles LC-MS/MS les plus rapides au monde

Détectez plus et quantifiez plus avec la gamme LC-MS/MS : LCMS-8040, LCMS-8045, LCMS-8050 et LCMS-8060NX.

Vitesse ultra-rapide

- Ultra-Fast switching, inversion de polarité ultra-rapide jusqu'à 5 msec sans perte de sensibilité

- Ultra-Fast scanning, vitesse de balayage ultra-rapide jusqu'à 30 000 u/sec

Haute fiabilité

- Technologie UFsweeper™ diminuant considérablement la contamination croisée

- Linéarité excellente avec une large échelle dynamique

- Maintenance aisée de la source sans rupture du vide

Sensibilité et flexibilité

- Sensibilité idéale pour toutes les applications, même les plus exigeantes à faible concentration en matrice complexe

UFMS ULTRA FAST MASS SPECTROMETRY

www.shimadzu.fr

Short course 3

From Validation to Uncertainty: Taking the Best from Regulations in Bioanalysis

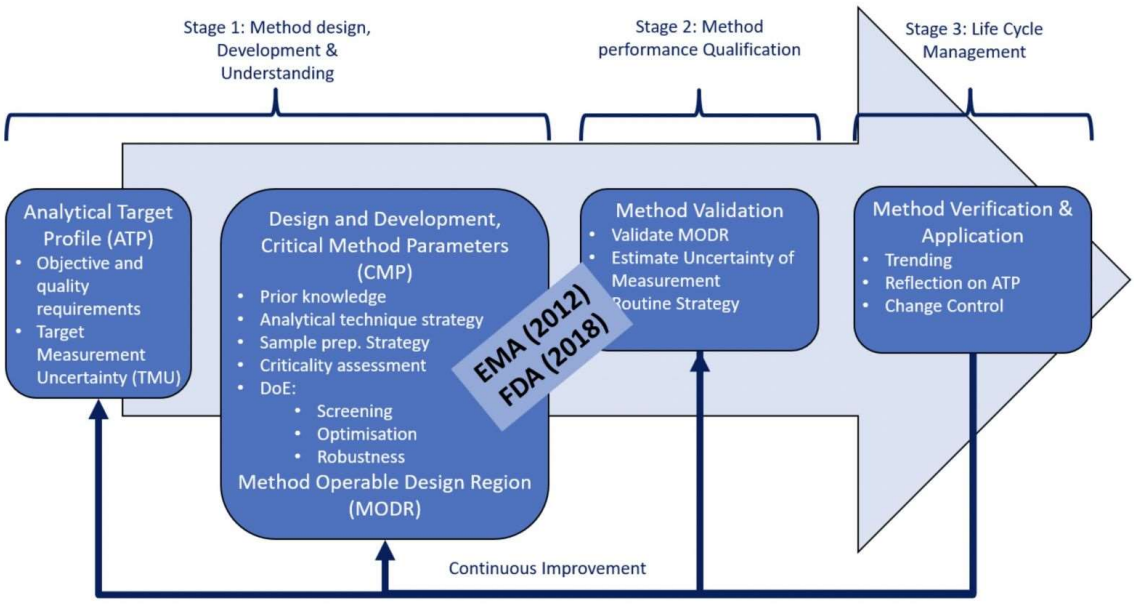
*By **Jean-Marc Roussel**, Co-designer NeoLiCy® software, Mâcon (France)*

Although the EMA (2012), FDA (2018) and ICH M10 (Draft-2019) guidelines on Bioanalytical Methods Validation give clear statements on the validation design and methodology, the emergence of the Analytical Quality by Design (AQbD) and Target Measurement Uncertainty (TMU) concepts may confuse the analysts when coming to their bioanalytical methods validation stage. In this short-course we will describe the AQbD principles and explain how the EMA and FDA requirements can be included in this method development and lifecycle assessment workflow.

We will particularly focus on the Accuracy characteristic and demonstrate how a simultaneous assessment of Precision and Trueness can provide the analyst with the Accuracy information, by means of the Total Error concept. Measurement Uncertainty is nowadays becoming a major concern in analytical and bioanalytical methods development, we will explain how this information can be extracted from the method validation results, using a balanced validation design such as those described in the EMA and FDA guidelines. We will also discuss about the use of this information in routine analysis and its role in decision making once the analytical result is obtained.

This short-course will be suited for all anyone involved in bioanalytical methods development and validation. Although a previous knowledge on basic statistics is desirable, the short-course will cover the principles of each calculation involved in the process. During this short-course, you will also have the opportunity to discuss specific refinements with the presenter.

Sunday, 27 September – 1.00 pm



FLUIGENT

WHY USE FLUIGENT'S MICROFLUIDIC CONTROLLERS?

PRESSURE-BASED FLOW CONTROL

Reliable results

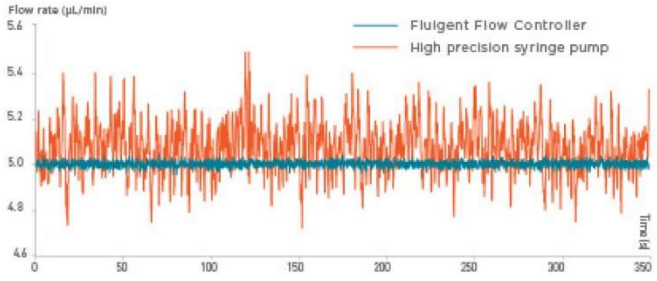
- Pulseless and stable flow
- Fastest response time
- Best precision

Easy to use

- Plug and play solutions
- Intuitive software
- Adaptable and upgradable

ONLY STAND-ALONE PRESSURE CONTROLLER

STABLE, PULSE FREE FLOW



CONTACT US FOR MORE INFORMATION OR A QUOTE

Workshop

How to build an open-source capillary electrophoresis?

Olivier Vorlet, HEIA, Fribourg, Switzerland
Samuel Roth, HEIA, Fribourg, Switzerland
Claude Rorhbasser, PHARMELP, Fribourg, Switzerland
Serge Rudaz, University of Geneva, Switzerland
Pascal Bonnabry, Geneva University Hospitals, Geneva, Switzerland

In this workshop, a new generation open-source CE will be presented. This prototype, intended to be evolutionary and sustainable, was created by the University of Applied Sciences of Fribourg (Western Switzerland) in collaboration with the University of Geneva (Switzerland) and the Geneva University Hospitals (Switzerland).

This CE device was conceived to help developing countries to fight falsified or sub-standard medicines, but it could also be useful for educational purposes. Interested users will get acquainted with the instrument, understand it and get trained on how to repair it.

The new prototype includes a renewable energy source to make it independent from local supply, and an integrated software to simplify data treatment and reporting. Components are stardard and interchangeable, so they could be replaced by a local solution or easily available parts found on the Internet.

Sunday, 27 September - 5.30 pm - Workshop. Part 1
Monday, 28 September - 5.30 pm - Workshop. Part 2
Tuesday, 29 September - 5.30 pm - Workshop. Part 3
Wednesday, 30 September - 5.30 pm- Workshop. Part 4

ELVE FLOW

PLUG & PLAY MICROFLUIDICS

MICROFLUIDIC
FLOW CONTROL SPECIALISTS

Miniaturize your system and save cost and time!

- **Cell culture**
- **DNA handling**
- **PCR analysis**
- **Chemical reactions**
- **Drug testing**

Precision at a small volume scale

- **Flow management solutions**
- **Pressure measurement & control**
- **Fluid switching solutions**
- **Pressure generator**
- **Valves & Accessories**

CONTACT US: Tel: +33(0).184.163.807 **contact@elveflow.com** www.elveflow.com

DESIGNED AND MANUFACTURED IN PARIS

Need a microfluidics partner for your research consortium?

HORIZON 2020

ANR

MARIE CURIE ACTIONS

Seminars & tutorial

How to publish with impact ? Meet the editors

This tutorial is organized by

ROYAL SOCIETY OF CHEMISTRY

Monday, 28 September - 12.50 pm

- **Philippa Ross**, Executive Editor, Lab on a Chip, Analyst and Analytical Methods
- **Michael Roper**, Associate Editor, Analytical Methods

It provides Editors' insights on how to publish impactful work and give the opportunity for attendees to ask questions about publishing, the peer review process, etc.

12.50 pm : Introduction & Tutorial. Philippa Ross (Executive Editor, Lab on a Chip, Analyst and Analytical Methods)
1.10 pm: Q&A. Michael Roper (Associate Editor, Analytical Methods)

Lab on a Chip Analytical Methods Analyst

Contribution of capillary electrophoresis in the context of drug development

Monday, 28 September - 3.00 pm

This seminar is organized by

Agilent Trusted Answers

- **Marianne Fillet**, Head Professor at University of Liege - Laboratory of the analysis of Medicines
- **Henri Nicar**, Biopharma Market Specialist, Agilent Technologies

It covers the use of CE for characterization and quantitative analysis of active molecules, drugs and biopharmaceuticals. First the features and improvements in interface design are presented for the direct CE-MS coupling in the field of protein biopharmaceuticals characterization.

Then a keynote lecture illustrates the latest approaches that CE can offer in different drug discovery frames and added value for QC of complex and innovative therapies, such as biopharmaceuticals. This seminar gives also the opportunity for attendees to ask questions to the speakers about AGILENT CE and CE-MS systems and solutions in the field of pharma and biopharma.

3.00 pm: Introduction. Henri Nicar
3.05 pm: Charge heterogeneity characterization with cIEF-MS. Henri Nicar
3.15 pm: Contribution of capillary electrophoresis in the context of drug development and quality control. Marianne Fillet
3.35 pm: Q&A. Henri Nicar & Marianne Fillet

générateurs de gaz pur

GEN GAZ

GENERATEURS DE GAZ

Hydrogène, Azote et Air Zéro pour GC, LCMS, TOC, DEDL, ICP, MP-AES, Préparation d'échantillons

Une **gamme complète** de générateurs:

- Empilables pour gain d'espace au sol
- Autonomes ou à partir d'un réseau d'air comprimé
- Puretés maximales pour répondre à tous les besoins analytiques
- Commande par écran tactile
- Montage en parallèle

NEW

AirComp 200

"Jamais un compresseur n'a été aussi silencieux"

Gengaz srl - Centre d'Affaires du Molinel Bât C - Avenue de la Marne 59290 Wasquehal
Tél/Fax: 00.33.(0)3.20.75.38.29 - contact@gengaz.com - www.gengaz.com

Nanofluidics with Chromatographics Tools

This seminar is organized by VICI

Tuesday, 29 September - 4.40 pm

- **Jennifer C. Copeland**, VICI
- **Shirley Li**, VICI
- **Stanley D. Stearns**, VICI

It provides a look into making smaller and smaller components to investigate smaller and smaller samples. We will show the use of the True Nano™ UHPLC for shotgun proteomics of HeLa cells, discuss using a version of the system for virus-like particle detection, and how we are envisioning single-cell proteomic analysis.

4.40 pm: Introduction. Stanley D. Stearns
4.45 pm: Nanofluidics with chromatography tools. Jennifer C. Copeland
5.10 pm: Q&A and moderation. Shirley Li, Jennifer C. Copeland & Stanley D. Stearns

---

Quasar Microfluidics: A new, innovative method for glass chip fabrication

Wednesday, 30 September - 10.00 am

Nowadays, the European market for glass chips is dominated by a small number of large companies. Having glass microfluidic chips at an accessible price is nearly impossible. Therefore, during his PhD at Elvesys SAS (project DNARepairman, ID 722433), Kostiantyn Breiev focused on the fabrication of high-quality glass chips for microfluidics at an obtainable price. As a result, he created Quasar Microfluidics – the company that circumvents classical limitations (e.g. use of a clean room, UV Kub, mask aligners, strong glass-glass-bonding) by use of a novel technique for glass chip fabrication.

ELVEFLOW an ELVESYS brand

Discover the LineUp series, the new generation of microfluidic controllers

Wednesday, 30 September - 10.00 am

Discover the LineUp™ Series, Fluigent's leading fluidic delivery platform. A complete solution, including software for automation, to easily adapt to any microfluidic setup and provide unmatched accuracy, simplicity, and versatility.

FLUIGENT SMART MICROFLUIDICS™

Size does not matter: nSMOL for large mABs

This seminar is organized by SHIMADZU Excellence in Science

Wednesday, 30 September - 12.15 pm

In this seminar Shimadzu brings to you a simple yet elegant way for measuring monoclonal antibody drugs in human plasma. We'd like to introduce novel technology of nSMOL, making bioanalysis of mAbs easier than ever before.

Rashi Kochhar, Marketing Communications Manager, Shimadzu (Asia Pacific), Singapore.

BioAccord™ SYSTEM

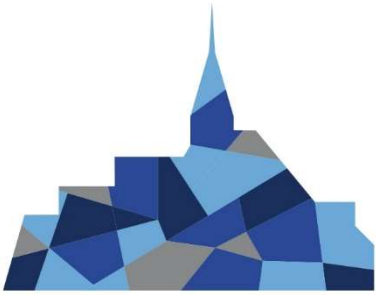
The First SmartMS™-Enabled Biopharma Solution

Easy-to-deploy and easy-to-operate LC-MS is obtainable with the BioAccord LC-MS System.

