



**PBA
2024**

**34th International Symposium on
Pharmaceutical and
Biomedical Analysis**
September 9-12, Geneva / Switzerland

PROGRAMME

www.pba2024.org

09.09.2024

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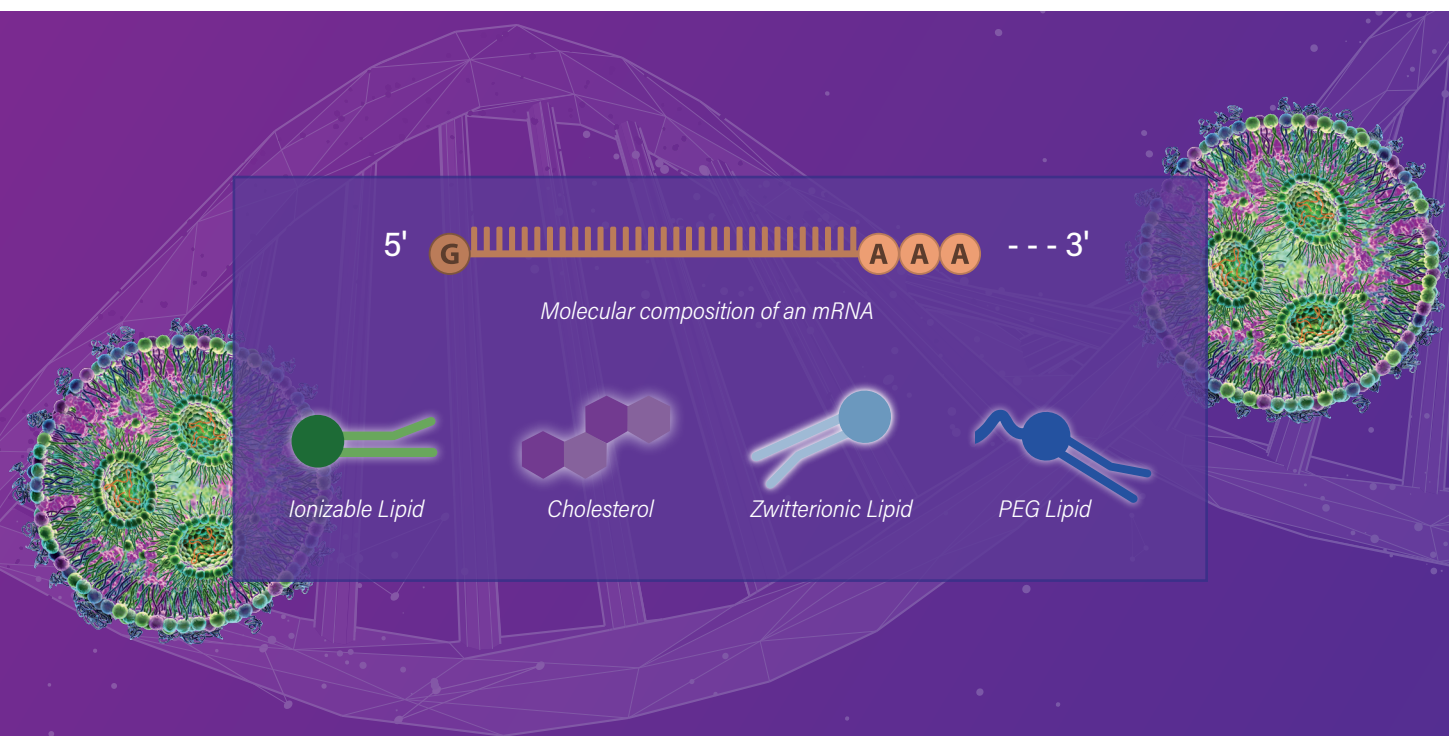
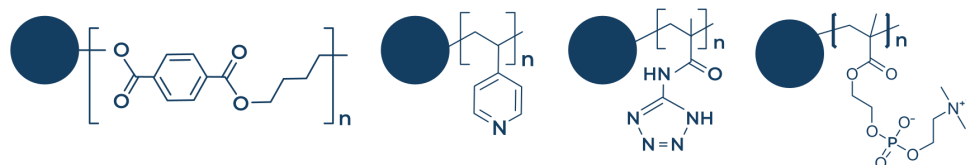


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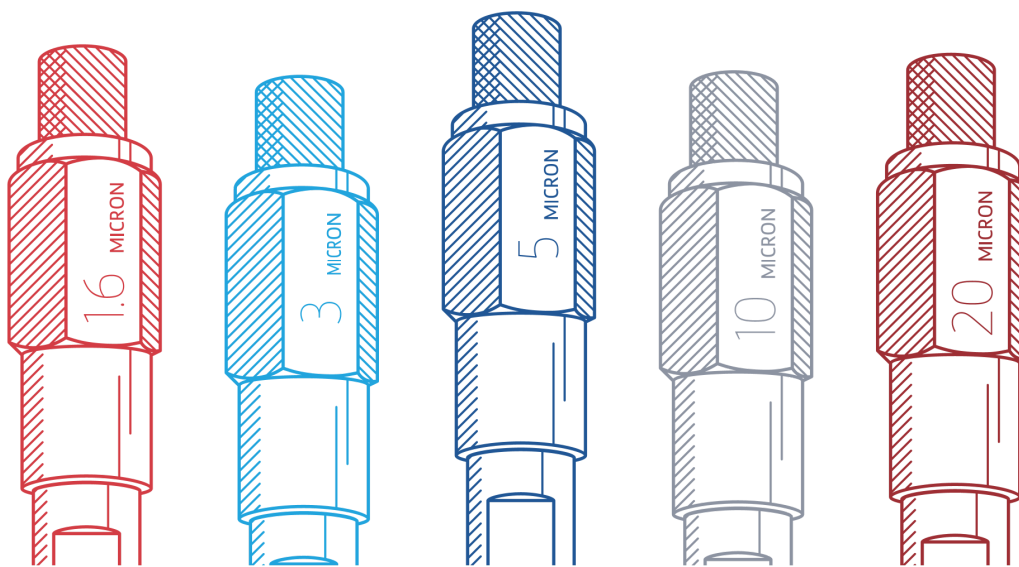
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- New selectivity profiles with Daicel achiral columns



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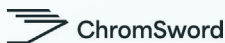
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Sponsors



Exhibitors

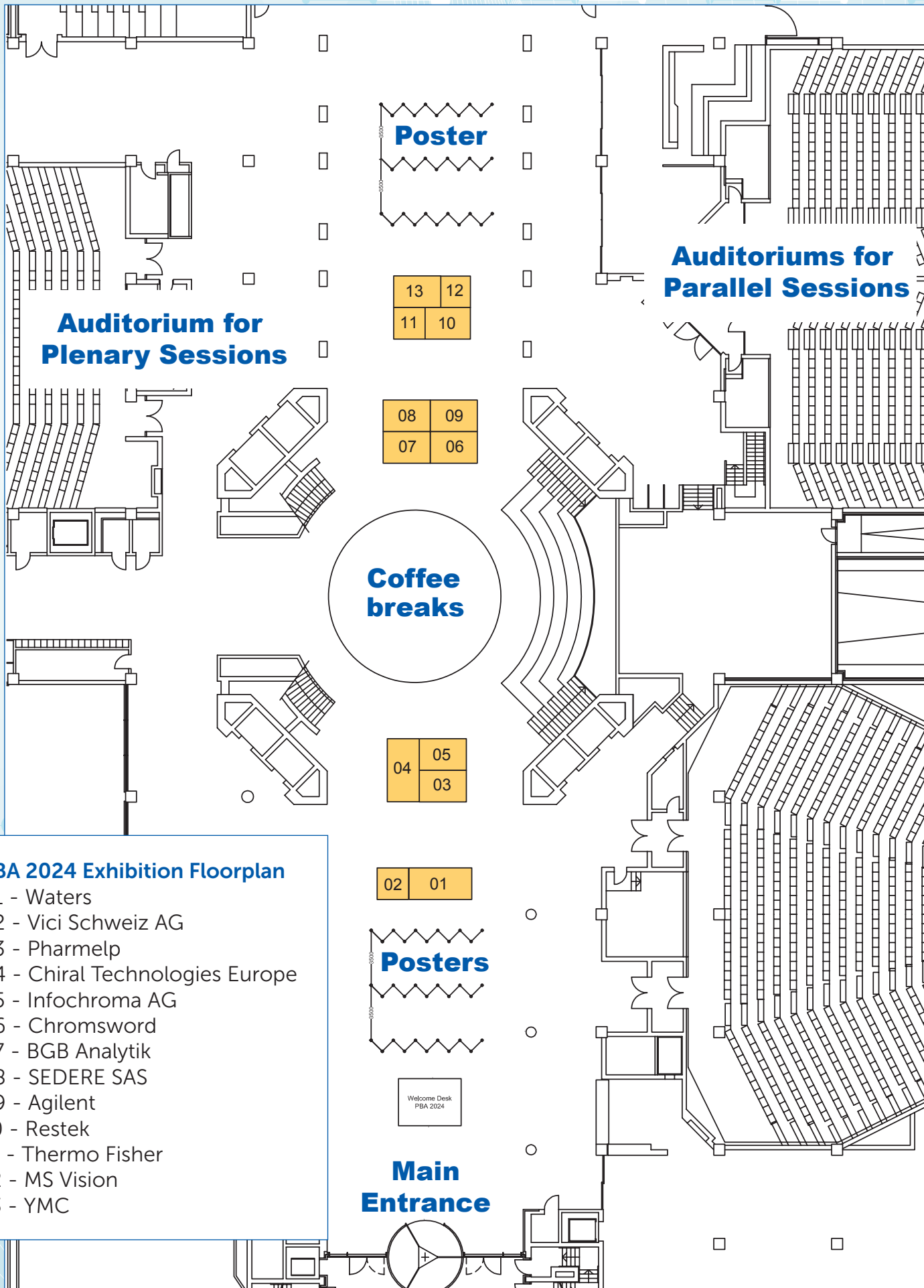


Partner Associations



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- PBA 2024 Exhibition Floorplan**
- 01 - Waters
 - 02 - Vici Schweiz AG
 - 03 - Pharmelp
 - 04 - Chiral Technologies Europe
 - 05 - Infochroma AG
 - 06 - Chromsword
 - 07 - BGB Analytik
 - 08 - SEDERE SAS
 - 09 - Agilent
 - 10 - Restek
 - 11 - Thermo Fisher
 - 12 - MS Vision
 - 13 - YMC

EXHIBITORS INFORMATION



Agilent - #09

<https://www.agilent.com/en/solutions/biopharma-pharma>

As a global leader in analytical laboratory technologies, Agilent provides trusted answers to our customers' most critical questions and challenges. Using more than 50 years of laboratory, clinical, and enterprise-level expertise, we produce advanced instruments, software, and consumables, supported by teams of highly skilled and knowledgeable people.

