

# ISC 2022

18-22 September, 2022  
Budapest, Hungary



33<sup>rd</sup> International Symposium on Chromatography

## FINAL PROGRAMME





## Higher Peaks – Clearly

Experience newfound clarity with the Nexera XS inert UHPLC. Offering reliable, robust performance, the Nexera XS inert represents a new peak in the analysis of biopolymers. It features a metal-free sample flow path prepared from corrosion-resistant materials, so that results will be clear and unaffected by sample adsorption or surface corrosion. Together with a new range of consumables, Shimadzu now offers the complete solution for bioanalysis.

### **Unconstrained recovery and sensitivity**

Bioinert flow path prevents sample loss due to adsorption.

### **Clear resolution without restrictions**

UHPLC performance for high efficiency bioanalysis.

### **Assured reliability and reproducibility**

Corrosion-resistant material ensures long-term stability and reliable data acquisition.



Ultra High Performance  
Liquid Chromatograph  
**Nexera XS inert**



# WELCOME

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## Welcome to Budapest and ISC 2022

It is indeed my pleasure to welcome you to the 33<sup>rd</sup> International Symposium on Chromatography in Budapest. Unfortunately, the COVID pandemic did not allow in-person symposia during the last three years, thus ISC 2022 is going to be the first significant live event in Europe since 2019, covering all fields of chromatography and separation science.

We are going to have excellent scientific and social programmes comprising almost 100 oral and more than 200 poster presentations. Lunchtime vendor seminars and an extensive exhibition featuring the leading companies in the field of separation technologies with focus on chromatography will also be equally interesting parts of the symposium.

The major focus of the symposium is on the impact of chromatography and separation science to meet the needs of the pharmaceutical, environmental, food and health industry, as well as science and medicine. The scientific programme reflects these themes and highlights new challenges and emerging opportunities for separation science.

During the symposium, prominent separation scientists will be honoured. The Halász Medal Award, the Csaba Horváth Memorial Award, the Ervin sz. Kováts Award for Young Scientists, the Prism-award of the Hungarian Society for Separation Sciences, as well as the Martin and Jubilee Medals of the Chromatographic Society will be presented during the ISC 2022 Symposium. The Joseph Huber Name Lecture Award of the Austrian Society of Analytical Chemistry will also be presented at the award ceremony.

Budapest, the capital of Hungary, is an economic, financial, and cultural centre with two million inhabitants. The city, which is beautifully situated on both sides of the Danube river, has a history dating back over 2000 years. The venue – Budapest Congress Centre – is equipped with a complete range of conference facilities and is easily reached by public transport. It is situated in a pleasant and peaceful chestnut park and directly connected to Novotel Budapest City. This is a place where meetings can be organised in a dynamic and modern environment. The centre is fully equipped with the latest audio-visual, stage-, light-, and air-conditioning technologies.

Welcome to Budapest!



Attila Felinger

ISC 2022 Symposium Chair

# SCIENTIFIC PROGRAMME

## SUNDAY, 18 SEPTEMBER

12:00-18:30 Registration desk opening

PÁTRIA HALL

Hours	Pátria Hall	Chair: Attila Felinger
17:00-17:30	Opening Ceremony	
17:30-18:00	Award Ceremony	
18:00-18:30	<b>Philip J Marriott - PL-1</b> Journeys in GC×GC - Developing Ultra-High-Resolution Separations	
18:30-19:00	<b>Csaba Szántay - PL-2</b> The Human Factor in Scientific Thinking: The Illusions That We Live By	
19:00-21:00	Welcome reception	

## MONDAY, 19 SEPTEMBER

PÁTRIA HALL

Hours	Pátria Hall	Chair: Fabrice Gritti
9:00-9:30	<b>Gert Desmet - KL-1</b> Kinetic Plots and What We Can Learn from Them	
9:30-9:50	<b>Szabolcs Fekete - O-01</b> Pressure-Enhanced Liquid Chromatography: Tuning Selectivity with Pressure Changes	
9:50-10:10	<b>Ken Broeckhoven - O-02</b> Measurement and Modelling of Longitudinal Diffusion in Supercritical Fluid Chromatography with Pressure Changes	
10:10-10:30	<b>Krisztián Horváth - O-03</b> Design and Optimization of Capacity Gradient Stationary Phases	