The award-winning SmartMS-enabled BioAccord LC-MS System is purposefully designed for streamlined analysis and monitoring of biotherapeutic drugs, with analytical workflows covering the broad array of product and process attributes.

www.waters.com/**BioAccord**

e-MSB 2020 Scientific Program



Sunday, 27 September 2020

10:00 AM **12:30 PM**	Short course 2 **Introduction to metabolomics workflow** *by Coral Barbas, Center for Metabolomics and Bioanalysis (CEMBIO) - Universidad San Pablo CEU - Madrid, Spain* *and Serge Rudaz, University of Geneva - Switzerland*	**Short course 1** **Facing the complexity of biopharmaceuticals characterisation** *by Davy Guillarme, University of Geneva, Geneva, Switzerland* *and Yannis François, University of Strasbourg, Strasbourg, France*
1:00 PM **3:30 PM**	**Short course 3** **From Validation to Uncertainty: Taking the Best from Regulations in Bioanalysis** *Jean-Marc Roussel, Co-designer NeoLiCy® software Mâcon (France)*	
4:30 PM	**Opening ceremony** *Chairs: Pr Myriam Taverna - University Paris Saclay - Chatenay-Malabry, France* *& Pr Serge Rudaz - University of Geneva - Switzerland*	
4:55 PM	**PL - The modular proteome and its biological significance** *Ruedi Aebersold - Department of Biology, Institute of Molecular Systems Biology, ETH Zurich and Faculty of Science, University of Zurich - Zurich, Switzerland*	
5:30 PM **6:00 PM**	**Workshop** **How to build an open-source capillary electrophoresis? Part 1** *Olivier Vorlet & Samuel Roth HEIA, Fribourg, Switzerland, Claude Rorhbasser, PHARMELP, Fribourg, Switzerland* *Serge Rudaz, University of Geneva, Switzerland Pascal Bonnabry, Geneva University Hospitals, Geneva, Switzerland*	
6:05 PM **6:15 PM**	**Smile & Cheers**	

Monday, 28 September 2020

10:30 AM
11:10 AM

PL - Designing materials for ultrasensitive biosensing

Molly M. Stevens - Department of Materials, Department of Bioengineering and Institute of Biomedical Engineering, Imperial College - London, United Kingdom

11:15 AM

CE-MS and advances in instrumentation

Chair: Christian Neusüß
Aalen University, Aalen, Germany

Biopharmaceuticals

Chair: Davy Guillarme
University of Geneva, Geneva, Switzerland

11:20 AM

KN - Microchip CE: Characterizing Molecules Large-to-Small using Mass Spectrometers Large-to-Small

Michael Ramsey
Department of Chemistry,
University of North Carolina, USA

KN - In-depth characterization of biopharmaceuticals using micropillar array columns combined with mass spectrometry

Koen Sandra
Research Institute for Chromatography,
Kortrijk, Belgium

11:45 AM

Quantification of protein adsorption and optimization of separations in CE and CE-MS.

Hervé Cottet - Université de Montpellier, Institut des Biomolécules Max Mousseron, UMR CNRS 5247 - Montpellier, France
Co-authors: Charly Renard, Laurent Leclercq, Liesa Salzer, Christian Neusüß

Charge variant analysis of monoclonal antibodies by CZE-MS under native conditions.

YS - Kendall Johnson - Barnett Institute of Chemical and Biological Analysis, Department of Chemistry and Chemical Biology, Northeastern University - Boston, USA
Co-authors: Erica Teng, Marcia Santos, Alexander Ivanov

12:00 PM

Evaluation of a nanoflow interface based on the triple-tube coaxial sheath-flow sprayer.

YS - Sabrina Ferré - Institute of Pharmaceutical Sciences of Western Switzerland, Group of Analytical Pharmaceutical Chemistry - Geneva, Switzerland
Co-authors: Sabrina Ferré, Nicolas Drouin, Hans-Peter Zimmermann, Victor González-Ruiz, Serge Rudaz

Online mass spectrometry of CE(SDS)-separated proteins by two-dimensional capillary electrophoresis.

YS - Jennifer Römer - Aalen University - Germany
Co-authors: Cristina Montealegre, Johannes Schlecht, Steffen Kiessig, Bernd Moritz, Christian Neusüß

12:15 PM

Profiling nucleotides in low numbers of mammalian cells by sheathless CE-MS in positive ion mode: circumventing corona discharge.

Rawi Ramautar - Leiden University, Leiden Academic Center for Drug Research - Leiden, The Netherlands

The Detection of a reduced monoclonal antibody (mAb) at low ng/ml concentration in biological samples by CE-MS.

Karsten Hendriks - Sciex, Capillary Electrophoresis EMEAI
Co-authors: Stephen Lock, Richard Snell

12:30 PM

Characterization of post-transcriptional RNA modification by capillary electrophoresis - tandem mass spectrometry.

YS - Antony Lechner - CNRS – Unistra UMR 7140, Université de Strasbourg, Laboratoire de Spectrométrie de Masse des Interactions et des Systèmes - Strasbourg, France
Co-authors: Philippe Wolff, Emmanuelle Leize-Wagner, Yannis François

Fab-specific peptide functionalized biomaterials for mAbs capture and analysis.

Zhengjin Jiang - Jinan University, institute of pharmaceutical analysis - Ganghzou, China
Co-authors: qiqin Wang, xiao Liu, rongrong Xu, yutian Lei

12:50 PM
1:30 PM

RSC tutorial

How to publish with Impact

Philippa Ross, RSC Executive Editor, Analyst, Analytical Methods and Lab on a Chip
Mike Roper, Analytical Methods Associate Editor,The Florida State University, Florida,USA

YS: Young Speaker

3:00 PM **3:45 PM**	**AGILENT TECHNOLOGIES seminar** **Contribution of capillary electrophoresis in the context of drug development** *Marianne Fillet, Head Professor at University of Liege - Laboratory of the analysis of Medicines* *Henri Nicar, Biopharma Market Specialist, Agilent Technologies*	
3:50 PM	**Comprehensive omics** *Chair: Alexander Ivanov* *Northeastern University College of Science, Boston, USA*	**Pharmaceuticals and drug development** *Marianne Fillet* *University of Liege, Liege, Belgium*
3:55 PM	**KN - Adventures in Multidimensional Fractionation for Quantitative Proteomics** *Jarrod Marto* *Dana-Farber Cancer Institute and Harvard Medical School, Boston, USA*	**KN - Quantitative microscale analytical systems to aid in drug development** *Mike Roper* *Department of Chemistry & Biochemistry, The Florida State University, Florida,USA*
4:20 PM	**Metabolic Trajectories Following Contrasting Diets from Food Provisions: Identifying Robust Biomarkers of Habitual Diet.** *Philip Britz-Mc Kibbin - Mc Master University,Department of Chemistry and Chemical Biology - Hamilton, Canada*	**Direct analysis of glycosylation pattern of intact antibodies in cell supernatant with LC-MS or CE-MS.** *Lukas Naumann - Faculty of Chemistry - Aalen University - Aalen, Germany*
4:35 PM	**Genomics meets glycomics: a comprehensive omics approach for lung cancer biomarker discovery.** *Ana Frakas & Andras Guttman - University of Pannonia - Hungary* *Co-authors: Brigitta Meszaros, Marton Szigeti*	**The use of capillary electrophoresis in gene therapy product testing.** *Stephen Lock - University of Pannonia / SCIEX* *Co-author: Tinting Li*
4:50 PM	**Native capillary electrophoresis top-down mass spectrometry for the characterization of proteoforms and their complexes.** *YS - Kevin Jooss - Northwestern University, Departments of Chemistry and Molecular Biosciences - Evantson, USA* *Co-authors: Schachner Luis F., Compton Philip D., Kelleher Neil L.*	**Characterization of antigen-adjuvant interactions in vaccines by Taylor dispersion analysis** *YS - Camille Malburet - IBMM, Institute of Biomolecules Max Mousseron - University of Montpellier, CNRS, ENSCM - Montpellier, France* *Co-authors: Laurent Leclercq, Jean-Francois Cotte, Jérôme Thiebaud, Hervé Cottet*
5:05 PM	**Computer-assisted LC(CE)-HRMS analysis tools for untargeted analysis: sources of errors and strategies to overcome them.** *Guillaume Erny - Faculdade de Engenharia da Universidade do Porto - Portugal* *Co-authors: Patricia Gomes-Alves, Nuno Neuparth, Lucia Santos, Pedro Carreiro-Martins, Ricardo Gomes, João Gaspar Marques, Ana Catarina Guerreiro*	**Fast and robust quality assessment of therapeutic monoclonal antibodies using size exclusion chromatography-mass spectrometry.** *Raya A. Sadighi -Vrije University of Amsterdam, Division of Bio-Analytical Chemistry - Amsterdam, The Netherlands* *Co-authors: Govert W. Somsen, Rob Haselberg*
5:30 PM **6:00 PM**	**Workshop: How to build an open-source capillary electrophoresis? Part 2**	
6:05 PM **8:00 PM**	**Poster session 1**	

Tuesday, 29 September 2020

9:00 AM	**Environmental analysis** *Chair: Thanh Duc MAI* *University Paris Saclay, Faculty of Pharmacy, Chatenay Malabry, France*	**Bioaffinity chromatography, monoliths and IMERs** *Chair: Zhengjin Jiang* *Jinan University, Ganghzou, China*
9:05 AM	**KN - HPLC coupled to high resolution mass spectrometry has boosted environmental research** Juliane Hollender*Department Environmental Chemistry, Federal Institute of Aquatic Science and Technology (EAWAG),Dübendorf, Switzerland*	**KN - Chromatographic Imers as Prototypes for Flow-Chemistry Applications** *Gabriella MassoliniDepartment of Pharmaceutical Sciences,University of Pavia, Italy*
9:30 AM	**Closing the Gap: Enrichment-free analysis of anionic persistent and mobile organic compounds in the sub-ppb range in drinking water by Capillary Electrophoresis-High Resolution Mass Spectrometry.** *Christian Neusüss - Aalen University - Aalen, Germany* *Co-authors: Höcker Oliver, Bader Tobias, Schmidt Torsten C., Schulz Wolfgang*	**The potential of Porous Polymer Monoliths for sample preparation in capillary electrophoresis: From enrichment phases to microreactors.** *Thuy Tran - Institut Galien Paris Sud, UMR8612, Protein and Nanotechnology in Analytical Science (PNAS), CNRS, Univ. Paris-Saclay - Châtenay-Malabry, France* *Co-authors: Huikai Shao, Balazs Reider, Bin Yang, Gabor Jarvas, Andras Guttman, Zhengjin Jiang, Myriam Taverna*
9:45 AM	**Parallel coupling of nano-liquid chromatography with microarray bioassays and nanoelectrospray mass spectrometry for untargeted screening of toxic compounds.** *Kristina Still - Vrije Universiteit, Division of Bioanalytical Chemistry - Amsterdam, The Netherlands* *Co-authors: Timo Hamers, Peter H. Cenijn, Govert W. Somsen, Marja H. Lamoree, Jeroen Kool*	**Ultra-miniaturized weak affinity chromatography for ligand identification of nanodiscs-solubilized G-protein coupled receptors: a new fragment screening approach in FBDD.** *YS - Andrea Gottardini - Université de Lyon, Institut des Sciences Analytiques - Lyon, France* *Co-authors: Lecas Lucile, Wagner Renaud, Dugas Vincent, Demesmay Claire*
10:00 AM	**Development of a miniature and air-transportable liquid chromatograph with UV detector: Crude oil characterisation by GPC-UV.** *Damien Bazin - Chromatotec, R&D service - Saint-Antoine, France* *Co-author: Franck Amiet*	**Affinity Sheathless CE-MS for the selective study of FcRn - Antibody interaction.** *YS - Christopher Gstoettner - Leiden University Medical Center, Center for Proteomics and Metabolomics - Leiden - The Netherlands* *Co-authors: Manfred Wuhrer, Elena Dominguez-Vega*
10:20 AM	**SCIEX Award Ceremony**	
10:30 AM	**PL - Ion mobility and mass spectrometry detection for chip-based separation devices** *Detlev Belder - Institut für Analytische Chemie, Fakultät für Chemie und Mineralogie, Universität Leipzig, Germany*	