For the pharmaceutical and biopharmaceutical industries, Agilent provides end-to-end workflows from research and drug discovery, to development, manufacturing, and quality control. We strive to provide reliable answers to help overcome analytical challenges and optimize the productivity needs of labs. Complete solutions to help get products to market faster.



BGB Analytik - #07

www.bgb-info.com

BGB Analytik AG is a leading manufacturer and supplier of consumables for chromatography in the fields of chemistry, environmental science, pharmacology, biology, medicine, and health. The BGB® brand represents high-quality, cost-effective products for laboratories around the world, providing the tools for monitoring the quality of air, water, soil, food, botanicals, pharmaceuticals, and chemical products.

BGB Analytik AG employs expert scientists, chemists, and analysts who place great value on providing competent support and advice for our customers. Able to rely on its many years of experience and the knowledge of its employees, BGB Analytik AG can offer its customers the best possible solution in the field of chromatography.



Chromsword - #06

www.chromsword.com

ChromSword Group is a leading provider of AI-powered HPLC method development solutions, serving customers in the Life Science Research, Pharmaceutical, and

Chemical industries. With a focus on innovation and automation, ChromSword offers a comprehensive suite of software solutions designed to simplify and accelerate HPLC method development. Our advanced software packages allow analytical scientists to perform computer-assisted, fully automatic HPLC method development, significantly reducing time and resource requirements.

The ChromSword group ensures full compliance with the ICH guidelines and Analytical Quality by Design (AQbD) principles, enabling laboratories to maintain high standards in precision and reproducibility. Trusted globally, our solutions help scientists optimize complex chromatographic separations, improve efficiency, and achieve reliable, regulatory-compliant results faster than ever before.

Through continuous R&D and a commitment to excellence, ChromSword remains at the forefront of HPLC innovation, supporting the global scientific community with cutting-edge tools that streamline analytical processes and ensure data integrity.



Chiral Technologies Europe - #04
www.chiraltech.com

Daicel Chiral Technologies is the world's most trusted source of chiral chromatography solutions for optical isomer separation.

We offer the life science industries the largest portfolio of chiral stationary phases; analytical and preparative chiral columns.

Daicel's chiral and achiral products perform a vital role for pharmaceutical, biopharmaceutical and agrochemical customers enabling HPLC, SFC and SMB to aid discovery, development and manufacturing projects.

New applications in the separation of small molecules, peptides and oligonucleotides using Daicel phases are being continually developed to meet the needs of innovative research.



InfoChroma AG - #05
www.infochroma.ch

infochroma ag is a family owned SME producing and offering consumables for chemistry, pharmacy and industry. They have been a reliable partner in this field for nearly 60 years. infochroma's trade mark is a most comprehensive range of glass vials,

sample bottles and HPLC consumables paired with excellent quality. Together with their Thuringian partner company Glastechnik Gräfenroda GmbH (GTG) they have developed innovative products in the vial segment.

Together, infochroma ag and GTG are also your competent partner for custom-made products made from tubular glass. Qualified glassblowers and machine engineers, combined with much experience and know how, allows them to develop a product from your idea to the finished product.



MS Vision - #12
www.msvision.com

MS Vision was founded in 2004 by a group who have previously held senior positions with the major manufacturers of mass spectrometry systems. A common vision of excellence in after sales service and providing novel tools to make better use of existing technologies is the driving force behind our rapid growth.

Currently MS Vision operates out of offices in UK, The Netherlands, Germany and France.

pharmelp

Pharmelp - #03
www.pharmelp.ch

Pharmelp is a nonprofit association dedicated to promoting training and the implementation of drug quality control in countries with limited resources. This approach addresses, among other things, the problem of falsified and/or substandard medicines as defined by the WHO.

Since 2006, Pharmelp has been actively developing an open-source capillary electrophoresis (CE) technology, incorporating light-emitting diodes (LEDs) for the detection system in collaboration with the University of Geneva and the University of Applied Sciences of Western Switzerland, Fribourg (HEIA-FR).

Pharmelp initiates collaborative projects in countries where the quality control of medicine presents challenges.

Its missions involve supplying analytical solutions, such as measuring equipment and onsite training for students and laboratory personnel, in partnership with Pharm-Ed, an educational and collaborative platform aimed at the efficient, safe, and rational management of medicines in hospitals.



RESTEK - #10

www.restek.com

Established in 1985, at Restek we are dedicated to providing our clients and customers with the highest quality chromatography supplies and customer service available.

We offer a wide range of GC Columns, LC columns, GC/LC accessories and reference standards, as well as products for air sampling and sample preparation.



SEDERE SAS - #08

www.sedere.com

SEDERE produces and distributes the most complete product line of Low-Temperature Evaporative Light-Scattering Detection (LT-ELSD). Today, SEDERE is proud to present SEDEX 100LT, with SAGA (SEDEX Automated Gain Adjustment). This new "un-saturable" & universal detector provides the best solution for HPLC, UHPLC or SFC analysis.



Thermo Fisher - #11

www.thermofisher.com



VICI Schweiz AG - #02

www.vicischweiz.ch

VICI Schweiz AG (formerly Schmidlin Labor + Service AG) is now part of the VICI group. It serves Swiss customers with the complete range of VICI products like valves, fittings, gas generators, syringes, tubing, gas purifiers, GC columns and detectors, and many more. But VICI SLS is also a multi-brand supplier for products around your general laboratory demand with lab instrumentation, reactors, pilot plants by Wiggins. Another range we have in our portfolio are the instrumentation valves & fittings by SSP. Further, we offer industrial gas generators and atmosphere control systems. Another focus are Chromatography consumables like vials, caps, septa, and syringe filters. We will work constantly on our product portfolio to be able to fulfill the requirements of our customers!

Waters

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Waters - #01

www.waters.com/GTx

Waters Corporation is a global leader in analytical instruments and software that has been a pioneer in sample preparation, automation, chromatography, mass spectrometry, light scattering, and field-flow fractionation innovations for more than 60 years. Most recently, the scientific teams at Waters have been helping the biotechnology industry make improvements to the techniques that are applied to the analysis of cell and gene therapy drug substances and products. These modalities tend to be large and complex. They require compliant-ready analytical techniques for characterization and chemistry, manufacturing, and control (CMC) monitoring, yet many historical approaches are manual, error-prone, and laborious. Waters has developed robust, compliant-ready solutions for gene therapy and vaccine analyses. Waters brings industry-leading expertise and the analytical tools needed to support the development and commercialization of these exciting new modalities. Waters has the chromatography and analytical tools to cleanup, separate, and characterize AAVs, mRNA, Lipid Nanoparticles and more.



YMC - #13

www.ymc.eu

YMC is a leading global supplier of high-performance products for liquid chromatography. The broad and innovative product range includes (U)HPLC columns (especially YMC-Triart), dedicated bioinert BioLC columns (for SEC, IEX, RP and HIC), chiral columns (immobilised/coated CHIRAL ART). The portfolio also includes bulk media for prep. processes, glass columns (ECO/ECOPLUS) for MPLC and pilot columns (YMC PilotPLUS). YMC further provides comprehensive application support, column packing, phase screening and method development services and training programmes.

YMC products are used in R&D, process development, manufacturing and quality control. YMC's extensive distribution network has headquarters in Kyoto/Japan and sites worldwide to guarantee availability of YMC solutions throughout the world.

SHORT COURSES

SC1 - Digital Evolution in Liquid Chromatography: Redefining Learning and Method Development with Virtual Tools

Davy **GUILLARME**, School of pharmaceutical Sciences, University of Geneva, Switzerland

Szabolcs **FEKETE**, Waters corporation, Geneva, Switzerland

Schedule: September 9, 2024 – 09h00 / 12h00

Room 4276

This short course will be divided in two distinct parts, one for teaching and the other one for research.

The first part will be devoted to the presentation of freely accessible liquid chromatography simulation tools that can be used for theoretical and/or practical training of university students or internships wishing to learn the basic principles of chromatography. The trainers will give a particular focus on Excel tools developed at the University of Geneva and will demonstrate their possibilities using several case studies.

The second part of the short course will focus on the presentation of commercial modeling software for the automated development of liquid chromatography methods in the laboratory (Drylab, Fusion QbD, ChromSword...). The principle of operation of these software packages will be explained as well as the limitations/constraints associated with their use. The trainers will then focus on the Drylab software, which is probably the most widely used today. Several case studies will illustrate the possibilities offered by this software for the analysis of both small and large molecules.

SC3 - The role of chromatography and mass spectrometry in protein biopharmaceutical analysis

Koen **SANDRA**, RIC group, Belgium

Schedule: September 9, 2024 – 09h00 / 12h00

Room 4389

Protein biopharmaceuticals are on the rise! These recombinantly produced therapeutic macromolecules currently account for 20% of the total pharmaceutical market and today monoclonal antibodies are considered the fastest growing class of therapeutics. Their success is driven by their efficacy in disease areas with a high unmet medical need such as oncology, autoimmune and infectious diseases.

From a structural point of view, protein biopharmaceuticals come with a complexity highly demanding towards analytics. Unraveling this structural complexity demands for a wide range of complementary analytical tools and methodologies with chromatography and mass spectrometry at the forefront.

In this short course, an overview will be provided of the different chromatographic and mass spectrometric approaches applied in biopharmaceutical analysis. Emerging trends such as multidimensional chromatography and native mass spectrometry will furthermore be touched upon. All this will be illustrated with real life examples from the presenter's laboratory.

SC4 - Analytical and computational tools for metabolite annotation by HPLC-MS

Gaétan **GLAUSER**, Neuchâtel Platform of Analytical Chemistry, University of Neuchâtel, Switzerland

Schedule: September 9, 2024 – 13h00 / 16h00
Room 4276

Emmanuel DEFOSSEZ, Institute of Biology, University of Neuchâtel, Switzerland
This short course intends to give the participants an overview of the different tools available for small molecule identification in the context of HPLC-MS metabolomics approaches.