## MONDAY, 19 SEPTEMBER

Hours	Bartók Room	Chair: Tony Edge
9:00-9:30	<b>Gertrud E. Morlock - KL-2</b> Disruptive Planar Innovations: Multiplex Planar Assays, Non-Target 12D-Hyphenations, and 2LabsToGo Systems	
9:30-9:50	<b>Irena Vovk - O-04</b> Challenges in HPTLC and HPTLC-MS Analyses of Phytochemicals in Plant Materials and Food	
9:50-10:10	<b>Johannes Scholz - O-05</b> Two-dimensional Multiple Heart-cut Liquid Chromatography–Mass Spectrometry to Reveal the Sphingolipidome of <i>Caenorhabditis elegans</i>	
10:10-10:30	<b>Ágnes M. Móricz - O-06</b> Two-Dimensional Liquid Chromatography in Different Ways: 2D-HPTLC and HPTLC-HPLC	

BARTÓK ROOM

Hours	Lehár Room	Chair: Jörg Kutter
9:00-9:30	<b>Didier Thiebaut - KL-3</b> A Microfluidic Device for Digital Manipulation of Gaseous Samples: From Breakthrough Volumes Measurement to Enhanced Preconcentration of Volatile Compounds	
9:30-9:50	<b>Erwin Rosenberg - O-07</b> Fast Gas Chromatography by Using a Negative Thermal Gradient and Short GC Columns	
9:50-10:10	<b>Arnaud Philippart - O-08</b> Optimization of Organic Molecule Separation and Detection Using Gas Chromatographic Column Based on MEMS Technologies Developed for Planetary and Exobiology Studies	
10:30-11:00	<b>Coffee Break / Exhibition</b>	

LEHÁR ROOM

## MONDAY, 19 SEPTEMBER

### PÁTRIA HALL

Hours	Pátria Hall	Chair: Gyula Vigh
11:00-11:30	<b>Deirdre Cabooter - KL-4</b> Detailed Performance Analysis of Zwitterionic Hydrophilic Interaction Liquid Chromatography Polymer Columns	
11:30-11:50	<b>Tohru Ikegami - O-09</b> Development and Characterization of HILIC Stationary Phases Modified with Polyacrylamide Prepared by Different Polymerization Methods	
11:50-12:10	<b>Katarina Molnárová - O-10</b> The Potential of Hydrophilic Interaction Liquid Chromatography in the Separation of Glycopeptides	
12:10-12:30	<b>Yong Guo - O-11</b> Quantitative Assessment of Retention Mechanisms in Hydrophilic Interaction Chromatography (HILIC)	

### BARTÓK ROOM

Hours	Bartók Room	Chair: Philip Marriott
11:00-11:30	<b>Luigi Mondello - KL-5</b> New Frontier in Ultra Fast-GC from Theory to Practice	
11:30-11:50	<b>Barbara Giocastro - O-12</b> Investigation of Analytical Artifacts in the Application of Thermodesorption – Comprehensive Two-Dimensional Gas Chromatography - Mass Spectrometry for the Study of Particulate Matter and Atmospheric Processes	
11:50-12:10	<b>Amel Meziani - O-13</b> Optimization of GC Columns with Radially-Elongated Pillars with Different Coatings as Second Dimension of Comprehensive Two-Dimensional Gas Chromatography (GC×μGC)	
12:10-12:30	<b>Luciano Arantes - O-14</b> Short-Column Gas Chromatography for the Analysis of Thermally Labile and High Boiling Compounds of Forensic Interest	

### LEHÁR ROOM

Hours	Lehár Room	Chair: Torgny Fornstedt
11:00-11:30	<b>Martina Catani - KL-6</b> Boosting the Downstream Processing of Biopharmaceuticals by Means of Multicolumn Continuous Chromatography	
11:30-11:50	<b>Leon E. Niezen - O-15</b> Recycling Liquid Chromatography for the Analysis of Polymer Composition	
11:50-12:10	<b>Jordy D. Kruijswijk - O-62</b> Understanding the Atypical Chromatographic Behavior of Semi-Crystalline Polyamides	
12:30-13:30	<b>Lunch</b>	