11:15 AM	**Food, beverages, nutrition and health** *Chair: Ana M. García-Campaña* *University of Granada, Granada, Spain*	**Biosensors, instrumentation and applications** *Chair: Lorena Dieguez* *International Iberian Nanotechnology Laboratory, Braga, Portugal*
11:20 AM	**KN - Tailored micromotors for analyte (bio)sensing in health applications** *Alberto Escarpa* *Department of Analytical Chemistry and Chemical Engineering, University of Alcala de Henares, Spain*	**KN - Current trends and applications in biosensors** *Rita Asquini* *Department of Information Engineering, Electronics and Telecommunications, Sapienza University, Rome, Italy*
11:45 AM	**Analysis of nutritional and bioactive compounds in food supplements using purpose-made CE with contactless conductivity detection: a case study in Vietnam.** *Pham Hung Viet- VNU University of Science, Vietnam National University,VNU Key Laboratory of Analytical Technology for Environmental Quality and Food Safety Control - Hanoi, Vitenam* *Co-authors: Hong Anh DUONG, Thanh Dam NGUYEN*	**Lab on a chip for the electrochemical quantitation and recycling of strategic material.** *Anne Varenne - Institut of Chemistry for Life and Health Sciences, CNRS 2027, Chimie ParisTech PSL - Paris, France* *Co-authors: Gouyon Jérémie, Griveau Sophie, d'Orly Fanny, Bedioui Fethi*
12:00 PM	**Supercritical fluid chromatography tandem mass spectrometry combined with miniaturized extraction techniques as a promising tool for the analysis of vitamin D metabolites in biological samples.** *YS - Bárbara Socas Rodríguez - Lund University, Green Technology Group - Lund, Sweden* *Co-authors: Margareta Sandahl, Cecilia Holm, Charlotta Turner*	**Quantification of protein expression locally on tissue sections to evaluate tumor heterogeneity.** *YS - Anna Fomitcheva Khartchenko - IBM Research, Precision Diagnostics - Zurich, Switzerland* *Co-authors: Lena Voith von Voithenberg, Govind V. Kaigala*
12:15 PM	**Green micro-separation of phenolic acid and flavonoid using 3D printed lab on a chip device.** *Haider Al Lawati - Sultan Qaboos University, Chemistry - Oman* *Co-authors: Nafiseh Bagheri, Javad Hassanzadeh*	**Multiplex phenotypic profiling of single-cancer cells in microdroplets** *Sara Abalde-Cela - International Iberian Nanotechnology Laboratory, Braga, Portugal* *Co-authors: Kevin Oliveira, Alexandra Teixeira, José M. Fernandes, Cláudia Lopes, Paulina Piairo, Lei Wu, Laura Rodríguez-Lorenzo, Lorena Diéguez*

2:30 PM **4:30 PM**	**Poster session 2**
4:40 PM **5:25 PM**	**VICI seminar** **Nanofluidics with Chromatographics Tools** *Jennifer C. Copeland & Stanley D. Stearns, VICI*
5:30 PM **6:00 PM**	**Workshop: How to build an open-source capillary electrophoresis? Part 3**

6:05 PM	**Point-of-care devices, innovation in microfluidics, precision medecine** *Chair: Vince Remcho* *Oregon State University, Corvallis, USA*	**Organ- and cell-on-chip** *Chair: Stéphanie Descroix* *Centre de recherche de l'Institut Curie, Paris, France*
6:10 PM	**KN - Advanced Tools in Precision Medicine: from 3D in vitro tissue models to point-of-care diagnostics** *Frederic Zenhausern* *University of Arizona, Phoenix, USA*	**KN - Microscale biochemical assays for multiomic profiling of tumor sections** *Govind Kaigala* *IBM Research Laboratory, Zurich, Switzerland*
6:35 PM	**Multiplexing Neurochemical Detection with Carbon Electrodes and Fast Scan Cyclic Voltammetry.** *YS - Alexander Zestos - American University - Washington D.C., USA* *Co-author: Pauline Wonnenberg*	**Arrays of micro-magnets for negative selection of Circulating Tumor Cells in a microfluidic device.** *YS - Lucie Descamps - Université Lyon 1,Institut des Nanotechnologies de Lyon - Lyon, France* *Co-authors: Samir Mekkaoui , Jessica Garcia , Marie-Charlotte Audry , Emmanuelle Laurenceau , Syed Harris Hussain , Léa Payen , Damien Le Roy , Anne-Laure Deman*
6:50 PM	**Concentration and separation of DNA in complex biological fluids with µLAS technology.** *Audrey Boutonnet-Rodat - ADELIS, R&D department - Labège, France* *Co-authors: Mano Marion , Ginot Frederic*	**Extraction of NSAIDS and their metabolites from liver-on-chip samples by dispersive liquid-liquid microextraction based on the solidification of the floating organic drop.** *YS - Maarten van der Horst - Hogeschool Leiden, LCAB - Leiden, The Netherlands* *Co-authors: Emma Nienhuis , Wus van Zomeren , Evelyne Steenvoorden , Natasja Carol-Visser , Peter Lindenburg*
7:05 PM	**Capillary flow LC-MS usig micro pillar array columns: Combinig nano flowsensitivity with analytical flow robustness throughput.** *Paul Jacobs - PharmaFluidics, R&D - Ghent, Belgium* *Co-authors: Jeff Op de Beeck , Bo Claerebout , Kurt Van Mol , Natalie Van Landuyt , Geert Van Raemdonck , Simon Daled , Maarten Dhaenens , Gert Desmet*	**Fabrication of 2D monolayers and 3D spheroids of cells in acoustic levitation.** *Nathan Jeger-Madiot - ESCPI / CNRS, PMMH - Paris, France* *Co-authors: Lousineh Arakelian , Niclas Setterblad , Mauricio Hoyos , Jérôme Larghero , Jean-Luc Aider*

Young Scientist Award

The e-MSB 2020 Young Scientist Award is intended to give talented young scientists extra encouragement. It will be presented to a young researcher whose outstanding work sets an example for other scientists. All presenters of an oral contribution who are less than 35 years of age at the time of their lecture are eligible for consideration. An international jury of both young and mature scientists will judge the qualified presentations and choose a winner. The prize consists of a certificate and €400 donated by CCCTA (Centre de Compétence en Chimie et Toxicologie Analytiques), a Swiss association supporting analytical chemistry. Three runners up will receive certificates and cash prizes sponsored by AFSEP (Association Francophone des Sciences Séparatives). The winners will be announced and prizes awarded during the Awards Ceremony on Wednesday, September 30th.

Wednesday, 30 September 2020

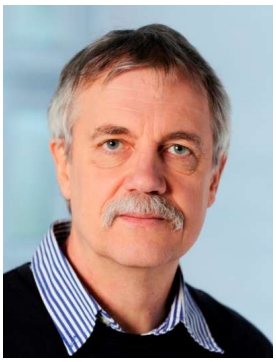
8:30 AM	**Electrodriven separations - AFSEP Session 1** *Chair: Hervé Cottet* *University of Montpellier, Montpellier, France*
8:35 AM	**CE-ICP/MS and TDA/ICP-MS for the characterization of a therapeutic gadolinium-based nanoparticle.** *YS - Lucie Labied - Institut des Sciences Analytiques, Techniques Séparatives - Lyon, France* *Co-authors: Tristan Doussineau, Olivier Tillement, François Lux, Agnès Hagège*
8:50 AM	**Coupling on-chip HPLC and electrochromatography to ion mobility spectrometry.** *YS - Nora Hartner - Leipzig University, Institute of Analytical Chemistry - Leipzig, Germany* *Co-authors: Raddatz Christian-Robert, Zimmermann Stefan, Belder Detlev*
9:05 AM	**ROMANCE strikes back: on the path to reliable CE-MS quantification.** *YS - Santiago Codesido Sanchez - Université de Genève, Analytical Sciences - Geneva, Switzerland* *Co-authors: Nicolas Drouin, Sabrina Ferre, Julie Schappler, Víctor González-Ruiz, Serge Rudaz*
9:20 AM	**Analysis of lipid-conjugated oligonucleotides by cyclodextrin-modified capillary zone electrophoresis.** *Fatima Barakat - Bordeaux University, ChemBioPharm team, ARNA INSERM U1212, CNRS 5320 - Bordeaux, France* *Co-authors: Gaudin Karen, Vialet Brune, Barthélemy Philippe, Ferey Ludivine*
9:35 AM	**Ultra-fast chiral separations of biomolecules by voltage-gradient gas-phase electrophoresis.***Govert W. Somsen - Division of Bioanalytical Chemistry, Amsterdam Institute for Molecules, Medicines and Systems - Amsterdam, The Netherlands* *Co-authors: Raquel Pérez-Míguez, María Castro-Puyana, María Luisa Marina, Elena Domínguez-Vega*
10:00 AM **10:10 AM**	**ELVESYS Pitch** **Quasar Microfluidics: A new, innovative method for glass chip fabrication**
10:15 AM **10:25 AM**	**FLUIGENT Pitch** **Discover the LineUp series, the new generation of microfluidic controllers**

10:40 AM		**Miniaturized sample preparation techniques** *Chair: Hong Heng See* *University of Technology Malaysia, Johor, Malaysia*
10:45 AM	**Electrodriven separations - AFSEP Session 2** *Chair: Yannis Francois* *University of Strasbourg, Strasbourg, France* *STARTING AT 10:50 AM*	**KN - Liquid phase microextraction of biological samples – from principles to automation** ***Pavel Kubáň*** ***Institute of Analytical Chemistry of the Czech Academy of Sciences, Brno, Czech Republic*** *Co-authors: Andrea Šlampová, Miloš Dvořák, Lenka Ryšavá, Blanka Miková*
10:55 AM	**Capillary electrophoresis tandem mass spectrometry for proteomics in the context of multiple myeloma: investigation of two hyphenating approaches.** ***YS** - Marie-Jia Gou - University of Liege, Laboratory for The Analysis of Medicines - Liège, Belgium* *Co-authors: Gwenael Nys, Gael Cobraiville, Alice Demelenne, Anne-Catherine Servais, Jo Caers, Marianne Fillet*	
11:10 AM	**Analysis and investigation of acid-base and electromigration properties of applied and potential peptide drugs by capillary electromigration methods.** *Vaclav Kasicka - Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences, Electromigration methods - Prague, Czech Republic* *Co-authors: Veronika Solinova, Tereza Tumova, Petra Sazelova*	**On-chip sample preparation using a ChipFilter coupled to nanoLC-MS/MS for bottom-up proteomics.** *Ndiaye Massamba Mbacké - ESPCI Paris, Laboratoire de Spectrométrie de Masse Biologique et Protéomique SMBP - Paris, France* *Co-authors: Vinh Joëlle , Chiappetta Giovanni*
11:25 AM	**Physicochemical protein properties, quality and binding affinities.** *Hermann Wätzig - Medicinal and Pharmaceutical Chemistry, Technical University - Braunschweig, Germany* *Co-authors: Scheller Christin, Olabi Mais, Ratih Ratih, Wiesner Rebecca, Zagst Holger, Stein Matthias, Oltmann-Norden Imke*	**Solid sampling probe based on a polymer inclusion membrane.** ***YS** - Hui Yin Tey -University of Technology Malaysia, Centre for Sustainable and Nanomaterials - Johor, Malaysia* *Co-author: Hong Heng See*
11:40 AM	**Metabo-ring study: a multi-center trial for the identification of metabolites in biological samples by CE-MS.** ***YS** - Nicolas Drouin - Leiden University, Analytical Biosciences and Metabolomics - Leiden, The Netherlands* *Co-authors: Hankemeier Thomas, Ramautar Rawi*	**New approach for on-chip magnetic immuno-extraction of exosomes.** *Monica Araya-Farias -Curie Institute, UMR 168 - Paris, France* *Co-authors: Dario Brambilla, Lucile Alexandre, Laura Trapiella-Alfonso, Giacomo Gropplero, William César, Marine Verhulsel, Marina Cretich, Marcella Chiari, Stéphanie Descroix*
11:55 AM	**Selection and application of markers for CE-DAD migration time correction of peptide maps used to assess enzyme activity.** *Karen Waldron - University of Montreal, Department of Chemistry - Montreal, Canada* *Co-author: Marie-Pier Ouellet*	**Buffer exchange using bidirectional flow.** ***YS -** Vesna Bacheva - IBM Research - Zurich, Suisse Technion - Israel Institute of Technology, Science and Technology department - Haifa, Israël* *Co-authors: Federico Paratore, Govind Kaigala, Moran Bercovici*
12:15 PM **1:00 PM**	**SHIMADZU seminar** **Size does not matter : nSMOL for large mABs** **Rashi Kochhar**, Marketing Communications Manager, Shimadzu (Asia Pacific), Singapore	