The course will cover the basic concepts of mass spectral interpretation, the various MS acquisition modes used in metabolomics, and the latest advances in computational resources for metabolite annotation (molecular networks, in-silico annotation etc.).

SC5 - Analytical characterization of therapeutic oligonucleotides

Marianne **FILLET**, Full Professor, University of Liège, Belgium

Schedule: September 9, 2024 – 13h00 / 16h00
Room 4389

The great potential of therapeutic oligonucleotides to treat a wide range of diseases has drawn more and more attention. To date, the USA Food and Drug Administration (FDA) have approved 16 oligonucleotide-drug treatments, twelve of these since 2016.

Due to their particular structure, their numerous potential impurities, and the regulatory framework governing their use as therapeutic agents, oligonucleotides require the implementation of appropriate analytical methodologies to provide a complete analysis of these biological molecules.

This workshop focuses on strategies and the latest developments in analytical methodologies applied to the characterization of therapeutic oligonucleotides. The first part of this workshop will be devoted to an introduction to the problems related to the specific analysis of these molecules and a presentation of the various separative methods used to characterize therapeutic oligonucleotides. The second part of the workshop will focus on analytical methods for the detailed assessment of these molecules.

SC6 - Multiomics Data Analysis and Integration

Julien **BOCCARD**, School of Pharmaceutical Sciences, University of Geneva, Switzerland

Schedule: September 9, 2024 – 13h00 / 16h00

Room 5393

With the development of analytical techniques, it is now possible to generate large amounts of data for the characterization of complex samples. In addition, the emergence of approaches that combine multiple sources of information of different types is opening up new opportunities to better understand the mechanisms involved in biochemical processes. A major challenge is therefore to integrate the different blocks of data, and this is particularly true for Omics approaches (transcriptomics, metabolomics, lipidomics, proteomics), which have specific characteristics and require adapted statistical tools.

The aim of this workshop is to provide an overview of multisource Omics data structures and different supervised and unsupervised statistical approaches available for an integrative analysis. The first part will be devoted to multivariate methods (PCA and PLS) for analyzing high-dimensional data, while the second part will introduce multiblock approaches for integrating Omics datasets. The principles and practical aspects of the different methods will be presented and discussed.

SC7 - The analytical procedure lifecycle in accordance with ICH Q14 and ICH Q2: A deeper understanding of method performance to ensure continuous improvement and regulatory flexibility

Jean-Marc **ROUSSEL**, Independent Consultant (Mâcon, France) Katrin Liebelt (Novartis, Basel, Switzerland), Luis **ORTIZ** (Novartis, Basel, Switzerland)

Schedule: September 9, 2024 – 09h00 / 12h00 - 13h00 / 16h00

Room 4393

ICH Q14 (Analytical Procedure Development) and Q2(R2) (Validation of Analytical Procedures) guidelines, which will become effective in June 2024, are ushering in a new era in the concepts of Analytical Quality by Design and Analytical Procedure Lifecycle Management (i.e., definition of the analytical target profile, systematic method development, method performance qualification including validation and transfer, and ongoing method performance verification).

During this course, we will review the general concepts of method development and additional elements of the analytical procedure lifecycle as described in the ICH Q14 guideline and USP chapter <1220>, respectively.

We will discuss the assessment of analytical methods performance according to ICH Q14 and ICH Q2, and address the question: *“Is it a statistical nightmare or a walk in the park?”*

Using application examples, we will focus on the robustness, validation, and performance monitoring of analytical procedures.

We will show the interest of Designs of Experiments (DoE) in the study of robustness and propose a methodology to evaluate the stability of the quantitative response in the Method Operable Design Region (MODR).

Next, we will explore the analysis of the response function, whether linear or non-linear, and discuss statistical tools for evaluating its performance.

Evaluating the accuracy and precision of analytical procedures remains a delicate issue, and we will show the value of using prediction or tolerance intervals to estimate procedure performance in routine use.

The concept of ongoing performance verification of analytical procedures will be introduced, along the value of control charts in this task.

Industrial case studies for systematic method development and enhanced method performance qualification approaches will be presented:

- on development pathways for platform/generic methods for biological products,
- strategies for combined validation and transfer studies aimed at assessing the overall variability of the analytical procedure, which consider additional noise factors between participating laboratories (i.e.: knowledge, experience, and equipment), applicable to small and large molecules.

It will be shown how these systematic and enhanced approaches enable the user to develop a comprehensive understanding of the sources of procedural variability and thus develop an appropriate analytical procedure control strategy.

Finally, to holistically implement these advanced approaches, we will present these method development concepts in the context of a patient-centered approach and a risk-based control strategy. Deepening the link between the quality attributes of a product and an analytical method, via its performance requirements, which is highly relevant to minimizing the risks of future changes and impact on the overall product control strategy.



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PROGRAMME AT A GLANCE

&

DETAILED PROGRAMME

Monday - September 9	
09h00	Short Courses Half-Day SC1 - Room 4276 SC3 - Room 4389 Short Courses Full day SC7 - Room 4393
10h30	Coffee Break
10h45	Short Courses Half-Day SC1 - Room 4276 SC3 - Room 4389 Short Courses Full day SC7 - Room 4393
12h00	Lunch Break
13h00	Short Courses Half-Day SC4 - Room 4276 SC5 - Room 4389 SC6 - Room 5393 Short Courses Full day SC7 - Room 4393
14h30	Coffee Break
14h45	Short Courses Half-Day SC4 - Room 4276 SC5 - Room 4389 SC6 - Room 5393 Short Courses Full day SC7 - Room 4393
16h00	Break
16h30	Welcome Ceremony Serge Rudaz , Sébastien Castelltort , Costanza Bonadonna , Patrycia Nowak-Sliwinska
17h00	PL-01 - Opening Plenary Lecture ● HUGO DUMINIL-COPIN <i>Can one truly understand by counting?</i>
17h40	Interlude
17h55	PL-02 - Plenary Lecture ● GERT DESMET <i>Performance Characteristics and Applications of Next-Generation Micro-Pillar Array Columns</i>
18h35	Welcome Cocktail

Tuesday - September 10	
08h30	PL-03 - Plenary Lecture ● VALERIE PICHON <i>Bio- and bio-mimetic molecules as powerful tools for target analysis of compounds in biological fluids and complex molecule characterization</i>
09h10	Sample Preparation and Spectroscopy ● Miniaturized Approaches ●
09h15	KN-01 ● KN-02 ● Sibel Ozkan Marianne Fillet
09h40	OP1-A ● OP1-B ● OP1-A1: Maria Cristina Gamberini OP1-A2: Nathalie Delaunay OP1-A3: Hasret Subak OP1-B1: Claire Smadja OP1-B2: Zahia Bouchelaghem OP1-B3: Giacomo Musile
10h40	Coffee Break
11h05	Natural Products ● Pharmaceutical Analysis ●
11h05	KN-03 ● KN-04 ● Jean-Luc Wolfender Jingwu Kang
11h30	OP2-A ● OP2-B ● OP2-A1: Markus Ganzera OP2-A2: Ann Van Schepdael OP2-A3: Sogolo Lebelo OP2-B1: Erwin Adams OP2-B2: Martin Thomas Gaugg OP2-B3: Yue Zhang
12h30	
12h45	LS-01 - Waters Lunchtime Seminar
12h30	Lunch Break
13h30	PS-01 - Poster Session
14h15	Peptides Analysis ● Clinical Analysis ●
14h30	KN-05 ● KN-06 ● Zhengjin Jiang Michal Markuszewski
14h55	OP3-A ● OP3-B ● OP3-A1: Caterina Temporini OP3-A2: Alexandre Goyon OP3-A3: Evelien Wynendaele OP3-B1: Víctor González-Ruiz OP3-B2: Erika Del Grosso OP3-B3: Nicolas Drouin
15h55	Break
16h15	SO - Short Oral Presentations ● SO-01: Tobias Langer / SO-02: Adrien Deloche SO-03: Isabella Senini / SO-04: Olivier Kirchhoffer SO-05: Aurore Boclinville / SO-06: Lola Alez-Martin SO-07: Elfried M. B. Salanon / SO-08: Marie Willocx
17h30	Young Career Seminar ●
18h45	Young Researchers Cocktail
19h15	VIP Dinner

Wednesday - September 11

PL-04 - Plenary Lecture CORAL BARBAS

Information Quality: *The Analytical Chemistry Challenge in Metabolomics*

Biomarkers and Diagnostics

Capillary Electrophoresis

KN-07
Pablo Sinues

KN-08
Myriam Taverna

OP4-A
OP4-A1: Jessica **Fiori**
OP4-A2: Cedric **Delporte**
OP4-A3: Pierre **Van Antwerpen**

OP4-B
OP4-B1: Rawi **Ramatar**
OP4-B2: Clara **Davoine**
OP4-B3: Rabah **Gahoual**

Coffee Break

Computational Approaches

Food and Exposomics

KN-09
Nicolas Zamboni

KN-10
Ana Garcia-Campana

OP5-A
OP5-A1: Emmanuel **Bourgogne**
OP5-A2: Luis-Manuel **Quiros-Guerrero**
OP5-A3: Akira **Kotani**

OP5-B
OP5-B1: Mathieu **Galmiche**
OP5-B2: Emmanuelle **Bichon**
OP5-B3: Liam **Nestor**

Lunch Break

Flash Posters

FP-01 - Katarzyna **Woźniczka** / FP-02 - Charlotte **De Bleye**
FP-03-Greta **Galante** / FP-04 - Chiara **Cancellerini**
FP-05 - Igor Gustavo **Carvalho Oliveira** / FP-06 - Martina **Lioi**
FP-07 - Anaëlle **Monfort** / FP-08 - Nathalie **Nguyen**
FP-09 - Simon **Schumacher** / FP-10 - Virginia **Ghizzani**
FP-11 - Hervé **Rais** / FP-12 - Laetitia **Maidodou**

PS-02 - Poster Session

Coffee Break

ICH / QBD and
Regulatory Aspects

Chiral Analysis

KN-11
Sandra Furlanetto

KN-12
Kenji Hamase

OP6-A
OP6-A1: Eric **Rozet**
OP6-A2: Arnaud **Delobel**
OP6-A3: Amanda **Guiraldelli Mahr**
OP6-A4: Bruno **Boulanger**

OP6-B
OP6-B1: Gioele **Visconti**
OP6-B2: Pieter **De Gauquier**
OP6-B3: Bezhana **Chankvetadze**
OP6-B4: Emmanuelle **Lipka**