## MONDAY, 19 SEPTEMBER

Hours Bartók Room		BARTÓK ROOM
13:30-14:30	<b>Shimadzu Vendor Seminar:</b> Better Together – Reaching Higher Peaks	
Hours Pátia Gallery and Entrance Foyer		PÁTIA HALL
14:30-16:00	<b>Attended Poster Session I. - Presentation of ODD numbered posters</b>	
15:30-16:00	<b>Coffee / Exhibition</b>	
Hours Pátia Hall		PÁTIA HALL
	<i>Chair: Wolfgang Lindner</i>	
16:00-16:30	<b>Alberto Cavazzini - KL-7</b> The Quest for Evermore Speed and Efficiency in Chiral Chromatography: Considerations on the Effect of Particle Geometry, Particle Pore Size, and the Loading of Chiral Selector	
16:30-16:50	<b>Abhijit Tarafder - O-16</b> Machine-learning for Chiral Method-Development in High-throughput Laboratory – Status Update	
16:50-17:10	<b>István Ilisz - O-17</b> Enantiomeric Separations Based on High-Performance Liquid Chromatography Utilizing Different Types of Chiral Stationary Phases	
17:10-17:30	<b>Anna Kubíčková - O-18</b> Chiral Liquid Crystals – Neverending Separation Challenge	
Hours Bartók Room		BARTÓK ROOM
	<i>Chair: Irena Vovk</i>	
16:00-16:30	<b>Bob W. J. Pirok - KL-8</b> State-of-the-Art Chemometric Strategies for Fully Automated Interpretive Method Development in Liquid Chromatography	
16:30-16:50	<b>Stefan Böhmendorfer - O-19</b> Self-Organizing Maps for the Classification and Exploration of Thin-Layer Chromatograms	
16:50-17:10	<b>Arnold Zöldhegyi - O-20</b> Analytical Quality-by-Design (AQbD) Model-Based Comparison of HPLC-Separation Systems Using Multivariate Eluent Design Spaces – Establishing Stationary Phase-Independent Separation of Ezetimibe and Related Impurities Across Several Column Chemistries	
17:10-17:30	<b>József Simon - O-21</b> <i>In silico</i> Separation of Overlapped Chromatographic 2 Peaks with the Expectation-Maximization Algorithm	



## TUESDAY, 20 SEPTEMBER

### PÁTRIA HALL

Hours	Pátria Hall	Chair: Alberto Cavazzini
9:00-9:30	<b>Simona Felletti - KL-9</b> Fundamentals of Adsorption Applied to Analytical and Preparative Liquid Chromatography for Cannabinoids Separations	
9:30-9:50	<b>Jean-Marc Roussel - O-22</b> Application of Prediction Intervals to the Interpretation of the Robustness Study of a UHPLC Method for the Separation of Cannabinoids	
9:50-10:10	<b>Margita Utczás - O-23</b> Cannabinoids in Sport: Innovative Analytical Methods Can Help	
10:10-10:30	<b>Constantina P. Kapnissi-Christodoulou - O-24</b> Use of Synergistic Systems in EKC, HPLC and LC-MS for Improved Separations – Evaluation of Extraction Procedures for the Quantification of Cannabinoids, Polyphenols and Aloins in Plants and Products	

### BARTÓK ROOM

Hours	Bartók Room	Chair: Michal Holcapek
9:00-9:30	<b>Michael Lämmerhofer - KL-10</b> Multidimensional Liquid Chromatography as a Powerful Tool to Enhance Selectivity in Pharmaceutical Analysis	
9:30-9:50	<b>Mimi den Uijl - O-25</b> Retention Modelling on Stationary-Phase-Assisted-Modulation Columns for Application in Two-dimensional Liquid Chromatography	
9:50-10:10	<b>Chris Tuczemskyi - O-26</b> The Incentive of Dual Injection Capabilities for Method Development and Quantitation in Heart-cut 2D-LC	
10:30-11:00	<b>Coffee Break / Exhibition</b>	

## TUESDAY, 20 SEPTEMBER

Hours	Pátiria Hall	Chair: Didier Thiebault
11:00-11:30	<b>Torgny Fornstedt - KL-11</b> Improved Analytical and Preparative Separation Methods of Therapeutic Oligonucleotides Using Digital Tools	

- 11:30-11:50 **Honorine Lardeux - O-28**  
The Impact of Low Adsorption Surfaces for the Chromatographic Analysis of Oligonucleotides
- 11:50-12:10 **Momoka Hayashida - O-29**  
Investigation of Supercritical Fluid Chromatography (SFC) Analytical Conditions for Oligonucleotides
- 12:10-12:30 **Alexander B. Schwahn - O-30**  
Oligonucleotide Sequencing by LC-MS/MS: A Novel Approach for Characterization and Quality Control of mRNA-based Vaccines and Biotherapeutics

PÁTIRIA HALL

Hours	Bartók Room	Chair: Gert Desmet
11:00-11:30	<b>Sebastiaan Eeltink - KL-12</b> Establishing the Next-generation Multi-dimensional Liquid Chromatography	

- 11:30-11:50 **Petr Cesla - O-31**  
Novel Approaches Minimizing Dilution in Comprehensive Two-Dimensional Liquid Chromatography
- 11:50-12:10 **Elena Bandini - O-32**  
Combining Temperature Gradient Elution with Refractive Index Detection through Temperature-responsive Liquid Chromatography
- 12:10-12:30 **Ahmet Talha Üzümcü - O-33**  
External Cavity Quantum Cascade Laser (EC-QCL) Coupled SEC for Online Detection of Functional Groups at ppm Level