2:45 PM	**Portable and purpose-made devices** *Chair: Peter Hauser* *University of Basel, Basel, Switzerland*	**Biomarkers; clinical, diagnostic and forensic applications** *Chairs: Frederic Robert - Sebia, Lisses, France* *Philip Britz-McKibbin - McMaster University, Hamilton, Canada*
2:50 PM	**KN - A few contributions to the development of capillary electrophoresis systems** *Claudimir Lucio do Lago* *Institute of Chemistry, University of São Paulo, Brasil*	**KN - Capillary Electrophoresis application in Forensic Medicine and Science** *Franco Tagliaro* *Unit of Forensic Medicine, Department of Diagnostics and Public Health, University of Verona, Verona, Italy*
3:15 PM	**A portable CE-LIF prototype system of the Ocean Worlds Life Surveyor (OWLS) instrument suite for potential astrobiology spaceflight missions.***Florian Kehl - NASA Jet Propulsion Laboratory, California Institute of Technology Chemical Analysis and Life Detection - Pasadena, USA* *Co-authors: Vlad F. Cretu, Jessica S. Creamer, Peter A. Willis*	**In-depth characterization of glycated and carbamylated hemoglobin in clinical samples by top-down CE-MS/MS.***Alexander Stolz - Aalen University – Germany* *Co-authors: Liesa Salzer, Ylva Hedeland, Laurent Leclercq, Hervé Cottet, Jonas Bergquist, Christian Neusüß*
3:30 PM	**A microfluidic HPLC-droplet-ESI-MS chip for the investigation of enzyme inhibitors.** ***YS** - Andrea Peretzki - Leipzig University, Institute of Analytical Chemistry - Leipzig, Germany* *Co-author: Detlev Belder*	**Capillary Isotachophoresis separation of exosomes.** *Yuliya Shakalisava - Leiden University, Leiden Academic Center for Drug Research - Leiden, The Netherlands* *Co-authors: Milan de Putter, Thomas Hankemeier*
3:45 PM	**Application of Microfluidic Glass-based Interfaces for 2D Electromigrative Separation Techniques.** ***YS** - Hannes Graf - Eberhard Karls Universität Tübingen, Institute of Physical and Theoretical Chemistry - Tübingen, Germany* *Co-authors: Caroline Huhn, Benjamin Rudisch*	**Deep and highly sensitive CZE-MS-based glycan profiling of human plasma and blood-derived immunoglobulin G and extracellular vesicle isolates.** *Alexander Ivanov - Northeastern University College of Science, Department of Chemistry and Chemical Biology - Boston, USA* *Co-authors: Anne-Lise Marie, Somak Ray, Shulin Lu, Jennifer Jones, Ionita Ghiran*
4:00 PM	**A new concept for modular CE with LiF detection: a highlight with O-glycans analysis.** ***YS** - Théo Liénard--Mayor - Institut Galien Paris-Sud, PNAS - Chatenay-Malabry, France* *Co-authors: Furter Jasmine S., Taverna Myriam, Hauser Peter C., Mai Thanh Duc*	**Steroid profile in human seminal fluid: is it linked to sperm quality?** ***YS** - Eulalia Olesti - Biomedical and metabolomics analysis, Analytical Sciences, University of Geneva - Geneva, Switzerland* *Co-authors: Santiago Codesido, Arnaud Garcia, Rita Rahban, Michel Rossier, Julien Boccard, Serge Nef, Víctor Gónzalez-Ruiz, Serge Rudaz*
4:45 PM **5:25 PM**	**PL - New developments in metabolomics with CE-MS** *Coral Barbas - Center for Metabolomics and Bioanalysis (CEMBIO)* *Universidad San Pablo CEU - Madrid, Spain*	
5:30 PM **5:50 PM**	**Workshop** **How to build an open-source capillary electrophoresis? Part 4**	
5:55 PM **6:10 PM**	**Awards/Prizes ceremony**	
6:10 PM **6:30 PM**	**MSB 2021 & closing ceremony** *Chairs: Pr Myriam Taverna - University Paris Saclay - Chatenay-Malabry, France* *& Pr Serge Rudaz - University of Geneva – Switzerland*	

Plenary Speakers Biographies

Ruedi Aebersold



Department of Biology, Institute of Molecular Systems Biology
ETH Zurich and Faculty of Science, University of Zuric
Zurich, Switzerland

"The modular proteome and its biological significance"

Sunday, 27 September, 4 :55 pm

Prof. Ruedi Aebersold is one of the pioneers in the field of proteomics. He is known for developing a series of methods that have found wide application in analytical protein chemistry and proteomics like a new class of reagents termed Isotope Coded Affinity Tag (ICAT) reagents used in quantitative mass spectrometry. Prof. Dr. Aebersold and his team of researchers use the protein profiles determined by this method to differentiate cells in different states, such as noncancerous versus cancerous cells, and to systematically study how cells respond to external stimuli. These "snapshot" profiles indicate which cells contain abnormal levels of certain proteins. This is expected to lead to new diagnostic markers for disease and to a more complete understanding of the biochemical processes that control and constitute cell physiology.

Prof. Aebersold serves on the Scientific Advisory Committees of numerous academic and private sector research organizations and is a member of several editorial boards in the fields of protein science, genomics, and proteomics.

Prof. Aebersold is a native of Switzerland and obtained his Ph.D. in Cellular Biology at the Biocenter of the University of Basel in 1983. Since that time, he is a faculty member of the Universities of Washington and British Columbia, until 2000, when he co-founded the Institute for Systems Biology in Seattle. In 2004, he accepted a position as full professor at the Institute of Biotechnology at the Swiss Federal Institute of Technology (ETH) in Zurich, where in January 2005, his research group became the first integral part of the newly founded Institute of Molecular Systems Biology.

Coral Barbas

Center for Metabolomics and Bioanalysis (CEMBIO)
Universidad San Pablo CEU - Madrid, Spain

"New developments in metabolomics with CE-MS"

Monday, 28 September, 10 :30 am

Coral Barbas is currently Full Professor of Analytical Chemistry at the Chemistry and Biochemistry Department of the Faculty of Pharmacy at Universidad CEU San Pablo, Madrid (Spain) and Director of the "Centre for Metabolomics and Bioanalysis" (CEMBIO) at this Faculty.

She is also Director of CEU International School of Doctorate (CEINDO); Visiting Professor at Imperial College London, Department of Surgery and Cancer and at Bialystok Medical University.

As previous appointments, she was Vice-Chancellor for Research at Universidad CEU San Pablo and Marie Curie Fellow at Kings College London.

She is the author of more than 200 publications and book chapters, with current research interests in all the steps in metabolomics workflow: experimental design, sample pretreatment, analytical methods for targeted and untargeted metabolomics focused on multiplatform analysis with GC-MS, LC-MS and CE-MS, method validation, data treatment, compound identification and interpretation.

Prof. Dr. Detlev Belder

Institute of Analytical Chemistry,
University of Leipzig, Germany

"Ion mobility and mass spectrometry detection for chip-based separation devices"

Tuesday, 29 September, 10 :30 am

Detlev Belder is a full professor of analytical chemistry at Leipzig University. He earned his Ph.D. in chemistry in 1994 at the University of Marburg with experimental work done at the Max-Planck-Institut für Kohlenforschung in Mülheim an der Ruhr.

From 1995 - 2006, he headed the Department of Separation Science at the Max-Planck-Institut für Kohlenforschung. In 2006 he was appointed as a professor of analytical chemistry at the University of Regensburg. In 2007 he accepted the offer as a chair of Analytical Chemistry at Leipzig University.

Belder's research is focused on lab-on-a-chip technology as an enabling science in chemistry. In the belder laboratories at the University of Leipzig, a broad field of research and application of lab-on-a-chip technology is carried out. The Belder Group is known for miniaturized separation techniques such as chip electrophoresis and chip HPLC. The Belder lab also works on detection techniques such as the coupling of microfluidic chips with mass spectrometry or ion mobility spectrometry, as well as on optical techniques such as fluorescence and Raman microscopy. A particular focus in recent years has been on integrated chip laboratories that combine chemical reactors and analysis units on one chip.

Professor Belder has been recognized with several awards, such as the Gerhard Hesse Prize (2015) and the Fresenius Prize (2019).

Molly M. Stevens

Department of Materials, Department of Bioengineering
and Institute of Biomedical Engineering, Imperial College London
London, United Kingdom

"Designing materials for ultrasensitive biosensing"

Monday, 28 September, 10:30 am

Molly Stevens is Professor of Biomedical Materials and Regenerative Medicine in the Department of Materials and the Department of Bioengineering, and the Research Director for Biomedical Material Sciences at the Institute of Biomedical Engineering.

She joined Imperial in 2004 as a lecturer after Postdoctoral training in the laboratory of Professor Robert Langer in the Chemical Engineering Department at the Massachusetts Institute of Technology (MIT). Prior to this she graduated from Bath University with a First Class Honours degree in Pharmaceutical Sciences and was then awarded a PhD in biophysical investigations of specific biomolecular interactions and single biomolecule mechanics from the Laboratory of Biophysics and Surface Analysis at the University of Nottingham (2000).

Professor Stevens is Fellow of 8 UK Societies including the Royal Society and the Royal Academy of Engineering. In 2019, she was elected Foreign Member of the National Academy of Engineering (USA). She holds numerous leadership positions, for instance Director of the UK Regenerative Medicine Platform “Smart Materials” Hub, Deputy Director of the EPSRC funded Interdisciplinary Research Centre in Early-Warning Sensing Systems for Infectious Diseases, Associate Director of the British Heart Foundation Centre of Research Excellence, previous member of the World Economic Forum Global Future Council for Advanced Materials, Scientist Trustee of the National Gallery (London, UK), Associate Editor of ACS Nano and previous reviewing editor at Science, amongst many other roles.

Professor Stevens has been the recipient of over 30 prestigious awards, including the Acta Biomaterialia Silver Medal (2020), Surfaces and Interfaces Award (Royal Society of Chemistry 2019), Rosalind Franklin Medal and Prize (Institute of Physics, 2018), the Harrison Medal (Royal Pharmaceutical Society, 2017) and the Imperial College President’s Award and Medal for Outstanding Research Team (2016).

Keynote Speakers Biographies

Rita Asquini
Department of Information Engineering, Electronics and Telecommunications, Sapienza University, Rome, Italy

Session : Biosensors, instrumentation and applications

Keynote lecture : Current trends and applications in biosensors

Rita Asquini holds a M.Sc. and a Ph.D. in electronic engineering and worked for Telecom Italia (now TIM) as a Network Engineer on Service Assurance of Communication Networks (1998-2000). Currently, she is Associate Professor in Electronic Engineering with the Department of Information Engineering, Electronics and Telecommunications in “Sapienza” University of Rome, where she has been Assistant Professor from 2008 to 2015 and Research Fellow from 2002 to 2008. She has been teaching the courses of Applied Electronics and Photonics Microsystems. Her main research interests include modeling, fabrication, and characterization of optoelectronic devices with liquid crystals, polymers and silicon structures.

Claudimir Lucio do Lago
Institute of Chemistry, University of São Paulo, Brasil

Session : Portable and purpose-made devices

Keynote lecture : A few contributions to the development of capillary electrophoresis systems

Claudimir Lucio do Lago is graduated in Chemistry at the University of Campinas (1986), from where also obtained his PhD working with the development of Analytical instrumentation (1991). This is also the central theme of his “Livre-Docente” thesis at University of São Paulo (1998). He was a visiting scientist at the Technical University of Munich (2013) and is a full professor at the University of São Paulo since 2014. Although his interests in instrumentation range from quartz crystal microbalance to mass spectrometry, the most frequent topic has been capillary electrophoresis. His group has contributed to the development of capacitively coupled contactless conductivity detection and concepts such as thermal marks and separated electrolysis. The development of instrumentation has been accompanied of the development of methods in a wide range of applications. Over the last decade, he has dedicated also to the study of hemiesters of carbonic acids or monoalkyl carbonates, for which purpose the development of new or improved analytical instrumentation is a must.

Alberto Escarpa
Department of Analytical Chemistry and Chemical Engineering, University of Alcala de Henares, Spain

Session : Food, beverages, nutrition and health

Keynote lecture : Tailored micromotors for analyte (bio)sensing in health applications

Dr. Alberto Escarpa is Full Professor of Analytical Chemistry at the University of Alcalá. He has received highly prestigious awards such the *International Dropsens Award* “*Best research work in applied electroanalytical chemistry*” (finalist) in 2015. He served as guest professor in international Universities also member of the *Collegium of the PhD in Food Science* at Teramo University (Italy).

His main research interests are analytical miniaturization and nanotechnologies, the exploration of new nanomaterials for optical and electrochemical (bio)-sensing, electrochemical microfluidics, lab-on-a-chip technology and self-propelled micromotors. He has co-authored more than 150 peer-reviewed articles in leading international peer-review journals, 3 international patents and several book chapters, yielding an h-index of 41. He has recently been included in the top-1% of most cited chemists in the world, and in the top-145-ranked (#76) chemistry researchers in Spain. His works have been featured and highlighted in several occasions as cover in top journals (*Angewandte Chemie International Edition, Chemical Science, Chemistry: European Journal, Lab on a Chip, Analytical Chemistry, Analyst*) and social scientific media *(Chemical World from RSC), Separations Now from Wiley) and C&EN news from ACS). He has also supervised 14 PhD students and several postdoctoral researchers.* He has edited and authored several books, organized several international congresses, member of the Editorial board of numerous journals and *Editor in Chief* for *Microchimica Acta*.