Guided City Tour

JOB FAIR

Congress Dinner

Thursday - September 12

PL-05 - Plenary Lecture MICHAL HOLCAPEK

Translating UHPSFC/MS method into real clinical practice: Pancreatic cancer screening based on plasma lipidome

Biopharmaceuticals and
Therapeutics

Technological Advances

KN-13
Gabriella Massolini

KN-14
Tim Causon

OP7-A
OP7-A1: Anne-Catherine **Servais**
OP7-A2: Chiharu **Ishii**

OP7-B
OP7-B1: Jasmin **Schairer**
OP7-B2: Anna **Kaliszewska**

Coffee Break

Biopharmaceuticals and
Therapeutics

Technological Advances

OP8-A
OP8-A1: Camille **Malburet**
OP8-A2: Sarah **Nguyen**
OP8-A3: Anika **Hoffmann**

OP8-B
OP8-B1: Szabolcs **Fekete**
OP8-B2: Govert **Somsen**
OP8-B3: Sergey **Girel**

PL-06 - Closing Plenary Lecture KOEN SANDRA

A journey into pharmaceutical and biomedical analysis: from metabolite biomarker discovery to characterization of protein and nucleic acid based medicines

Closing Ceremony

Farewell Drink

Short Courses

- SC1 Digital Evolution in Liquid Chromatography: Redefining Learning and Method Development with Virtual Tools – Davy **Guillaume** & Szabolcs **Fekete**
- SC3 The role of chromatography and mass spectrometry in protein biopharmaceutical analysis – Koen **Sandra**
- SC4 Analytical and computational tools for metabolite annotation by HPLC-MS – Gaëtan **Glauser** & Emmanuel **Defossez**
- SC5 Analytical characterization of therapeutic oligonucleotides – Marianne **Fillet**
- SC6 Multiomics Data Analysis and Integration – Julien **Boccard**
- SC7 The analytical procedure lifecycle in accordance with ICH Q14 and ICH Q2: A deeper understanding of method performance to ensure continuous improvement and regulatory flexibility – Jean-Marc **Roussel**, Katrin **Liebelt**, Luis **Ortiz**

● R080 | ● R280 | ● R290

Monday, September 9, 2024

PLENARY

17h00	PL-01	<i>Chairs of the session: Serge Rudaz, Jean-Luc Veuthey</i> Can one truly understand by counting? <i>Hugo Duminil-Copin</i>
17h55	PL-02	<i>Chairs of the session: Serge Rudaz, Davy Guillarme</i> Performance Characteristics and Applications of Next-Generation Micro-Pillar Array Columns <i>Gert Desmet</i>

Tuesday, September 10, 2024

PLENARY

8h30	PL-03	<i>Chair of the session: Jacques Crommen</i> Bio- and bio-mimetic molecules as powerful tools for target analysis of compounds in biological fluids and complex molecule characterization <i>Valérie Pichon</i>
9h10		

PARALLEL SESSION | SAMPLE PREPARATION AND SPECTROSCOPY

Chairs of the session: Eric Ziemons, Anne-Catherine Servais

KEYNOTE

9h15	KN-01	Molecularly Imprinted Polymers (MIPs) in Sensors for pharmaceutical and biomedical assay- New Sensing Technologies <i>Sibel Ozkan</i>
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OP1-A

9h40	OP1-A1	New frontier for cells characterization. Spectralomics: the Raman Spectroscopy <i>Rizzarda Maffezzoni, Francesca Ravera, Hugh Byrne, Graziella Pellegrini, Maria Cristina Gamberini</i>
	OP1-A2	Potential of lectin- and aptamer-based sorbents for extraction and/or fractionation of the human chorionic gonadotropin glycoforms prior to analysis at the intact level by LC-HRMS <i>Nathalie Delaunay, Sophia Smires, Anastasia Goumenou, Audrey Combès, Christophe Chendo, Valérie Pichon</i>
	OP1-A3	2D MXene/Surfactant nanocomposite preparation and its electrochemical performance towards the identification of Vandetanib level in human urine sample <i>Hasret Subak, Pinar Talay Pinar</i>

PARALLEL SESSION | MINIATURIZED APPROACHES

Chairs of the session: Gert Desmet, Gabriella Massolini

KEYNOTE

9h15	KN-02	Characterization of extracellular vesicles, challenges, opportunities and prospects in therapeutics <i>Marianne Fillet</i>
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OP1-B

9h40 OP1-B1 **Imaged capillary isoelectric focusing associated with multivariate analysis to detect degradation of therapeutic monoclonal antibodies**
Cecile Tardif, Emmanuel Jaccoulet, Frederic Halgand, Myriam Taverna, Claire Smadja

OP1-B2 **Unveiling the dynamics of enzymatic activity in crowded environments: insights from hyaluronidase kinetics and interactions in extracellular matrix mimics**
Zahia Bouchelaghem, Rouba Nasreddine, Alexandra Launay, Magdalena Andelini, Bérengère Claude, Claudia Bich, Josef Hamacek, Francesco Piazza, Catherine Perrin, Reine Nehmé

OP1-B3 **Portable capillary electrophoresis: a novel device for determining the date-rape drug gamma-hydroxybutyric acid (GHB) at the point of need**
Giacomo Musile, Marc-Aurèle Boillat, Götz Schlotterbeck, Peter C. Hauser

PARALLEL SESSION | NATURAL PRODUCTS

Chairs of the session: Ana Garcia-Campana, Emmanuelle Bichon

KEYNOTE

11h05 KN-03 **Confident MS-based Metabolite Annotation in Natural Product Metabolomics : New opportunities in the digital age**
Jean-Luc Wolfender

OP2-A

11h30 OP2-A1 **Two orthogonal techniques for natural products analysis - SFC and CE, a practical comparison**
Markus Ganzera, Michael Zwerger

OP2-A2 **Off-line CE search for PTP1B - inhibiting Traditional Chinese Medicines**
Ann Van Schepdael, Juan Gao, Zhengjin Jiang, Erwin Adams

OP2-A3 **Phytochemical, antioxidant, and androgenic effects of multi-solvent extracts of *Sclerocarya birrea* on mouse testicular TM3 Leydig cells**
Sogolo Lebelo, Nelisiwe Masuku

PARALLEL SESSION | PHARMACEUTICAL ANALYSIS

Chairs of the session: Sibel Özkan, Koen Sandra

KEYNOTE

11h05 KN-04 **Mass spectrometry-based multi-omics analysis for molecular pharmacology**
Jingwu Kang

OP2-B

11h30 OP2-B1 **An analytical view on outpatient parenteral antimicrobial therapy**
Erwin Adams, Tam Nguyen, Ann Van Schepdael, Isabel Spriet, Charlotte Quintens

OP2-B2 **Implementation, Use and Outlook of Vendor-Agnostic Data Management Tools in Chemical and Analytical Development**
Adrian Clarke, Martin Thomas Gaugg

OP2-B3 **Simultaneous detection of unspecific trace N-nitrosamine impurities by LC-MS/MS in a pharmaceutical formulation**
Yue Zhang, Sabah Houari, Thomas Van Laethem, Philippe Hubert, Cédric Hubert

LUNCHTIME SEMINAR - WATERS

12h45 LS-01 **LC-based Analytical Tools for AAVs, LNPs, and mRNA Improved Potency and Safety Indicating Measurements**
Mateusz Imiotek

POSTER SESSION

13h30 PS-01 **Poster Session**

PARALLEL SESSION | **PEPTIDES ANALYSIS**

Chairs of the session: Jingwu Kang, Myriam Taverna

KEYNOTE

14h30 KN-05 **From linear peptides to supramolecular mimotope peptide nanofibers: novel technologies for fast, efficient and high-throughput bioseparation of antibody drugs**
Zhengjin Jiang

OP3-A

14h55 OP3-A1 **Critical role of proline hydroxylation in collagen functionality: analytical characterization of 3- and 4-hydroxyproline isomers at amino acid and peptide levels**
Martina Lioi, Sara Tengattini, Valentina D'Atri, Gabriella Massolini, Simona Daly, Davy Guillarme, Caterina Temporini

OP3-A2 **Expedited method development and characterization of therapeutic peptides and oligonucleotides**
Alexandre Goyon

OP3-A3 **Analytical peptidomics: future challenges**
Evelien Wynendaele, Amélie Descamps, Hannah Hirmz, Seppe Ghijis, Bart De Spiegeleer

PARALLEL SESSION | **CLINICAL ANALYSIS**

Chairs of the session: Aurélien Thomas, Sandra Furlanetto

KEYNOTE

14h30 KN-06 **Metabolomics in gastrointestinal stromal tumor studies**
Michal Markuszewski

OP3-B

14:55 OP3-B1 **Exploring seminal liquid as a matrix for early detection of testicular cancer metabolism**
Victor González-Ruiz, Maricruz Mamami-Huanca, Constanza Fernández-Hernández, Luz Alonso-Dasques, Sandra Camunas, Ángeles López-González, Nina Mørup, Francisco J. Rupérez, Antonia García, Ana Gradillas, Serge Rudaz, Serge Nef, Ameer Y. Taha, Kristian Alsmtrup, Coral Barbas

OP3-B2 **Chemical, Metabolic and Plasma stability studies of different glucotrifluoroborates as potential agents for Boron Neutron Capture Therapy (BNCT)**
Salvatore Villani, Daniela Imperio, Silvia Fallarini, Silvio Aprile, Luigi Panza, Erika Del Grosso

OP3-B3 **LC-MRM3, a high potential technique for pandemic preparedness: a case study of SARS-CoV-2**
Nicolas Drouin, Hyung L. Elfrink, Stefan A. Boers, Sam van Hugten, Els Wessels, Jutte J.C. de Vries, Geert H. Groeneveld, Paul Miggiels, Bart van Puyvelde, D Maarten Dhaenens, Andries E. Budding, Leonie Ran, Roy Masius, Zoltan Takats, Arjen Boogaerds, Markus Bulters, Wouter Muurlink, Paul Oostvogel, Amy C. Harms, Mariken van der Lubben, Thomas Hankemeier