Juliane Hollender
Department Environmental Chemistry, Federal Institute of Aquatic Science and Technology (EAWAG), Dübendorf, Switzerland

Session : Environmental analysis

Keynote lecture : HPLC coupled to high resolution mass spectrometry has boosted environmental research

Prof. Dr. Juliane Hollender is the head of the department Environmental Chemistry at the Swiss Federal Institute of Aquatic Science and Technology (Eawag) as well as adjunct professor at the ETH Zurich in the department Environmental System Sciences. After a master in chemistry and a PhD in environmental engineering, she worked for 10 years at the RWTH Aachen in Germany before she moved to Switzerland in 2005. Her research concentrates on the fate of organic micropollutants in the natural and engineered aquatic environment. She is especially interested in biological transformation of contaminants in the environment, bioaccumulation in aquatic organisms as well as non-target analysis using high resolution mass spectrometry to get a more comprehensive picture of the contamination of aquatic systems.
She is a member of scientific committees including the research council of the Swiss National Science Foundation and the steering committee of the network of reference laboratories, research centres and related organisations for monitoring of emerging environmental substances (NORMAN).

Govind Kaigala
IBM Research Laboratory, Zurich, Switzerland

Session : Organ- and cell-on-chip

Keynote lecture : Microscale biochemical assays for multiomic profiling of tumor sections

Our vision is of a single platform of utility to researchers and diagnosticians alike to quantify and profile tumor heterogeneity. Every organism is an expression of the fine balance between order and chaos. Tumor biology, not being exempt from this complexity, expresses ‘chaos’ in the form of heterogeneity, and overlooking it by averaging data across whole tumors often makes profiles inaccurate and their treatment ineffective. To address this particular challenge from a technological perspective, we introduced an open-space microfluidic technology called the microfluidic probe (MFP). The MFP enables biochemical assays at the microscale that can both deposit biomarker specific ligands and extract cells from tissue sections using hydrodynamic confinements. These comprise single or multiple biochemicals being injected and aspirated simultaneously so as to localize nanoliter volume liquids on um-length scale on an immersed surface

without mechanical contact to the tissue. The continuous flow inherent to this system allows for rapid reaction kinetics and dynamic control over the location and area of interaction. In this talk, I will outline some of our efforts in trying to translate such techniques into current pathology workflows and obtain quantifiable genomic, transcriptomic and proteomic information from the same tissue sample, with interactive control over the 'scale/spatial resolution' of analysis.

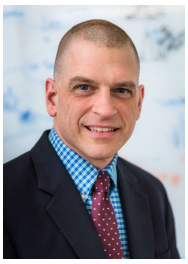
Pavel Kuban
Institute of Analytical Chemistry of the Czech Academy of Sciences, Brno, Czech Republic

Session : Miniaturized sample preparation techniques

Keynote lecture : Liquid phase microextraction of biological samples – from principles to automation

Pavel Kubáň graduated in Chemistry and Mathematics from Masaryk University, Brno, Czech Republic, obtained his Ph.D. degree from Mendel University, Brno, Czech Republic and his Researcher Professor degree from the Czech Academy of Sciences. Currently, he is the leading scientist at the Department of Electromigration Methods at the Institute of Analytical Chemistry of the Czech Academy of Sciences.
His work is devoted mainly to capillary electrophoresis, liquid phase microextraction techniques and to their coupling for direct analyses of complex samples. He is author of more than 100 scientific papers, reviews and book chapters and 60 contributions on scientific conferences. He is a member of the editorial board of Separation Science Plus journal (Wiley).

Jarrod Marto
Dana-Farber Cancer Institute and Harvard Medical School, Boston, USA



Session : Comprehensive omics

Keynote lecture : Adventures in Multidimensional Fractionation for Quantitative Proteomics

Dr. Marto is an Associate Professor in the Department of Cancer Biology at the Dana-Farber Cancer Institute, with a joint appointment in Pathology at the Brigham and Women's Hospital and Harvard Medical School. Dr. Marto also Directs the Blais Proteomics Center at the Dana-Farber.

Dr. Marto received his Ph.D. in analytical chemistry at The Ohio State University with Alan Marshall in 1995 and then went on to postdoctoral studies at the University of Virginia with Donald Hunt, followed by several years in the biotech sector. Dr. Marto's group at the Dana-Farber has made significant contributions to the fundamental development of 1-D, 2-D, and 3-D microcapillary, high performance liquid chromatography and the interface of these separation platforms directly with mass spectrometry.
Dr. Marto uses these LC-MS/MS technologies to interrogate phosphorylation signaling and biochemical protein complexes as regulatory and organizational modules in the functional proteome. Dr. Marto uses similar approaches to interrogate the cellular activity of small molecule probes to uncover new pharmacologically-addressable targets and therapeutic pathways. Dr. Marto has published widely in the areas of analytical chemistry, advanced instrumentation, informatics, and cancer biology.

Gabriella Massolini
Department of Pharmaceutical Sciences, University of Pavia, Italy

Session : Bioaffinity chromatography, monoliths and IMERs

Keynote lecture : Chromatographic Imers as Prototypes for Flow-Chemistry Applications

Visiting scientist at Bradford University (UK) and associated professor at McGill University in Montreal (Canada) working with Prof. Irving Wainer. She is member of the PhD Teaching Council in "Chemistry and pharmaceutical sciences" and for 10 years she was director of the PhD School. She served as Director of the Department of Drug Sciences of Pavia University (2011-2018). At present she is member of the board of the Cluster in Life Sciences in Lombardia Region and of the board of Pavia University.
Editor of Chromatographia since 2006.
Professor Massolini has been active in all fields of separation sciences particularly in liquid chromatography and chromatographic-like techniques. Her main scientific interests involve the development of stationary phases based on immobilized proteins/enzymes. In particular, she carried out innovative researches on the exploitation of immobilized enzymes as bioreactors in liquid chromatography (flow-chemistry systems) and on the comprehension of interaction mechanisms for protein-based stationary phases. She has authored 107 peer-reviewed scientific publications and presented many invited lectures at scientific meetings.

Michael Ramsey
Department of Chemistry,University of North Carolina, USA

Session : CE-MS and advances in instrumentation

Keynote lecture : Microchip CE: Characterizing Molecules Large-to-Small using Mass Spectrometers Large-to-Small

J. Michael Ramsey holds the Minnie N. Goldby Distinguished Professor of Chemistry Chair at the UNC - Chapel Hill. He is also on the faculty of the Departments of Biomedical Engineering and Applied Physical Sciences. He is a member of the National Academy of Engineering and a Fellow of the Optical Society of America, the American Chemical Society, and the American Institute for Medical and Biological Engineering. Moreover,
Dr. Ramsey is the scientific founder of Caliper Technologies (NASDAQ:CALP), renamed Caliper Life Sciences and acquired by PerkinElmer in 2011. He is also the scientific founder of the venture-backed companies 908 Devices Inc., a company developing revolutionary compact mass spectrometry and chemical separations-based products, and Genturi Inc., a genomics tools provider. Prof. Ramsey has published over 300 peer-reviewed papers (H-index = 64) and presented over 500 invited, plenary, or named lectures. In addition, he has over 150 issued and 20 pending patents.

Mike Roper

Department of Chemistry & Biochemistry, The Florida State University, Florida,USA

Session : Pharmaceuticals and drug development

Keynote lecture : Quantitative microscale analytical systems to aid in drug development

Michael Roper obtained his PhD from Prof. Robert T. Kennedy in 2003 and then performed postdoctoral research with Prof. James P. Landers. Since joining the faculty at Florida State University in 2006, the Roper research group has developed powerful analytical systems for the quantitative measurement of small molecules and peptides secreted from cellular tissues with high temporal resolution. In particular, his group has examined the endocrine portion of the pancreas, islets of Langerhans, which are responsible for controlling blood glucose levels through the release of hormone peptides. Defects in the release of these hormones are found in numerous metabolic diseases, including type 2 diabetes; therefore, analytical tools that can provide insight into the pathways of hormone release are imperative for gaining a better understanding of the biology that controls glucose levels and possible therapeutic routes towards its amelioration. Dr. Roper has received the 2013 American Chemical Society Division of Analytical Chemistry's Young Investigator Award in Separation Science and the 2018 Mid-Career Award by the American Electrophoresis Society.

Koen Sandra

Research Institute for Chromatography, Kortrijk, Belgium

Session : Biopharmaceuticals

Keynote lecture : In-depth characterization of biopharmaceuticals using micropillar array columns combined with mass spectrometry

Koen Sandra received a PhD degree in Biochemistry from the Ghent University, Belgium in 2005. After his PhD, he joined Pronota, a molecular diagnostics company where he was active in developing analytical platforms for disease biomarker discovery and in setting up external collaborations. In 2008, he joined RIC, a company that provides chromatographic, electrophoretic and mass spectrometric support to the chemical, life sciences and pharmaceutical industries, where he currently holds the position of Scientific Director. As a non-academic scientist, Koen Sandra is author of over 40 highly cited scientific papers and has presented his work at numerous conferences as an invited speaker.

Franco Tagliaro

Unit of Forensic Medicine, Department of Diagnostics and Public Health, University of Verona, Verona, Italy

Session : Biomarkers; clinical, diagnostic

Keynote lecture : Capillary Electrophoresis application in Forensic Medicine and Science

Professor Franco Tagliaro is full professor of Forensic Medicine at the University of Verona in Italy, where he is head of the Section of Legal Medicine, Department of Diagnostics and Public Health and of the Unit of Legal Medicine of the University Hospital. He is the chairman of the PhD Program in NanoScience and Advanced Technologies.

Pr. Tagliaro was formerly visiting professor in the years 1995-2005 at the University of Alabama at Birmingham, USA, and since 2006 he is "professor on ad hoc contract" at the University of New Haven, CT, USA.
Pr. Tagliaro was ad hoc consultant of the United Nations Interregional Crime and Justice Research Institute, Roma, and ad hoc consultant of the UNDCP (United Nations International Drug Control Program, Vienna) for capillary electrophoresis; since 2016, he is Member of the International Panel of Forensic Experts of UNODC, United Nations Office on Drugs and Crime, Vienna and from April 2017, scientific consultant at the Pharmacokinetics and Metabolomics Laboratory, I.M. Sechenov University, Moscow, Russia.
He was member of the editorial board of "Journal of Chromatography B", and now of "Forensic Science International", "Forensic Science Journal", "Italian Journal of Legal Medicine". Since 2018, he is Associate Editor of "Medicine Science and The Law".
Pr. Tagliaro research fields are capillary electrophoresis developments for forensic and legal applications, with extensive publications in international and national journals and books with international and national publishers.

Frederic Zenhausern
University of Arizona, Phoenix, USA

Session : Point-of-care devices, innovation in microfluidics, precision medecine

<u>Keynote lecture :</u> Advanced Tools in Precision Medicine: from 3D in vitro tissue models to point-of-care diagnostics

Dr. Frederic Zenhausern is Endowed Chair Professor of Basic Medical Sciences, Professor of Radiation Oncology at the College of Medicine, Phoenix, and founder director of the Center for Applied Nanobioscience and Medicine (ANBM) at the University of Arizona (UofA). Since 2019, he is the co-chair of the Department of Basic Medical Sciences. He is also Member of the Therapeutic Development Program at the University of Arizona's Cancer Center, member of BIO5 and Professor at the Department of Biomedical Engineering, College of Engineering. Prior to joining the University of Arizona, Dr. Zenhausern was founder director of the Center for Applied Nanobioscience at the Arizona State University's Biodesign Institute, and co- founder and R&D director of the first phase of the Center for Flexible Display and then CTO of MacroTechnology Works, a university think tank. Zenhausern was also tenured Professor with both the Electrical Department and the School of Materials at the Ira A. Fulton School of Engineering.
Dr. Zenhausern is also Professor at the Translational Genomics Research Institute (TGen) and lead innovative clinical research initiatives as director of the Personalized Medicine Research Laboratory at Honor Health Research Institute. Over a decade, Zenhausern held corporate research positions at IBM Research Division and Motorola Labs. He was also a senior research scientist at Firmenich Inc., Princeton (NJ). He is also a "Professeur Titulaire (Adjunct)" with active research collaboration at the University of Geneva's School of Pharmaceutical Sciences.
Dr. Zenhausern received his B.S. in biochemistry from the University of Geneva, his M.B.A. in finance from Rutgers University and his Doctorate Es Science in Applied Physics from the Department of Condensed Physics Matter at the University of Geneva. He has co-authored about 80 scientific publications and over three dozen U.S. patents. Zenhausern founded several startups and currently sit on several corporate scientific boards. He is also the recipients of several awards and an elected fellow of the U.S. National Academy of Inventors (NAI) and a Fellow of the American Institute of Medical and Biological Engineering (AIMBE).

Democratizing Molecular Biology

Analysis at the Microscale

Bringing together innovative sample preparation and complex microscale technologies to deliver molecular biology analysis at the point-of-need

Developing rapid COVID-19 testing for return to regular operations

Conducting water pathogen analysis in the Pacific Ocean

Diagnosing cassava mosaic virus in Tanzania

Creating the next generation of rapid, point-of-need technologies to address global health, safety, and environmental issues

MicroGEM

info@microgembio.com www.microgembio.com

Poster presentations

Posters and also 3 min poster pitches (by some of them) are available on the platform's Poster Gallery. You have the opportunity to discuss with the presenters, during two live sessions, which are planned according the timetable below.
To do so, go to the Schedule on the platform, select your session and simply click on the virtual room of your choice.