PARALLEL SESSION

YOUNG SCIENTISTS SHORT ORAL PRESENTATIONS

16h15	SO-1	Endogenous steroid analysis by supercritical fluid chromatography-mass spectrometry: super possibilities and critical aspects <i>Tobias Langer, Raul Nicoli, Davy Guillarme, Serge Rudaz, Tiia Kuuranne, Alessandro Musenga</i>
	SO-2	Ultra-miniaturized weak affinity chromatography: towards a screening strategy of native membrane proteins in fragment Based Drug Discovery: Adenosine Receptor as a case-study <i>Adrien Deloche, Vincent Dugas, Renaud Wagner, Claire Demesmay</i>
	SO-3	Advancements in neoglycoprotein synthesis and monitoring strategies <i>Isabella Senini, Sara Tengattini, Francesca Rinaldi, Simone Nicolardi, Luciano Piubelli, Gabriella Massolini, Marco Terreni, Caterina Temporini</i>
	SO-4	Navigating Experimental Metabolomics Knowledge Graphs to Highlight Anti-Infective Natural Products Within a Large Collection of Plant Extracts <i>Olivier Kirchhoffer, Luis Quiros-Guerrero, Jahn Nitschke, Louis-Félix Nothias, Frédéric Burdet, Laurence Marcourt, Nabil Hanna, Florence Mehl, Antonio Grondin, Emerson Ferreira Queiroz, Marco Pagni, Thierry Soldati, Jean-Luc Wolfender</i>
	SO-5	Characterization of Human Papillomavirus virus-like particles using iCIEF <i>Aurore Boclinville, Marylène Vandevenne, Nicolas Thelen, Marc Thiry, Nathalie Jacobs, Alain Brans, Marianne Fillet, Anne-Catherine Servais</i>
	SO-6	Detailed characterization of monoclonal antibodies charge variants using capillary electrophoresis and tandem mass spectrometry <i>Lola Alez-Martin, Pascal Houzé, Rania Joomun, Nathalie Mignet, Yannis-Nicolas François, Rabah Gahoual</i>
	SO-7	Towards automated decision support in the analytical reliability assessment of biomarker candidates: a multicriteria optimization framework <i>Elfried M. B. Salanon, Julien Boccard, Melanie Petera, Stephanie Durand, Blandine Comte, Estelle Pujos-Guillot</i>
	SO-8	Phage therapy: quality control challenges and advances <i>Marie Willocx, Mathieu de Jode, Flore Laurent, Laure Cuignet, Loïc Debehault, Maya Merabishvili, Jean-Paul Pirnay, Rob Lavigne, Pieter-Jan Ceysens, Celine Vanhee</i>

Wednesday, September 11, 2024

PLENARY

8h30 9h10	PL-04	<i>Chair of the session: Bezhn Chankvetadze</i> Information Quality: The Analytical Chemistry Challenge in Metabolomics <i>Coral Barbas</i>
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PARALLEL SESSION | BIOMARKERS AND DIAGNOSTICS

Chairs of the session: Michal Markuszewski, Kenji Hamase

KEYNOTE

9h15	KN-07	Translational exhalomics for diagnosis purposes in Clinics <i>Pablo Sinues</i>
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OP4-A

9h40 OP4-A1 **MS-based metabolomics and lipidomics for differential diagnosis of Parkinson's disease and atypical Parkinsonisms**
Erika Esposito, Nicolò Interino, Giovanna Calandra Buonauro, Pietro Cortelli, Manuela Contin, Giovanna Lopane, Francisco Javier Rupérez, Coral Barbas, [Jessica Fiori](#)

OP4-A2 **Characterization of IgG N-glycans in COVID-19, sepsis and HIV infection**
Yosra Helali, Pierre Van Antwerpen, Michael Piagnerelli, Axelle Bourez, Yvan Vander Heyden, Karim Zouaoui Boudjeltia, Arnaud Marchant, [Cedric Delporte](#)

OP4-A3 **Monitoring by LC-MS/MS of MPO-dependent oxidation of LDL and HDL in serum**
[Pierre Van Antwerpen](#), Axelle Bourez, Catherine Coremans, Cedric Delporte, Karim Zouaoui Boudjeltia

PARALLEL SESSION | **CAPILLARY ELECTROPHORESIS**

Chairs of the session: Marianne Fillet, Govert Somsen

KEYNOTE

9h15 KN-08 **Capillary electrophoresis-based strategies to characterize or predict in-vivo behaviour of nanomedicines**
[Myriam Taverna](#)

OP4-B

9h40 OP4-B1 **Charge to move forward in Volume-restricted Metabolomics**
[Rawi Ramautar](#)

OP4-B2 **Ligand-protein interaction's monitoring by CE-MS in the context of drug development: BGE and capillary coating optimizations**
[Clara Davoine](#), Marianne Fillet

OP4-B3 **Simultaneous quantification of therapeutic monoclonal antibodies and neutralizing anti-drug antibodies in patient serums using capillary electrophoresis coupled to tandem mass spectrometry**
Tessa Reinert, Pascal Houzé, Nathalie Mignet, Aynur Naghizade, Lola Alez-Martin, Matthieu Allez, Yannis François, [Rabah Gahoual](#)

PARALLEL SESSION | **COMPUTATIONAL APPROACHES**

Chairs of the session: Julien Boccard, Rawi Ramautar

KEYNOTE

11h05 KN-09 **Untargeted metabolomics in routine analysis**
[Nicolas Zamboni](#)

OP5-A

11h30 OP5-A1 **Molecular networking approach for clinical analysis: Benefits of creating in-silico databases of all drugs marketed in France as well as centrally authorized drugs approved by the European Medicines Agency for their identification**
Sacha Guilhaumou, Romain Magny, [Emmanuel Bourgogne](#)

OP5-A2 **Integrating large metabolomics dataset from chemodiverse natural extracts and biological screenings into knowledge graphs to enhance bioactive natural product discovery**
[Luis-Manuel Quiros-Guerrero](#), Frederic Burdet, Olivier Kirchhoffer, Paola Haemmerli, Louis-Felix Nothias, Pierre-Marie Allard, Arnaud Gaudry, Jahn Nitschke, Nabil Hanna, Florence Mehl, Antonio Grondin, Bruno David, Chunyan Wu, Thierry Soldati, Wolfrum Christian, Marco Pagni, Jean-Luc Wolfender

OP5-A3 **Chemometrically estimated repeatability in UHPLC equipped with a noise filter and the evaluation of their statistical reliability**
[Akira Kotani](#), Koichi Machida, Ryo Watanabe, Hideki Hakamata

PARALLEL SESSION | FOOD AND EXPOSOMICS

Chairs of the session: Ann van Schaepdel, Valérie Pichon

KEYNOTE

11h05 KN-10 **Exploring Emerging Contaminants: Analytical Strategies in food safety and the Exposome Connection**
Ana Garcia-Campana

OP5-B

11h30 OP5-B1 **Metabolomics insights into solvent neurotoxicity using 3D brain organoids**
Mathieu Galmiche, Isabel Meister, David Lopez-Rodriguez, David Pamies, Tatjana Sajic, Aurélien Thomas, Marie-Gabrielle Zurich, Julien Boccard, Serge Rudaz

OP5-B2 **Development of a workflow targeted on phase II biomarkers by on-line SPE-LC-(ESI)-HRMS in human urine for exposomic study purposes**
Emmanuelle Bichon, Tatiana Metlej, Laurena Rutin, Anne-Lise Royer, Bruno Le Bizec, German Cano-Sancho

OP5-B3 **Metabolomic profiling of mouse hippocampus to unravel the effects of chemogenetic modulation of astrocytes in a model for temporal lobe epilepsy**
Liam Nestor, Yvan Vander Heyden, Ann Van Eeckhaut, Dimitri De Bundel, Ilse Smolders

FLASH POSTER PRESENTATIONS

13h30 FP-01 **SPME as a novel extraction approach for in vivo analysis of phytocannabinoids in Cannabis spp. plants**
Katarzyna Woźniczka, Vaclav Trojan, Krzysztof Urbanowicz, Patrik Schreiber, Julia Zadrożna, Tomasz Bączek, Ryszard Tomasz Smoleński, Anna Roszkowska

FP-02 **Is Transmission surface-enhanced Raman spectroscopy a good alternative to separative techniques for the nicotine dosage in e-liquid boosters?**
Charlotte De Bleye, Pierre Beckers, Julie Horne, Kevser Kemik, Pierre-Yves Sacré, Eric Caudron, Philippe Hubert, Eric Ziemons

FP-03 **Circadian rhythm profiling of amino acids and biogenic amines in chronic hypercortisolism states: utility of dried blood spots**
Greta Galante, Valentina Bissi, Lorenzo Tucci, Iliara Improta, Alessandro Perrone, Kimberly Coscia, Giacomo Colombin, Valentina Vicennati, Uberto Pagotto, Guido Di Dalmazi, Flaminia Fanelli

FP-04 **A prick is enough! Therapeutic drug monitoring of antiseizure medication through capillary microsampling devices**
Chiara Cancellarini, Alice Caravelli, Erika Esposito, Laura Maria Beatrice Belotti, Martina Soldà, Luca Vignatelli, Barbara Mostacci, Jessica Fiori, Francesca Bisulli, Laura Licchetta

FP-05 **Negligible depletion in-vivo SPME for determining free and total endocannabinoid concentrations in rat brain**
Igor Gustavo Carvalho Oliveira, Maria Eugênia Costa Queiroz, Janusz Pawliszyn

FP-06 **Beyond conventional: evaluating the potential of HILIC for collagen peptide mapping analysis**
Martina Lioi, Sara Tengattini, Valentina D'Atri, Gabriella Massolini, Simona Daly, Caterina Temporini, Davy Guillaume

FP-07 **A single LC-MS/MS method to quantify 8 cannabinoids in blood, breast milk and meconium**
Anaëlle Monfort, Louiza Mahrouche, Martin Jutras, Wissal Ben Jmaa, Gregory Lodygensky, Ema Ferreira, Grégoire Leclair

FP-08	Development and optimization of an SFC-MS method for the simultaneous analysis of anticancer drugs with a wide range of physicochemical properties <i>Nathalie Nguyen, Dr. Davy Guillarme, Professor Serge Rudaz, Professor Pascal Bonnabry, Dr. Sandrine Fleury-Souverain</i>
FP-09	Native anion exchange chromatography coupled to mass spectrometry for the analysis of charge variants of IgG4-based monoclonal antibodies <i>Simon Schumacher, Dr. Kirstin Arend, Ann Marie Rojahn, Dr. Daniel Eßer</i>
FP-10	Development of an optimised icIEF method for harmonising Quality Control of Monoclonal Antibodies by using an AQbD approach <i>Virginia Ghizzani, Alessandro Ascione, Serena Orlandini, Sandra Furlanetto, Gabriella Massolini, Francesca Luciani</i>
FP-11	Instant and non-destructive analysis of medicines using cloud-based portable NIR technology and machine learning <i>Hervé Rais, Pierre Esseiva, Olivier Delémont</i>
FP-12	Improvements in body odor sampling and analysis for medical diagnosis applications using canine olfaction and GC-MS <i>Laetitia Maidodou, Damien Steyer, Eric Marchioni, Igor Clarot</i>