Topics

- Bioaffinity chromatography, monoliths and IMERs
- Biomarkers; clinical, diagnostic and forensic applications
- Biopharmaceuticals
- Biosensors, instrumentation and applications
- CE-MS and advances in instrumentation
- Comprehensive omics
- Electrodriven separations - AFSEP Session
- Environmental analysis
- Food, beverages, nutrition and health
- Miniaturized sample preparation techniques
- Organ- and cell-on-chip
- Pharmaceuticals and drug development
- Point-of-care devices, innovation in microfluidics, precision medecine
- Portable and purpose-made devices

Details of the posters are included on the following pages, classified by topic.

Best Poster Award

All posters and poster pitches presented at MSB 2020 will be considered for an MSB 2020 Poster Award. The posters will be reviewed by an international panel of scientists and ranked based on novelty and originality of the work, creativity and potential for innovation; scope of work, technical quality of experimental design, and execution of experiments; readability of the presentation and author's explanations.
Poster awards comprise cash prizes and book vouchers for the best posters. Runners-up will receive book vouchers.
We thank AFSEP, WILEY and RSC for their contribution to these prizes.
The winners will be announced during the Awards Ceremony on Wednesday, September 30th.
2 posters will also be awarded thanks to the vote of all attendees. All the participants can rate the posters from the poster gallery platform.

Poster N°	Lastname	Session 1 CEST	Room session 1	Session 2 CEST	Room session 2	Poster topic
1	LIANGSUPREE	Monday 28 Sept 06:05 pm	1	Tuesday 29 Sept 02:30 pm	1	Bioaffinity chromatography, monoliths and IMERs
2	LU	Monday 28 Sept 06:05 pm	2	Tuesday 29 Sept 02:30 pm	2	Bioaffinity chromatography, monoliths and IMERs
3	MALEVAL	Monday 28 Sept 06:05 pm	3	Tuesday 29 Sept 02:30 pm	3	Bioaffinity chromatography, monoliths and IMERs
23	RINALDI	Monday 28 Sept 06:35 pm	1	Tuesday 29 Sept 03:00 pm	1	Bioaffinity chromatography, monoliths and IMERs
24	YANG	Monday 28 Sept 06:35 pm	2	Tuesday 29 Sept 03:00 pm	2	Bioaffinity chromatography, monoliths and IMERs
5	KUZYK	Monday 28 Sept 06:05 pm	5	Tuesday 29 Sept 02:30 pm	5	Biomarkers: clinical, diagnostic and forensic applications
6	LOPEZ-GONZALVEZ	Monday 28 Sept 06:05 pm	6	Tuesday 29 Sept 02:30 pm	6	Biomarkers: clinical, diagnostic and forensic applications
25	MORANI	Monday 28 Sept 06:35 pm	3	Tuesday 29 Sept 03:00 pm	3	Biomarkers: clinical, diagnostic and forensic applications
27	GANGNUS	Monday 28 Sept 06:35 pm	5	Tuesday 29 Sept 03:00 pm	5	Biomarkers: clinical, diagnostic and forensic applications
37	BENAVENTE	Monday 28 Sept 06:35 pm	15	Tuesday 29 Sept 03:00 pm	15	Biomarkers: clinical, diagnostic and forensic applications
7	CHAMIEH	Monday 28 Sept 06:05 pm	7	Tuesday 29 Sept 02:30 pm	7	Biopharmaceuticals
8	CROSNIER DE LASSICHERE	Monday 28 Sept 06:05 pm	8	Tuesday 29 Sept 02:30 pm	8	Biopharmaceuticals
9	DADOUCH	Monday 28 Sept 06:05 pm	9	Tuesday 29 Sept 02:30 pm	9	Biopharmaceuticals
10	DOMINGUEZ-VEGA	Monday 28 Sept 06:05 pm	10	Tuesday 29 Sept 02:30 pm	10	Biopharmaceuticals
22	DROUYE	Monday 28 Sept 06:05 pm	22	Tuesday 29 Sept 02:30 pm	22	Biopharmaceuticals
28	DADOUCH	Monday 28 Sept 06:35 pm	6	Tuesday 29 Sept 03:00 pm	6	Biopharmaceuticals
30	GEURINK	Monday 28 Sept 06:35 pm	8	Tuesday 29 Sept 03:00 pm	8	Biopharmaceuticals
32	HELALI	Monday 28 Sept 06:35 pm	10	Tuesday 29 Sept 03:00 pm	10	Biopharmaceuticals
45	JAAG	Monday 28 Sept 07:05 pm	1	Tuesday 29 Sept 03:30 pm	1	Biopharmaceuticals
46	LOCK	Monday 28 Sept 07:05 pm	2	Tuesday 29 Sept 03:30 pm	2	Biopharmaceuticals
47	MURISIER	Monday 28 Sept 07:05 pm	3	Tuesday 29 Sept 03:30 pm	3	Biopharmaceuticals
48	SANTOS	Monday 28 Sept 07:05 pm	4	Tuesday 29 Sept 03:30 pm	4	Biopharmaceuticals
67	SERVAIS	Monday 28 Sept 07:35 pm	1	Tuesday 29 Sept 04:00 pm	1	Biopharmaceuticals
68	SIROIT	Monday 28 Sept 07:35 pm	2	Tuesday 29 Sept 04:00 pm	2	Biopharmaceuticals
69	SMADJA	Monday 28 Sept 07:35 pm	3	Tuesday 29 Sept 04:00 pm	3	Biopharmaceuticals
70	TENGATTINI	Monday 28 Sept 07:35 pm	4	Tuesday 29 Sept 04:00 pm	4	Biopharmaceuticals
49	MOLINA	Monday 28 Sept 07:05 pm	5	Tuesday 29 Sept 03:30 pm	5	Biosensors: instrumentation and applications
50	TA	Monday 28 Sept 07:05 pm	6	Tuesday 29 Sept 03:30 pm	6	Biosensors: instrumentation and applications
51	GRAF	Monday 28 Sept 07:05 pm	7	Tuesday 29 Sept 03:30 pm	7	Biosensors: instrumentation and applications
71	SUMANTAKUL	Monday 28 Sept 07:35 pm	5	Tuesday 29 Sept 04:00 pm	5	Biosensors: instrumentation and applications

Poster N°	Lastname	Session 1 CEST	Room session 1	Session 2 CEST	Room session 2	Poster topic
72	TRAPIELLA	Not available		Not available		Biosensors: instrumentation and applications
21	FRANCOIS	Monday 28 Sept 06:05 pm	21	Tuesday 29 Sept 02:30 pm	21	CE-MS and advances in instrumentation
29	MEIXNER	Monday 28 Sept 06:35 pm	7	Tuesday 29 Sept 03:00 pm	7	CE-MS and advances in instrumentation
52	ŘEMÍNEK	Monday 28 Sept 07:05 pm	8	Tuesday 29 Sept 03:30 pm	8	CE-MS and advances in instrumentation
53	SANDOR	Monday 28 Sept 07:05 pm	9	Tuesday 29 Sept 03:30 pm	9	CE-MS and advances in instrumentation
54	VAN MEVER	Monday 28 Sept 07:05 pm	10	Tuesday 29 Sept 03:30 pm	10	CE-MS and advances in instrumentation
56	ERNY	Monday 28 Sept 07:05 pm	12	Tuesday 29 Sept 03:30 pm	12	Comprehensive omics
58	JAOUEN	Monday 28 Sept 07:05 pm	14	Tuesday 29 Sept 03:30 pm	14	Comprehensive omics
73	NIX	Monday 28 Sept 07:35 pm	7	Tuesday 29 Sept 04:00 pm	7	Comprehensive omics
75	PEZZATTI	Monday 28 Sept 07:35 pm	9	Tuesday 29 Sept 04:00 pm	9	Comprehensive omics
76	VISCONTI	Monday 28 Sept 07:35 pm	10	Tuesday 29 Sept 04:00 pm	10	Comprehensive omics
11	AL HAMOUI DIT BANNI	Monday 28 Sept 06:05 pm	11	Tuesday 29 Sept 02:30 pm	11	Electrodriven separations
31	DUROUX	Monday 28 Sept 06:35 pm	9	Tuesday 29 Sept 03:00 pm	9	Electrodriven separations
33	GLIGA	Monday 28 Sept 06:35 pm	11	Tuesday 29 Sept 03:00 pm	11	Electrodriven separations
43	AL HAMOUI DIT BANNI	Monday 28 Sept 06:35 pm	21	Tuesday 29 Sept 03:00 pm	21	Electrodriven separations
44	EMONTS	Monday 28 Sept 06:35 pm	22	Tuesday 29 Sept 03:00 pm	22	Electrodriven separations
60	LECLERCQ	Monday 28 Sept 07:05 pm	16	Tuesday 29 Sept 03:30 pm	16	Electrodriven separations
61	NGUYEN	Monday 28 Sept 07:05 pm	17	Tuesday 29 Sept 03:30 pm	17	Electrodriven separations
63	VOETEN	Monday 28 Sept 07:05 pm	19	Tuesday 29 Sept 03:30 pm	19	Electrodriven separations
77	BAZIN	Monday 28 Sept 07:35 pm	11	Tuesday 29 Sept 04:00 pm	11	Environmental analysis
78	KIM	Monday 28 Sept 07:35 pm	12	Tuesday 29 Sept 04:00 pm	12	Environmental analysis
80	ROESCH	Monday 28 Sept 07:35 pm	14	Tuesday 29 Sept 04:00 pm	14	Environmental analysis
12	BIGARD & CLERGE	Monday 28 Sept 06:05 pm	12	Tuesday 29 Sept 02:30 pm	12	Food, beverages, nutrition and health
13	GARCĬA-CAMPAÑA	Monday 28 Sept 06:05 pm	13	Tuesday 29 Sept 02:30 pm	13	Food, beverages, nutrition and health
14	HASELBERG	Monday 28 Sept 06:05 pm	14	Tuesday 29 Sept 02:30 pm	14	Food, beverages, nutrition and health
34	LARA	Monday 28 Sept 06:35 pm	12	Tuesday 29 Sept 03:00 pm	12	Food, beverages, nutrition and health
35	MARQUES	Monday 28 Sept 06:35 pm	13	Tuesday 29 Sept 03:00 pm	13	Food, beverages, nutrition and health
15	BENAVENTE	Monday 28 Sept 06:05 pm	15	Tuesday 29 Sept 02:30 pm	15	Miniaturized sample preparation techniques
16	COCOVI-SOLBERG	Monday 28 Sept 06:05 pm	16	Tuesday 29 Sept 02:30 pm	16	Miniaturized sample preparation techniques
17	DUGAS	Monday 28 Sept 06:05 pm	17	Tuesday 29 Sept 02:30 pm	17	Miniaturized sample preparation techniques

Poster N°	Lastname	Session 1 CEST	Room session 1	Session 2 CEST	Room session 2	Poster topic
38	RICHERD	Monday 28 Sept 06:35 pm	16	Tuesday 29 Sept 03:00 pm	16	Miniaturized sample preparation techniques
39	SANCHES SILVA	Monday 28 Sept 06:35 pm	17	Tuesday 29 Sept 03:00 pm	17	Miniaturized sample preparation techniques
40	WANG	Monday 28 Sept 06:35 pm	18	Tuesday 29 Sept 03:00 pm	18	Miniaturized sample preparation techniques
88	BREIEV	Monday 28 Sept 07:35 pm	22	Tuesday 29 Sept 04:00 pm	22	Organ- and cell-on-chip
19	GEURINK	Monday 28 Sept 06:05 pm	19	Tuesday 29 Sept 02:30 pm	19	Pharmaceuticals and drug development
20	KOVAL	Monday 28 Sept 06:05 pm	20	Tuesday 29 Sept 02:30 pm	20	Pharmaceuticals and drug development
41	URAL	Monday 28 Sept 06:35 pm	19	Tuesday 29 Sept 03:00 pm	19	Pharmaceuticals and drug development
42	VAN DER BURG	Monday 28 Sept 06:35 pm	20	Tuesday 29 Sept 03:00 pm	20	Pharmaceuticals and drug development
66	ZESTOS	Monday 28 Sept 07:05 pm	22	Tuesday 29 Sept 03:30 pm	22	Point-of-care devices, innovation in microfluidics, precision medecine
81	BELLEBON	Monday 28 Sept 07:35 pm	15	Tuesday 29 Sept 04:00 pm	15	Point-of-care devices, innovation in microfluidics, precision medecine
82	D'ORLYE	Monday 28 Sept 07:35 pm	16	Tuesday 29 Sept 04:00 pm	16	Point-of-care devices, innovation in microfluidics, precision medecine
83	IMAMURA	Monday 28 Sept 07:35 pm	17	Tuesday 29 Sept 04:00 pm	17	Point-of-care devices, innovation in microfluidics, precision medecine
84	MAI	Monday 28 Sept 07:35 pm	18	Tuesday 29 Sept 04:00 pm	18	Point-of-care devices, innovation in microfluidics, precision medecine
64	DEROO	Monday 28 Sept 07:05 pm	20	Tuesday 29 Sept 03:30 pm	20	Portable and purpose-made devices
65	DREVINSKAS	Monday 28 Sept 07:05 pm	21	Tuesday 29 Sept 03:30 pm	21	Portable and purpose-made devices
85	MUSILE	Monday 28 Sept 07:35 pm	19	Tuesday 29 Sept 04:00 pm	19	Portable and purpose-made devices
86	TUMA	Monday 28 Sept 07:35 pm	20	Tuesday 29 Sept 04:00 pm	20	Portable and purpose-made devices
87	WANE	Monday 28 Sept 07:35 pm	21	Tuesday 29 Sept 04:00 pm	21	Portable and purpose-made devices