POSTER SESSION

14h15 PS-02 **Poster Session**

PARALLEL SESSION | ICH / QbD AND REGULATORY ASPECTS

Chairs of the session: Jean-Marc Roussel, Adrian Clarke

KEYNOTE

15h35 KN-11 **Analytical Quality by Design and Quality control: from small molecules to biopharmaceuticals**
Sandra Furlanetto

OP6-A

16h00 OP6-A1 **Analytical Quality by Design: only probability matters!**
Eric Rozet

OP6-A2 **Robustness and Validation of a Size-Exclusion Chromatography Method for Monoclonal Antibody Mass Variants Analysis: An AQbD-Inspired Approach**
Arnaud Delobel

OP6-A3 **Using the Analytical Target Profile (ATP) for Efficient Procedure Lifecycle Management**
Amanda Guiraldelli Mahr, Pierre Lebrun, Jean-Marc Roussel

OP6-A4 **Understanding links between Total Analytical Error, Measurement Uncertainty, Analytical Target Profile and Quality Target Product Profile**
Bruno Boulanger

PARALLEL SESSION | CHIRAL ANALYSIS

Chairs of the session: Tim Causon, Nathalie Delaunay

KEYNOTE

15h35 KN-12 **Multi-dimensional chiral HPLC analysis of amino acids and related compounds for drug discovery and diagnosis**
Kenji Hamase

OP6-B		
16h00	OP6-B1	Overcoming matrices inter-individual differences and in-source isobaric fragments for LC-MS native lactic acid enantiomeric quantification in pediatric human feces <i>Gioele Visconti, Adrien Frézal, Yohan Grzywinski, Olivier Ciclet</i>
	OP6-B2	Retention and enantioselectivity modelling of structurally diverse pharmaceuticals analyzed on polysaccharide-based stationary phases <i>Pieter De Gauquier, Jordy Peeters, Fardine Ameli, Kenno Vanommeslaeghe, Prf Yvan Vander Heyden, Debby Mangelings</i>
	OP6-B3	Isotope effect in high-performance liquid chromatography: Good or bad for bioanalysis? <i>Giorgia Sprega, Giorgi Kobidze, Alfredo Fabrizio Lo Faro, Tivadar Farkas, Francesco Paolo Busardo, <u>Bezhan Chankvetadze</u></i>
	OP6-B4	Exploring chiral supercritical fluid chromatography for preparative scale <i>Emmanuelle Lipka</i>

Thursday, September 12, 2024

PLENARY		
9h00	PL-05	<i>Chair of the session: Coral Barbas</i> Translating UHPSFC/MS method into real clinical practice: Pancreatic cancer screening based on plasma lipidome
9h40		<i>Michal Holcapek</i>

PARALLEL SESSION | BIOPHARMACEUTICALS AND THERAPEUTICS

Chairs of the session: Szabolcs Fekete, Zhengjin Jiang

KEYNOTE

9h45	KN-13	Hydrophilic interaction liquid chromatography (HILIC) for intact proteins analysis: a journey into new glycoconjugated vaccines <i>Gabriella Massolini</i>
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OP7-A		
10h10	OP7-A1	Interest of pl determination in the quality control of virus-like particles of human papillomavirus <i>Aurore Boclinville, Marylène Vandevenne, Nicolas Thelen, Marc Thiry, Nathalie Jacobs, Alain Brans, Marianne Fillet, <u>Anne-Catherine Servais</u></i>
	OP7-A2	Development of an enantio- and chemo-selective screening method for asparagine/aspartic acid and glutamine/glutamic acid residues in proteins <i>Chiharu Ishii, Kanako Takeshima, Takeyuki Akita, Masashi Mita, Yusuke Murakami, Tadashi Ueda, Kenji Hamase</i>

PARALLEL SESSION | TECHNOLOGICAL ADVANCES

Chairs of the session: Nicola Zamboni, Isabel Meister

KEYNOTE

9h45	KN-14	Old and new directions for small molecule (bio-) analytical applications with ion mobility-mass spectrometry <i>Tim Causon</i>
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OP7-B

10h10 OP7-B1 **Charge Variant Separation and Characterization of Various Antibodies Using CZE-MS, cIEF-MS, and IEX-MS on Intact and Subunit Level**
Jasmin Schairer, Jennifer Römer, Christian Neusüß

OP7-B2 **Novel approach for the isolation of β -estradiol metabolites from human serum samples employing a 3D-printed device**
Anna Kaliszewska, Mariusz Belka, Tomasz Bączek, Lucyna Konieczna

PARALLEL SESSION | BIOPHARMACEUTICALS AND THERAPEUTICS

Chairs of the session: Samir Cherkaoui, Caterina Temporini

OP8-A

11h15 OP8-A1 **A comparative study of analytical methods for assessing mRNA integrity in lipid nanoparticles: spotlight on mRNA-lipid adducts, fragments, and oligomers**
Camille Malburet, Marco Morani, Perrine Lardellier, Thibaut Willemin, Stéphanie Fertier-Prizzon, Marc Francois-Heude

OP8-A2 **Characterization and relative quantification of oxidation in a monoclonal antibody by a multi-level approach based on mass spectrometry**
Sarah Nguyen, Armelle Martelet, Séverine Clavier, Sarah Cianférani, Oscar Hernandez-Alba

OP8-A3 **Endotoxin Quantification by a Chemical Instrumental Analytical (U)HPLC-Assay**
Anika Hoffmann, Blanka BucSELLa, Mathieu Zollinger, Kevin Pacios, Franka Kalman

PARALLEL SESSION | TECHNOLOGICAL ADVANCES

Chairs of the session: Michal Holcapek, Pablo Sinues

OP8-B

11h15 OP8-B1 **The Effect of Column Length and Gradient Steepness on the Separation of Oligonucleotides in Ion Pair Reversed Phase Chromatography**
Szabolcs Fekete, Mateusz Imiolek, Matthew Lauber

OP8-B2 **Rapid isomer-specific identification and relative quantitation of new psychoactive substances in street samples**
Govert Somsen, Hany Majeed, Tijmen Bos, Ruben Kranenburg, Arian van Asten, Isabelle Kohler

OP8-B3 **Microflow liquid chromatography coupled to nanoelectrospray ionization as a strategic combination for high-throughput bioanalytical methods with challenging sensitivity requirements**
Sergey Girel, Mathieu Galmiche, Mathis Fiault, Cedric Schelling, Isabel Meister, Serge Rudaz

PLENARY

12h15 PL-06 *Chair of the session: Jean-Luc Veuthey*
A journey into pharmaceutical and biomedical analysis: from metabolite biomarker discovery to characterization of protein and nucleic acid based medicines
Koen Sandra



POSTERS

POSTERS

There are two poster sessions organized during PBA 2024:

Poster Session 01: Tuesday September 10 – 13h30 / 1h30

Poster Session 02: Wednesday September 11 – 14h15 / 15h15

Poster Session 01: Tuesday September 10 – 13h30 / 1h30

PS01-01

A simple LC-MS/MS assay of E6011, a novel anti-fractalkine human monoclonal antibody, in monkey serum - comparison with ligand binding assay -

Yuji Mano^{1,2}, Kenji Kita³, Haruna Ono³, Tomoko Kojima³

¹Eisai Co., Ltd., Tsukuba, Japan, ²University of Tsukuba, Tsukuba, Japan, ³Sunplanet Co., Ltd., Tsukuba, Japan

PS01-02

Analytical developments towards new metrological references for the quantification of testosterone, aldosterone and 17 β -estradiol in human serum.

Chloé Duret^{1,2}, Hélène Vaneekhoutte¹, Vincent Delatour¹, Amandine Boeuf¹, Valérie Pichon^{2,3}

¹LNE, Paris, France, ²ESPCI, Paris, France, ³Sorbonne Université, Paris, France

PS01-03

Affinity selection- mass spectrometry for Identifying Ligands of Acetylcholinesterase from *Topsentia ophiraphidites* and Docking Studies for the Dereplicated Ligands

Larissa R. G. da Silva^{1,3}, Chrystine B. de Sá², Nelilma C. Romeiro², **Quezia Cass**³, Alessandra Valverde¹

¹Laboratório de Produtos Naturais (LAPROMAR), Instituto de Química, Universidade Federal Fluminense, Niterói, Brazil, ²Laboratório Integrado de Computação Científica – LICC, Centro Multidisciplinar da Universidade Federal do Rio de Janeiro Macaé, Macaé, Brazil, ³Separare – Núcleo de Pesquisa em cromatografia, Departamento de Química, Universidade Federal de São Carlos, São Carlos, Brazil

PS01-04

mRNA/LNP Multiattribute Quantitation of Payload(s), Size and Heterogeneity With Size Exclusion Chromatography Coupled to Multiangle Light Scatterings

Mateusz Imiolek¹, Lavelay Kizekai², Bala Addepalli², Szabolcs Fekete¹, Matthew Lauber²

¹Waters Corporation, Geneva, Switzerland, ²Waters Corporation, Milford, United States

PS01-05

Vizualisation of the bivariate dispersion structure for the robust assessment of the repeatability and reproducibility of analytical measurements.

Student Elfried M. B. Salanon¹, Blandine Comte¹, Delphine Centeno¹, Stephanie Durand¹, Estelle Pujos-Guillot¹, Julien Boccard²

¹University Clermont Auvergne, INRAE, UNH, Metabolism Exploration Platform, MetaboHUB Clermont, Clermont-Ferrand, France, Saint Genes Champanelle, France, ²School of Pharmaceutical Sciences, University of Geneva, Geneva, Switzerland

PS01-06

Enhancement of LC-MS analysis of intact glycoprotein

Pierre Besson-Magdelain¹, Christophe Chendo¹, Audrey Combès¹, Valérie Pichon^{1,2}, Nathalie Delaunay¹

¹Laboratoire des Sciences Analytiques, Bioanalytiques et Miniaturisation – UMR CBI 8231 CNRS, ESPCI Paris PSL, Paris, France, ²Sorbonne Université, Paris, France

PS01-07

Development and validation of a High-Performance Liquid Chromatography coupled Mass Spectrometry (HPLC-MS/MS) method for ABT-263 quantification in two different biological matrices

Maxime Murphy¹, Louiza Mahrouche¹, Valérie Gaelle Roullin¹, Grégoire Leclair¹

¹University of Montreal, Montreal, Canada

PS01-08

Electrochemical Biosensors: Practical Solutions for Microorganism Identification

Seda Nur Topkaya¹

¹Izmir Katip Celebi University, Izmir, Turkey

PS01-09

Transacylation and hydrolysis of the acyl glucuronides of ibuprofen and its α -methyl-substituted analogues investigated by 1H NMR spectroscopy and computational chemistry: Implications for drug design.

Selena E. Richards¹, Peter R. Bradshaw², Caroline H. Johnson³, Andrew V. Stachulski⁴, Toby J. Athersuch^{2,6}, Jeremy K. Nicholson^{5,7}, John C. Lindon², Ian D. Wilson²

¹Department of Chemistry, Khalifa University, Abu Dhabi, United Arab Emirates, ²Department of

PS01-10

Absolute quantification and structural characterization of therapeutic monoclonal antibodies after administration to patients using capillary electrophoresis-tandem mass spectrometry

Tessa Reinert^{1,2}, Pascal Houzé^{1,3}, Nathalie Mignet¹, Alexandre Kulus², Matthieu Allez⁴, Yannis François², **Rabah Gahoual**¹

¹Chemical and Biological Technologies for Health, Faculty of Pharmacy, Paris Cité University, Paris, France, ²Laboratory of mass spectrometry of interactions and systems, University of Strasbourg, Strasbourg, France, ³Laboratory of Toxicology, Lariboisière Hospital, Assistance Publique - Hôpitaux de Paris (AP-HP), Paris, France, ⁴Gastroenterology department, Saint-Louis Hospital, Assistance Publique – Hôpitaux de Paris (AP-HP), Paris, France

PS01-11

Qualitative and quantitative evaluation of the metabolism of various drugs for five types of CYP2D6 SNPs

Seon Min Lee¹, Hyejin Kim¹, Heejin Jeong¹, Jongwook Song¹, Jonghwan Kim¹, Jeong-Doo Heo¹

¹Korea Institute Toxicology, Jinju, South Korea

PS01-12

The investigation of structural characteristics of biologically active natural polymers using solid-state NMR experiments

Ketevan Lomsadze, Isabelle Lengers, Vakhtang Barbakadze, Jens Köhler, Michael Ryan Hansen, Sascha Lebioda, Bodo Saake, Joachim Jose

¹School of Science and Technology, The University of Georgia, Georgia, Tbilisi, Georgia

PS01-13

Exploring Chiral Recognition: Docking Simulations and Experimental Validation on chiral Polysaccharide-based Stationary Phases

Anca-Elena DASCALU^{1,2,3}, Alina GHINET^{1,2,3}, Christophe FURMAN^{2,4}, **Emmanuelle Lipka**^{2,4}

¹Junia, Health and Environment, Laboratory of Sustainable Chemistry and Health, F-59000, Lille, France,

²Univ. Lille, Inserm, CHU Lille, Institut Pasteur de Lille, UMR 1167 - RID-AGE - Risk Factors and Molecular Determinants of Aging-Related Diseases, F-59000, Lille, France, ³'Alexandru Ioan Cuza' University of Iasi, Faculty of Chemistry, Bd. Carol I, Nr. 11, 700506, Iasi, Romania, ⁴Univ. Lille, UFR3S-Pharmacie, BP 83, F-59006, Lille, France

PS01-14

Electrochemical biosensor designing for investigation of the interaction between DNA and Ciprofloxacin

Hasret Subak¹

¹Department of Analytical Chemistry, Faculty of Pharmacy, Van Yuzuncu Yil University, 65080, Van, Turkey

PS01-15

Enhancing microflow LC-MS/MS analysis of neuromedin U through reduced aspecific adsorption

Linus Donvil^{1,2}, Jana Bongaerts³, Maria Bjerke², Debby Mangelings³, Yvan Vander Heyden³, Ann Van Eeckhaut¹

¹Vrije Universiteit Brussel, Research Group Experimental Pharmacology (EFAR), Center for Neurosciences (C4N), Laarbeeklaan 103, Jette, Brussels, Belgium, ²Universitair Ziekenhuis Brussel, Department of Clinical Biology, Laboratory of Clinical Neurochemistry, Laarbeeklaan 101, Jette, Brussels, Belgium, ³Vrije Universiteit Brussel, Department of Analytical Chemistry, Applied

PS01-16

Study on pesticides contamination in Chinese Proprietary Medicine (CPM) products retailed in Singapore

Cuilian Sun¹

¹Pharmaceutical Laboratory, Health Sciences Authority, Singapore

PS01-17

Clinical Calcium Ion Analysis with Isomeric Calcium Ionophores in Ion-Selective Electrodes

Yupu Zhang¹, Junyu Zhou³, Tianbao Yang², Zejian Huang², Gabriel J. Mattos¹, Nikolai Yu Tiuftiakov¹, Yaotian Wu¹, Jinxu Gao³, Yu Qin³, Eric Bakker¹

¹University of Geneva, Geneva, Switzerland, ²PharmaBlock Sciences, Nanjing, China, ³Eaglenos Sciences, Nanjing, China

PS01-18

Unveiling the potential of ion-pairing RPLC for mRNA characterization

Jonathan Maurer^{1,2,3}, Camille Malburet³, Marc François-Heude³, Davy Guillarme^{1,2}

¹Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, Geneva, Switzerland,

²School of Pharmaceutical Sciences, University of Geneva, Geneva, Switzerland, ³mRNA Center of Excellence, Analytical Sciences, Sanofi, Marcy l'Etoile, France

PS01-19

LC-MS/MS determination and pharmacokinetic study of selected breast cancer drugs in clinical practice

Lu Turković¹, Zvonimir Mlinarić¹, Dubravka Glasovac², Sven Komljenović², Mila Lovrić², Tajana Silovski^{3,4}, Marija Križić³, Miranda Sertić¹

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PS01-20

Potential for drug-drug interactions of breast cancer drug abemaciclib – an in vitro metabolism study

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PS01-21

Chiral targeted brain metabolomics in volume-limited biological samples

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PS01-22

An automated CZE-MS and Genedata-RefinerMS based analytical workflow for plate-based milligram scale siRNA synthesis.

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PS01-23

Fluorescent compounds as pH tracing standards for capillary isoelectric focusing analysis of labeled proteins and their glycoforms using laser-induced fluorescence detection

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PS01-24

Measurement of exogenous and endogenous steroids in dried blood spots by LC-MS/MS for application to pharmacokinetic studies

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PS01-25

Circadian rhythm profiling of amino acids and biogenic amines in chronic hypercortisolism states: utility of dried blood spots

Greta Galante¹, Valentina Bissi¹, Lorenzo Tucci^{1,2}, Ilaria Improta^{1,2}, Alessandro Perrone¹, Kimberly Coscia^{1,2}, Giacomo Colombin^{1,2}, Valentina Vicennati^{1,2}, Uberto Pagotto^{1,2}, Guido Di Dalmazi^{1,2}, Flaminia Fanelli¹
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PS01-26

Beyond conventional: evaluating the potential of HILIC for collagen peptide mapping analysis

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PS01-27

Biomonitoring of phthalates in the Swiss population

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PS01-28

Determination of organic acids and phenolic compounds by capillary electrophoresis

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PS01-29

Therapeutic drug monitoring of asparaginase in acute lymphoblastic leukemia (ALL) patients. Swiss-wide implementation and international cross-validation.

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PS01-30

A multiplex LC-MS/MS assay for the Therapeutic Drug Monitoring of ivacaftor, lumacaftor, tezacaftor, and elexacaftor and their active metabolites, in Cystic Fibrosis.

Fabrizio Corrado¹, Thomas Mercier¹, François Versace¹, Amarande Murisier¹, Susana Alves Saldanha¹, Sylvain Blanchon⁴, Zisis Balmouzis², Angela Koutsokera², François Girardin¹, Catia Marzolini¹, Alain Sauty^{2,3}, Laurent Arthur Decosterd¹, **Eva Choong**¹
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PS01-31

Quantification of recombinant human serum albumin (rHSA) in serum-free preservation medium for human donor corneal tissues, by liquid chromatography-tandem mass spectrometry (LC-MS/MS)

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PS01-32

Quantification of NNAL and anabasine with consecutive analysis of nicotine, cotinine and 3'-hydroxycotinine in urine using LC-MS/MS to determine tobacco smoking status and nicotine use from nicotine-containing alternatives for smoking cessation studies

Vera van der Velpen^{1,2}, **Kristina Žajdlíková**^{1,2}, Mats B. Hirt^{1,2}, Evangelia Liakoni¹, Manuel Haschke^{1,2}

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PS01-33

Caffeine metabolic ratios from diet to estimate CYP1A2 activity: association with olanzapine plasma concentrations

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PS01-34

Methodological Support for Clinical Analysis of Patients in Critical Condition

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PS01-35

Association of type 2 diabetes mellitus to arsenic metabolism?

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PS01-36

Determination of sildenafil by capillary electrophoresis

Océane Roulin¹

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PS01-37

DEVELOPMENT AND VALIDATION OF A HPLC-MS/MS METHOD FOR DETERMINATION OF BUDESONIDE IN NEWBORNS AFTER INHALATION OF THE DRUG

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PS01-38

A prick is enough! Therapeutic drug monitoring of antiseizure medication through capillary microsampling devices

Chiara Cancellarini¹, **Alice Caravelli**², Erika Esposito², Laura Maria Beatrice Belotti², Martina Soldà², Luca Vignatelli², Barbara Mostacci², Jessica Fiori^{1,3}, Francesca Bisulli^{1,2}, Laura Licchetta²

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PS01-39

Potential Identification of An Undeclared Compound in Herbal Supplements; Beta-Methylethephénylamine

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PS01-40

Comparative Analysis of Antibodies and Molecularly Imprinted Polymers for Electrochemical Detection of Dopamine

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PS01-41

Developing HPLC-UV Method for Multi-Analyte Detection of Caffeine, Nicotine, Clozapine, and Their Metabolites in Plasma Samples

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Pharmaceutical Toxicology, Faculty of Pharmacy, Ankara University, Ankara, Türkiye

PS01-42

Electrochemical and Spectroscopic Methods Provide Insight Into The Interaction between Nabumetone and double-stranded DNA.