Bioaffinity chromatography, monoliths and IMERs

1 Rapid affinity monolith chromatographic isolation of low-density lipoproteins and extracellular vesicles from human blood plasma
LIANGSUPREE Thanaporn - University Of Helsinki – Helsinki, Finland
Co-authors: Evgen Multia, Jari Metso, Matti Jauhiainen, Katariina Öörni, Aleš Podgornik, Marja-Liisa Riekkola

2 A thiol-ene polymer microfluidics device for integrating continuous on-chip digestion and separation, followed by characterization with mass spectrometry
LU Nan - University of Copenhagen, Microscale Analytical Systems, Department of Pharmacy - Copenhagen Denmark
Co-authors: Drago Sticker, Andreas Kretschmann, Nickolaj J. Petersen, Jörg P. Kutter

3 Innovative Hybrid Porous Materials for Glycomic Analysis: From Biomarkers Discovery to Clinical Diagnosis
MALEVAL Marc - CEA Saclay/Upsud Nimbe/Ledna - Gif Sur Yvette, France
Co-authors: Laurent Mugherli, Sophie Cholet, Catherine Andasse, Martine Mayne-l'Hermite, François Fenaille

23 Polymerized high internal phase emulsion (polyHIPE) materials as supports for enzyme immobilization
RINALDI Francesca - University Of Pavia, Pharmaceutical Analysis – Pavia, Italy
Co-authors: Antonino Ferro, Marco Corti, Giuseppe Tripodo, Enrica Calleri, Gabriella Massolini

24 A monolith-based Enzyme Reactor for O-deglycosylation of glycoproteins
YANG Bin - Institut Galien Paris-Sud , Proteins and Nanotechnology in Analytical Science – Paris, France
Co-authors: Zhengjin Jiang, N. Thuy Tran, Myriam Taverna

Biomarkers: clinical, diagnostic and forensic applications

5 In-depth glycosylation analysis of tumour-related carcinoembryonic antigen.
KUZYK Valeriia - Vrije Universiteit Amsterdam, BioAnalytical Chemistry- Amsterdam, The Netherlands
Co-authors: Rob Haselberg, Guinevere Lageveen-Kammeijer, Manfred Wuhrer, Govert Somsen

6 Multiplatform Metabolomics approach for biomarker discovery in cancer of neuroendocrine origin
LOPEZ-GONZALVEZ Angeles - Universidad CEU San Pablo- Boadilla Del Monte, Spain
Co-authors: Angeles Lopez-Lopez, Beatriz Soldevilla, Anna La Salvia, Genoveva Gómez-Esteves, Rocio García-Carbonero, Coral Barbas

25 Novel exosome isolation and enrichment strategies from biofluids: a zoom into performance with a new characterization tool based on capillary electrophoresis
MORANI Marco - Institut Galien Paris-Sud, UMR CNRS 8612, Proteins and Nanotechnology in Analytical Science (PNAS) – Paris, France
Co-authors: Thanh Duc Mai, Zuzana Krupova, Pierre Defrenaix, Evgen Multia, Marja-Liisa Riekkola, Myriam Taverna

27 Facilitating insights into the pathophysiology of SARS-CoV-2: LC-MS/MS method for peptides of the kinin-kallikrein system
GANGNUS Tanja - HHU Dusseldorf, Insitute of Clinical Pharmacy – Dusseldorf, Germany
Co-author: Bjoern B. Burckhardt

37 Analysis of glycopeptide biomarkers by on-line TiO2 solid-phase extraction capillary electrophoresis-mass spectrometry
BENAVENTE Fernando - Dpt Of Chemical Engineering And Analytical Chemistry, University Of Barcelona Fac. Química - Barcelona Spain
Co-authors: Montserrat Mancera-Arteu, Nejsi Lleshi, Estela Giménez, Victoria Sanz-Nebot

Biopharmaceuticals

7 Do co-solvents solve the solubility problems? Whereabouts of co-solvents in SEDDS formulations assessed by Taylor dispersion analysis
CHAMIEH Joseph - Université de Montpellier, IBMM – Montpellier, France
Co-authors: Arne Matteo Jörgensen, Andreas Bernkop-Schnürch, Hervé Cottet

8 Capillary Isoelectric Focusing-Mass Spectrometry for Charge Variants analysis of monoclonal antibodies
CROSNIER DE LASSICHERE Cédric - AGILENT TECHNOLOGIES - Les Ulis, France
Co-authors: Qiangwei Xia, Henri Nicar

9 In-line bottom-up and middle-up approaches for the characterization of therapeutic mAb by capillary electrophoresis
DADOUCH Meriem - Université de Montpellier, IBMM – Montpellier, France
Co-authors: Yoann Ladner, Claudia Bich, Marion Larroque, Catherine Perrin

10 Sheathless CE-MS for the characterization of bispecific antibodies
DOMINGUEZ-VEGA Elena - Leiden University, Medical Center Center for Proteomics and Metabolomics – Leiden, The Netherlands
Co-authors: Gstöttner Christoph, Nicolardi Simone, Wuhrer Manfred

22 Online IEX-MS Characterization and Monitoring of mAb Charge Heterogeneity Using an Optimized Cation Exchange Resin and Compact TOF Mass Spectrometer
DROUYE Freddy - WATERS - St Quentin en Yvelines, France
Co-authors: Samantha Ippoliti, Qi Wang, Ying Qing Yu, Matthew A. Lauber

28 In-line middle-up approaches for analysis of therapeutic monoclonal antibodies by capillary electrophoresis
DADOUCH Meriem - Université de Montpellier, IBMM – Montpellier, France
Co-authors: Yoann Ladner, Claudia Bich, Marion Larroque, Catherine Perrin

30 Multi-purpose CZE adenoviral vaccine analysis method
GEURINK Lars - Janssen Vaccines And Prevention, Analytical development – Leiden, The Netherlands
Co-authors: Ewoud van Tricht, Cari Sänger-van de Griend

32 New approach of preparation for the profiling and characterization of N-glycans by liquid chromatography mass spectrometry
HELALI Yosra – ULB, Faculté de Pharmacie – Bruxelles, Belgium
Co-authors: Van Antwerpen Pierre, Marchant Arnaud, Delporte Cedric

45 Charge variant analysis of monoclonal antibodies by SCX x RP online 2D-LC-MS
JAAG Simon - University Of Tuebingen, Pharmaceutical (Bio)Analysis – Tuebingen, Germany
Co-author: Michael Lämmerhofer

46 Native state charge variant analysis of commercialized monoclonal antibodies
LOCK Stephen – SCIEX – Pudsey, United Kingdom
Co-authors: Marcus Heinl, Karsten Hendriks, Peter Peter Holper

47 Analysis of acidic monoclonal antibody charge heterogeneity by a generic CZE method
MURISIER Amarande - Institute Of Pharmaceutical Sciences Of Western Switzerland (ISPSO), Analytical Pharmaceutical Chemistry - Genève Switzerland
Co-authors: Alexandre Goyon, Davy Guillarme

48 Characterization of AAV Capsid Protein by CE-SDS with UV and LIF detection using Chromeo Dye P503
SANTOS Marcia – SCIEX – Brea , USA
Co-author: Tingting Li

67 Characterization of virus-like particles of grapevine fanleaf virus presenting L2 epitope of human papillomavirus minor capsid protein
SERVAIS Anne-Catherine - University of Liège, Analysis of Medicines -Liège, Belgium
Co-authors: Yazdani Razieh, Shams-Bakhsh Masoud, Hassani-Mehraban Afshin, Shahriar Arab Seyed, Thelen Nicolas, Thiry Marc, Crommen Jacques, Fillet Marianne, Jacobs Nathalie, Brans Alain

68 Improving confidence and productivity for N-linked glycan analysis in biotherapeutics development using an integrated and compact LC-FLR-HRMS system
SIROIT Christophe - WATERS - St Quentin en Yvelines, France
Co-authors: Ximo Zhang, Corey Reed, Henry Shion, Robert Birdsall, Ying Qing Yu

69 Separation techniques coupled to native mass spectrometry: new tools to address the challenge in quality control of therapeutic monoclonal antibodies in hospital
SMADJA Claire – CNRS, Institut Galien Paris-Sud - Châtenay-Malabry, France
Co-authors: Le-Minh Victor, Sola Laura, Chiari Marcella, Halgand Frederic, Van Der Rest Guillaume, Tran Thuy, Taverna Myriam

70 Glycosylation profiling of monoclonal antibody Rituximab derived from different plants
TENGATTINI Sara - Department Of Drug Sciences, University Of Pavia, Laboratory of Pharmaceutical Analysis – Pavia, Italy
Co-authors: Francesca Rinaldi, Domenica Toto, Claudio Pisano, Marcello Donini, Carla Marusic, Eugenio Benvenuto, Caterina Temporini

Biosensors: instrumentation and applications

49 Biomarkers detection using Biomachines for medical diagnosis
MOLINA Franck - CNRS Sys2Diag – Montpellier, France
Co-authors: Schneider Francisco, Espeut Julien, Champigneux Pierre, Alali Mellis, Baptiste Julie, Davy Martin, Fruchard Carole, Amar Patrick

50 Tryptophan, valine and isoleucine analysis by CE and LED induced fluorescence or conductivity detections: a comparison
TA Hai Yen - Université Paul Sabatier, IMRCP – Toulouse, France
Co-authors: Lucie Perquis, Cédric Sarazin, Bruno Guiard, Varravaddheay Ong Meang, Fabrice Collin, François Couderc

51 Development of detection systems in intermediate microfluidic interfaces for multidimensional electrophoretic separation methods – a compilation
GRAF Hannes - Eberhard Karls Universtitaet – Tuebingen, Germany
Co-authors: Rudisch Benjamin, Huhn Carolin

71 Novel approaches for fabrication of nitrocellulose-based microfluidic analytical devices using CO2 laser patterning
SUMANTAKUL Saichon - Oregon State University – Corvallis, USA
Co-authors: Jiani Jiang, Vincent Remcho

72 Synthesis, characterisation, and evaluation of a novel optical imaging nanoprobe for the targeting of α,β-integrins in cancer diagnosis
TRAPIELLA Laura - Chimie Paristech PSL – Paris, France
Co-authors: Thomas Pons, Nicolas Lequeux, Bich-Thuy Doan, Fanny d'Orlyé, Anne Varenne

CE-MS and advances in instrumentation

21 CEToolbox: Specialized calculator for Capillary Electrophoresis users as an Android application
FRANCOIS Yannis - Université de Strasbourg, MSLIS / UMR, CNRS 7140 – Strasbourg, France
Co-authors: Antony Lechner, Pansanel Jérome, Biacchi Michae , Leize-Wagner Emmanuelle

29 Identification of NISTmAb Charge Variants by Fully Automated Capillary Isoelectric Focusing – Mass Spectrometry
MEIXNER Jens - AGILENT Technologies – Waldbronn, Germany
Co-authors: Wang Rena, Xia James

52 Determination of N-nitrosodimethylamine in valsartan pharmaceuticals using capillary electrophoresis-mass spectrometry
ŘEMÍNEK Roman - Masaryk University – Brno, Czech Republic
Co-authors: Doo Soo Chung, František Foret

53 NACE-ESI-MS/MS method for separation and characterization of phosphorylation and acylation isomers of lipid A
SáNDOR Viktor - University Of Pécs – Pécs, Hungary
Co-authors: Ágnes Dörnyei, Anikó Kilár, Béla Kocsis, Ferenc Kilár

54 Direct metabolic profiling of rat brain microdialysates by capillary electrophoresis-mass spectrometry.
VAN MEVER Marlien - Leiden University – Leiden, The Netherlands
Co-authors: Rawi Ramautar, Thomas Hankemeier

Comprehensive omics

56 Finnee, a Matlab toolbox for the untargeted analysis of datasets obtained using LC-MS with spectra recorded in full scan (MS1) mode.
ERNY Guillaume - University Of Porto Lepabe – Porto, Portugal