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PS01-44

Comparative Study of Molecularly Imprinted Polymer Immobilization Techniques on Microfluidic Electrochemical Chips for Dopamine Biosensing

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PS01-45

Subunit glycoprofiling by HILIC and Fc γ RIIIa affinity chromatography to address the glycoengineering of Rituximab from Nicotiana benthamiana

Sara Tengattini¹, Francesca Rinaldi¹, Aurora Tini¹, Isabella Senini¹, Carla Marusic², Claudio Pisano³, Marcello Donini², Caterina Temporini¹

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PS01-46

Oligonucleotide Characterization: Combining Anion Exchange Chromatography with In-line Multi-Angle Light-Scattering Detection

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PS01-47

Effect of Analytical Conditions on Oligonucleotide Adsorption in Ion-Pairing Reversed Phase and Ion Exchange Chromatography

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PS01-48

Native anion exchange chromatography coupled to mass spectrometry for the analysis of charge variants of IgG4-based monoclonal antibodies

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PS01-49

Microwave-assisted extraction and characterization of fatty acids: a sustainable approach to fatty acid production from wheat bran

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PS02-01

Application of inert biphenyl stationary phase in the analysis of biologically relevant metabolites

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PS02-02

Improvements in body odor sampling and analysis for medical diagnosis applications using canine olfaction and GC-MS

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PS02-03

Blockchain and machine learning based framework for managing EMRs: Security, Privacy, Interoperability, and Clinical Decision Support

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PS02-05

Capillary electrophoresis as a green alternative to liquid chromatography for determination of alpelisib in pharmaceutical dosage forms

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PS02-06

On going procedure performance verification of chromatographic assay methods

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PS02-08

Full analytical characterization of an innovative nanomedicine targeting human islet amyloid polypeptide for type 2 diabetes mellitus treatment

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PS02-09

Analysis of enantiomeric purity of some fluoroquinolones antibacterials pharmaceutical formulation on different chiral stationary phases

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PS02-10

Untargeted Metabolomics of PAC-containing Dietary Supplements by LC-MS: Data Fusion Approach For authentication and Detection of Adulteration in Botanical Materials

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PS02-11

Chemical derivatization for targeted brain metabolomics of volume-limited samples using LC-MS/MS

Liam Nestor¹, Cinzia Lella¹, Dimitri De Bundel¹, Ilse Smolders¹, Yvan Vander Heyden², Ann Van Eeckhout¹

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PS02-12

Monitoring of Leachable Compounds in Hospital Pharmacy-Compounded Drug Products by UHPLC-HRMS

Julian Pezzatti¹, William Bello^{1,2,3,4}, Laurent Carrez¹, Serge Rudaz^{3,4,5}, Sadeghipour Farshid^{1,2,3,4}

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PS02-13

SPME as a novel extraction approach for in vivo analysis of phytocannabinoids in Cannabis spp. plants

Katarzyna Woźniczka¹, Vaclav Trojan², Krzysztof Urbanowicz³, Patrik Schreiber², Julia Zadrożna¹, Tomasz Bączek¹, Ryszard Tomasz Smoleński³, Anna Roszkowska¹

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PS02-14

LC-MS/MS targeted-metabolomics of kynurenines in cell supernatants: a reliable readout for assessing the in vitro potency of selective hIDO1 and TDO inhibitors

Salvatore Villani¹, Silvia Fallarini¹, Sarah Jane Rezzi¹, Rita Maria Concetta Di Martino¹, Silvio Aprile¹, Erika Del Grosso¹

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PS02-15

Hunting for oxidized lipids in complex biological matrices

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PS02-16

Early Biopharmaceutical Assessment and Formulation Development in Drug Discovery

Anaëlle Monfort¹, M. Maxime Murphy¹, Louiza Mahrouche¹, Isabelle St-Jean¹, Martin Jutras¹, Mihaela Friciu¹, Valérie Gaëlle Roullin¹, Grégoire Leclair¹

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PS02-17

Development and optimization of an SFC-MS method for the simultaneous analysis of anticancer drugs with a wide range of physicochemical properties.

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PS02-18

Comparison of hemispherical directional reflectance and thermal emittance of metformin extended-release tablets exposed to sunlight

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PS02-19

Non-Invasive Quantification of Protein Glycation in Drug Development: A Time Domain NMR Approach

Hani Alam¹, Dr. Özlem Gezici Koç^{2,4}, **Gözde Özeşme Taylan**¹, Cem Yamalı³, Mecit Öztop²

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PS02-20

Enhanced Insulin Encapsulation Using Core-Shell Natural Polysaccharide-Based Aerogels for Oral Delivery

Candidate Gözde Özeşme Taylan¹, Student Carlos Illanes-Bordomás², Özge Güven³, Carlos A. García-González², Mecit Halil Öztop³

PS02-21

Microsampling Meets Microextraction: Bridging the Gap for More Efficient Drug Analysis

Adam Reguli¹, Hana Bavlovič Piskáčková¹, Olga Lenčová², Petra Kollárová-Brázdová², Martin Štěrba², Petra Štěrbová-Kovářiková¹

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PS02-22

Development of an in vitro BBB model to study the passage of magnesium taurate and related molecules in the brain compartment.

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PS02-23

High Throughput FAMS – A Fatty Acid Mass Spectrometry Method for Monitoring Polysorbate Hydrolysis in QC

Anja Bathke¹, Jan Wendler¹, Sina Hoelterhoff¹

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PS02-24

First steps in development of a surface-enhanced Raman chemical imaging method for pharmaceutical active ingredient tracking in the context of in-vitro skin equivalent-model permeation studies

Keuser Kemik^{1,2}, Dr. Charlotte De Bleye^{1,2}, Dr. Pierre-Yves Sacré^{1,2,3}, Pr. Philippe Hubert^{1,2}, Associate Pr. Eric Ziemons^{1,2}

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PS02-25

Online and automated sample handling – The future of fast and efficient mAb characterization and quantification

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PS02-26

Pick your method - A Toolbox for LC-MS Peptide Mapping

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PS02-27

Design of experiments-based sample-preparation optimization of plasma samples for targeted metabolic profiling of neurologically relevant amino acids

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PS02-28

Expediting Online Liquid Chromatography for Real-Time Monitoring of Product Attributes to Advance Process Analytical Technology in Downstream Processing of Biopharmaceuticals

Lukas Naumann¹, Tobias Graf¹, Lea Bonnington¹, Jakob Heckel¹, Bernhard Spensberger², Sascha Klein³, Christoph Brey³, Ronnie Nachtigall³, Maximilian Mroz³, Thomas Hogg¹, Christopher McHardy³, Andrés Martínez⁴, Reinhard Braaz⁵, Michael Leiss¹

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PS02-29

Optimizing solvent dilution for enhanced performance in online comprehensive two-dimensional liquid chromatography: theoretical and practical guidelines

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PS02-30

Determination of Ethylene Oxide Residuals in Sterilized Active Pharmaceutical Ingredients via Full Evaporation Headspace - Gas Chromatography

Ihtesham Rehman¹, Kris Wolfs¹, Erik Haghedooren², Erwin Adams¹

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PS02-31

Analytical Characterization of Plasmid DNA Topological Forms

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PS02-32

Negligible depletion in-vivo SPME for determining free and total endocannabinoid concentrations in rat brain

Igor Gustavo Carvalho Oliveira^{1,2}, Maria Eugênia Costa Queiroz¹, Janusz Pawliszyn²

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PS02-33

A rarely advertised approach to sensitize LC-sQMS methods

Gabriella Szabovik¹, Zoltán Dr. Béni¹

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PS02-34

Instant and non-destructive analysis of medicines using cloud-based portable NIR technology and machine learning

Hervé Rais¹, Pierre Esseiva¹, Olivier Delémont¹

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PS02-35

Is Transmission surface-enhanced Raman spectroscopy a good alternative to separative techniques for the nicotine dosage in e-liquid boosters?

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PS02-36

Untargeted metabolomic analysis of hawthorn-based food supplements: study of circulating molecules for rationalizing phytotherapy practices

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PS02-37

Metaboscan AI – the ML-based platform for full-Cycle management of metabolomic data

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PS02-38

An attempt to explain the mechanism of statin-induced muscle pain using a multiplatform metabolomics approach

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PS02-39

From untargeted to targeted HRMS-based proteomics: study of a biotechnological drug in plasma and CSF for Lafora disease

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PS02-40

Strategy for Multiplexing Absolute Quantification in Metabolomics with SILs as internal calibrant: one to quantify them all !

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PS02-41

Development of an optimised icIEF method for harmonising Quality Control of Monoclonal Antibodies by using an AQbD approach

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PS02-42

Targeted metabolomics as a tool for therapy efficacy monitoring of autoimmune and hematooncological diseases

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PS02-43

Lipidomics and metabolomics to investigate synergistic effects of erlotinib-HCl and tubacin anti-cancer drugs within 3D spheroid cell model of kidney cancer

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PS02-44

Gas Chromatography-Tandem Mass Spectrometry Method for the Quantitative Determination of Ethylene Glycol and Diethylene Glycol in Pediatric Syrups

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PS02-45

A single LC-MS/MS method to quantify 8 cannabinoids in blood, breast milk and meconium

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PS02-46

DEVELOPMENT OF HPLC METHOD FOR THE DETERMINATION OF ABEMACICLIB FROM LIPID-POLYMER HYBRID NANODELIVERY SYSTEMS

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PS02-47

INVESTIGATION OF THE MOLECULAR INTERACTION BETWEEN APROCLINIDIN, AN α_2 -ADRENERGIC RECEPTOR AGONIST, AND BOVINE SERUM ALBUMIN WITH FLUORESCENCE AND MOLECULAR DOCKING TECHNIQUES

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PS02-48

Design and Applications of Electrochemical Nanozyme Platform Consisting of Magnetic Nanomaterials and Inorganic Nanomaterials

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PS02-49

APTAMER-BASED HYBRID MONOLITHIC SORBENT FOR SELECTIVE EXTRACTION OF HOMOCYSTEINE IN BIOLOGICAL SAMPLES

Caroline Frenandez Grecco^{1,3}, Maria Eugênia Costa Queiroz³, Audrey Combès¹, **Valérie Pichon**^{1,2}

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PS02-50

Drug quality control in Senegal using capillary electrophoresis: retrospect on 12 years of work

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PS02-51

Developpement and validation of a capillary electrophoresis method for the control of salbutamol sulfate

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