58 A novel robust LCMS approach using micro Pillar Array Columns
JAOUEN Gilles – PHARMAFLUIDICS – Zwijnaarde, Belgium
Co-authors: Op De Beeck Jeff, Van Raemdonck Geert, Kurt Van Mol, Claerebout Bo, Van Landuyt Natalie, De Malsche Wim, Desmet Gert, Jacobs Paul

73 Micro pillar array columns in the context of proteomics studies
NIX Cindy - University Of Liege, Laboratory for the Analysis of Medicines – Liège, Belgium
Co-authors: Cobraiville Gael, Nys Gwenael, Fillet Marianne

75 Investigating bacterial sample preparation to understand cell metabolism during replication using LC-HRMS
PEZZATTI Julian - University Of Geneva, Analytical Sciences – Geneva, Switzerland
Co-authors: Matthieu Bergé, Julien Boccard, Santiago Codesido, Yoric Gagnebin, Patrick H. Viollier, Víctor González-Ruiz, Serge Rudaz

76 Alternative quantification of endogenous steroids with one-point calibration
VISCONTI Gioele - University Of Geneva, Analytical Sciences – Geneva, Switzerland
Co-authors: Eulalia Olesti, Víctor González-Ruiz, Serge Rudaz

Electrodriven separations

11 Assaying pancreatic lipase activity by a CE-C4D-PDA platform
AL HAMOUI DIT BANNI Ghassan - Université d'Orléans, Institute of Organic and Analytical Chemistry – Orléans, France
Co-authors: Nasreddine Rouba, Claude Bérengère, Fayad Syntia, Marchal Axel, Nehmé Reine

31 CE-ICP/MS to probe Aβ1-42/metal interactions, a complementary tool to study Alzheimer's disease
DUROUX Coraline -University Of Lyon, Institut des Sciences Analytiques – Villeurbanne, France
Co-author: HAGEGE Agnès

33 Study of the binding and selectivity profile of oligomer-modified gold nanostructures intended for biosensing applications by affinity capillary electrophoresis
GLIGA Laura-Elena - Universitatea de Medicină si Farmacie, Analytical Chemistry Department - Cluj-Napoca, Romania
Co-authors: Bogdan-Cezar Iacob, Ioan-Adrian Stoian, Ede Bodoki, Radu Oprean

43 Hyaluronidase inhibition monitored by capillary electrophoresis; the more crowded the less active?
AL HAMOUI DIT BANNI Ghassan - Université d'Orléans Institute of Organic and Analytical Chemistry – Orléans, France
Co-authors: Nasreddine Rouba, Orlic Lucija, Fayad Syntia, Marchal Axel, Piazza Francesco, Lopin-Bon Chrystel, Hamacek Joseph, Nehmé Reine

44 Development of a sensitive MEKC-LIF method for the analysis of synthetic cathinones and amphetamines.
EMONTS Paul - University of Liège, Laboratory for the Analysis of Medicines- Liege, Belgium
Co-authors: Anne-Catherine Servais, Marianne Fillet, Amandine Dispas

60 Superhydrophobic capillary coatings as innovative coatings for electrophoretic separations
LECLERCQ Laurent - Université Montpellier, IBMM – Montpellier, France
Co-authors: Renard Charly, Stocco Antonio, Cottet Hervé

61 eof supression and modulation in fused silica capillairies without dynamic or permanent coating
NGUYEN Ngoc Van Thanh - Université Paris Saclay – Bagneux, France
Co-authors: Thanh Duc Mai, Claire Smadja, Myriam Taverna

63 Extending the utility of trapped ion mobility spectrometry towards the analysis of high-molecular weight compounds
VOETEN Robert - Vrije Universiteit Amsterdam, BioAnalytical Chemistry – Amsterdam, The Netherlands
Co-authors: Rob Haselberg, Govert Somsen

Environmental analysis

77 Continuous monitoring of polycyclic aromatic hydrocarbons using automatic thermal desorption-gas chromatography
BAZIN Damien - Chromatotec - Val De Virvée, France
Co-author: Franck Amiet

78 Advantages of acetic acid as an LC-MS mobile phase additive for characterization of lignin oligomers and lignin-derived phenolic compounds
KIM Tae-Young - Gwangju Institute Of Science And Technology, School of Earth Sciences and Environmental Engineering – Gwangju, South Korea
Co-authors: Tae-Young Kim, Woo-Young Song

80 Development of an electro-membrane extraction setup combined with CE-MS for the analysis of ionic micropollutants in surface waters
ROESCH Tobias - Eberhard Karls University – Tübingen, Germany
Co-authors: Benjamin Rudisch, Carolin Huhn

Food, beverages, nutrition and health

12 Analysis of metabolites in ionic exchange chromatography coupled to mass spectrometry
BIGARD Adeline & CLERGE Adeline - Normandie Université, Laboratoire SMS - Mont Saint Aignan, France
Co-authors: Hebert Nathalie, Cardinaël Pascal, Peulon-Agasse Valérie

13 Simultaneous analysis of cyanotoxin multiclass by hydrophilic interaction liquid chromatography-tandem mass spectrometry in the absence of derivatization
GARCÍA-CAMPAÑA Ana M. - University Of Granada, FQM-302 – Granada, Spain
Co-authors: Aparicio-Muriana M. del Mar, Lara Francisco J., del Olmo-Iruela Monsalud

14 Probing cow's milk protein glycation by capillary electrophoresis – mass spectrometry
HASELBERG Rob - Vrije Universiteit Amsterdam, Division of BioAnalytical Chemistry – Amsterdam, The Netherlands
Co-authors: Gerlof P. Bosman, Zainab Hadi, Sergio Oliveira, Karen Knipping, Govert W. Somsen

34 A first approach for the determination of Fusarium emerging mycotoxins by non-aqueous capillary electrophoresis coupled with mass spectrometry
LARA Francisco J.- Universidad De Granada – Granada, Spain
Co-authors: M. Mar Aparicio-Muriana, Laura Gámiz-Gracia, Ana M. García-Campaña

35 Highly specific low-cost microfluidic device with C4D detection for PCBs analysis in milk
MARQUES Letícia - University Of São Paulo, São Carlos Institute Of Chemistry, Bioanalysis - São Carlos, Brazil
Co-authors: Laís Canniatti Brazaca, Emanuel Carrilho, Stanislau Bogusz Jr

Miniaturized sample preparation techniques

15 Immuno-and aptamer-affinity sorbents for on-line preconcentration in capillary electrophoresis-mass spectrometry. Towards a selective, sensitive and reliable analysis of biomarkers for research and diagnostics
BENAVENTE Fernando - Dpt Of Chemical Engineering And Analytical Chemistry, University Of Barcelona Fac. Química – Barcelona, Spain
Co-authors: Laura Pont, Roger Pero-Gascon, Estela Giménez, José Barbosa, Victoria Sanz-Nebot

16 Lab-In-Tube: Automatic flow-based SPE integrated in omic workflows
COCOVI-SOLBERG David J. - University Of Natural Resources And Life Sciences – Vienna, Austria
Co-authors: Stephan Hann, Manuel Miró

17 Off-line coupling of capillary isotachophoresis separation to IRMPD spectroscopy for chondroitin sulfate disaccharides analysis
DUGAS Vincent - Institut Des Sciences Analytiques, UCBL – Villeurbanne, France
Co-authors: Jaravel Léna, Schindler Baptiste, Compagnon Isabelle, Demesmay Claire

38 Droplet microfluidics based enzymatic digestion: a new sample preparation tool for MALDI-TOF MS
RICHERD Mathilde - Institut Curie, UMR 168 – Paris, France
Co-authors: Descroix Stéphanie, Malloggi Florent, Bregant Sarah, Dumas Simon

39 Evaluation of the antioxidant capacity of different additives to be used in Active food packaging
SANCHES SILVA Ana - National Institute Of Health, Instituto Nacional de Saúde Dr Ricardo Jorge – Lisboa, Portugal
Co-authors: Cássia Barbosa, Fernanda Vilarinho, Margarida Saraiva, Miguel A. Cerqueira, Lorenzo Pastrana, Ana Tasso, Diogo Castelo Branco, Mariana Andrade

40 A Membrane-Aided Protocol for Sensitive Released N-Glycan Analysis by CE-ESI-MS
WANG Wenjun - Leiden University Medical Centre- Leiden, The Netherlands
Co-authors: Noortje de Haan, Manfred Wuhrer, Guinevere S.M. Lageveen-Kammeijer

Organ- and cell-on-chip

88 A new, innovative method for microfluidic glass chip fabrication
BREIEV Kostiantyn - Elvesys SAS – Paris, France
Co-authors: Valerii Petruk, Snisarenko Dmytro, Christa Ivanova, Damien Cuvelier, Guilhem Velve Casquillas

Pharmaceuticals and drug development

19 Bromide quantification in complex vaccine matrices using capillary zone electrophoresis
GEURINK Lars - Janssen Vaccines And Prevention, Analytical development – Leiden, The Netherlands
Co-authors: Bojana Pajic, Cari Sänger-van de Griend, Ewoud van Tricht

20 Nitrophenolic standards of isoelectric point reloaded
KOVAL Dusan - IOCB Prague – Prague, Czech Republic
Co-authors: Renata Konasova, Maria Butnariu, Veronika Solinova

41 Probing protein interactions with biocompatible core-shell nanoparticles through advanced analytical methodologies
URAL Merve Seray - CNRS ISMO – Orsay, France
Co-authors: Frank Wien, Ruxandra Gref, Claire Smadja

42 iConsensus - Integrated control and sensing platform for biopharmaceutical cultivation processes
VAN DER BURG Debbie - Kantisto / Technical University Braunschweig – Baarn, The Netherlands
Co-authors: Cari Sänger, Van de Griend

Point-of-care devices, innovation in microfluidics, precision medecine

66 Multielectrode Arrays for Neurotransmitter Detection with FSCV
ZESTOS Alexander - American University - Washington DC, USA
Co-author: Pauline Wonnenberg

81 Acoustic reconcentration or separation of cells
BELLEBON Ludovic - Aenitis Technologies, PMMH laboratory – Paris, France
Co-authors: Aider Jean-Luc, Hoyos Mauricio

82 Development of aptamer-based microfluidic systems for the detection of protein biomarkers of cancer
D'ORLYE Fanny - CHIMIE PARISTECH PSL – Paris, France
Co-authors: Samantha Bourg, Anne Varenne, Sophie Griveau, Fethi Bedioui, Alberto Fracassi Da Silva

83 Cellulose oxidation with NaIO4 for protein quantification in urine
IMAMURA Amanda - USP BioMicS - São Carlos, Brazil
Co-authors: Thiago Pinotti Segato, Letícia Jordão Marques de Oliveira, Ayaz Hassan, Frank Nelson Crespilho, Emanuel Carrilho

84 Using electric field to capture and detect single cancerous cell
MAI Nguyen Phuong Thao - ENS Paris Saclay - Gif-Sur-Yvette, France
Co-authors: Bruno Le Pioufle, Juan Pelta, Philippe Manivet, Luc Lenglet

Portable and purpose-made devices

64 Biochip based on GMR sensors for early biological diagnosis
DEROO Maïkane - CEA DRF/IRAMIS/SPEC/LNO - Gif Sur Yvette, France
Co-authors: M. Giraud, F.D. Delapierre, A. Wijkhuisen, P. Bonville, M. Thévenin, F. Coneggo, G. Cannies, M. Plaisance, S. Gelhaye, E. Paul, S. Simon, C. Fermon, C. Féraudet-Tarisse, M. Jeckelmann, G. Jasmin-Lebras

65 Development of an Underwater Autonomous Capillary Electrophoresis Unit for Potential Future Ocean World Exploration and Terrestrial Chemical Oceanography
DREVINSKAS Tomas - NASA Jet Propulsion Laboratory, California Institute Of Technology, Microdevices Laboratory – Pasadena, USA
Co-authors: Florian Kehl, Konstantin Zamuruyev, Aaron C. Noell, Vlad Cretu, Andrew Demartino, Peter A. Willis

85 An instrument-free method based on a gas diffusion device for a rapid determination of cyanide in cadaveric blood using a smartphone detection.
MUSILE Giacomo - University Of Verona, Tagliaro's Research Group – Verona, Italy
Co-authors: Yvane Agard, Ksenia Shestakova, Elio De Palo, Franco Tagliaro

86 On-line coupling of microdialysis with capillary electrophoresis for determination of carbohydrates in dairy products
TUMA Petr - Charles University, Third Faculty Of Medicine, Department of Hygiene – Prague, Czech Republic

87 Implementation of CE analysis in western Africa for the Quality control of drugs. Perspectives and developments
WANE Thierno Mouhamed – UCAD – Dakar, Sénégal
Co-authors: El Hadji Assane Diop, Claude Rohrbasser , Serge Rudaz , Serigne Omar Sarr

PCO

CONFERENCES & EVENTS
CEYZ
THIERRY GUERMONPREZ

CEYZ – Conferences & Events Thierry Guermonprez
12 rue Alexandre Fourny – 44230 St Sébastien – France
Mobile : + 33 6 77 22 19 44 - thierry.guermonprez@ceyz.fr