BARTÓK ROOM

12:30-13:30 **Lunch**

Hours	Bartók Room
13:30-14:30	<b>Thermo Fischer Scientific Vendor Seminar</b> Semi-preparative LC Purification and Analytical Characterization of Genetic Chemical Scissors for Impurity Precision Profiling and Genomic Fingerprinting

BARTÓK ROOM

## TUESDAY, 20 SEPTEMBER

Hours	Pátria Gallery and Entrance Foyer
14:30-16:00	Attended Poster Session II. - Presentation of EVEN numbered posters

15:30-16:00 Coffee / Exhibition

### PÁTRIA HALL

Hours	Pátria Hall	Chair: Sebastian Eeltnik
16:00-16:30	<b>Fabrice Gritti - KL-13</b> Vacuum Jacketed Column Technology for Improved Ultra-high Pressure Liquid Chromatography Mass Spectrometry Performance	
16:30-16:50	<b>Bram Huygens - O-34</b> Band Broadening in Multicapillary Columns with Diffusional Bridging – Alleviating the Polydispersity Problem	
16:50-17:10	<b>Hélène Boiteux - O-35</b> The Importance of Column Compartment Thermostatting and Preheating for Temperature Sensitive Separations in Liquid Chromatography	
17:10-17:30	<b>Ali Moussa - O-36</b> Computational Fluid Dynamics Study of the Fine Details of the Viscous Heating Band Broadening and Potential Solutions to Alleviate it in Liquid Chromatography at Pressures up to 2500 bar in 2.1 Millimeter Columns	

### BARTÓK ROOM

Hours	Bartók Room	Chair: Michael Laemmerhofer
16:00-16:30	<b>Jörg P. Kutter - KL-14</b> Tackling Pharmaceutical and Biomedical Questions Using Thiolene-based Microfluidic Devices	
16:30-16:50	<b>Valentina Biagioni - O-37</b> A Continuous Microfluidic Sieve for the Size-based Fractionation of Particle Suspensions and Colloids	
16:50-17:10	<b>Tobias Werres - O-38</b> Peak Broadening Caused by Using Different Micro Liquid Chromatography Detectors	
17:10-17:30	<b>Jeff Op de Beeck - O-39</b> High Aspect Ratio Pillar Array Columns for Deep Proteome Profiling at Moderate LC Pump Pressures	



## WEDNESDAY, 21 SEPTEMBER

Hours	Pátia Hall	Chair: István Ilisz
9:00-9:30	<b>Gunda Köllensperger - KL-15</b> Fit for Purpose Metabolomic Workflows – Key Aspects of Validation	

9:30-9:50 **Katharina Böttinger - O-40**  
Quantification of N-glycosylation Signatures of Monoclonal Antibodies Using Liquid Chromatography – Mass Spectrometry

9:50-10:10 **Valentina D'Atri - O-41**  
Anion-Exchange Chromatography at the Service of Gene Therapy: Boosting the Separation of Full/Empty Adeno-Associated Virus Capsids

10:10-10:30 **Bastiaan Duivelshof - O-42**  
Expediting the Characterization of COVID-19 Therapeutic mAbs Using Innovative Ultra-Short Column Formats and Automated Chromatography-Based Method Modeling

PÁTIA HALL

Hours	Bartók Room	Chair: Martina Catani
9:00-9:30	<b>Martí Rosés - KL-16</b> Characterization of Retention Interactions in Reversed Phase and Hydrophilic Interaction Liquid Chromatography	

9:30-9:50 **David S. Bell - O-43**  
The Impact of Organic Modifiers on Hydrophilic Interaction Liquid Chromatography (HILIC) Retention Mechanisms

9:50-10:10 **Patrik Appelblad - O-44**  
Stationary Phases for Hydrophilic Interaction Liquid Chromatography and Use of Multivariate Analysis to Classify Materials

10:10-10:30 **Alexandra Zatirakha - O-45**  
Advances in the Design of Anion Exchange Stationary Phases for Ion Chromatography with Various Bonding Chemistries

BARTÓK ROOM

10:30-11:10 **Coffee Break / Exhibition**

## WEDNESDAY, 21 SEPTEMBER

### PÁTRIA HALL

Hours	Pátria Hall	Chair: Simona Felletti
11:10-11:30	<b>Donatela Sadriaj - O-46</b> A Detailed Investigation of Mass Transfer Phenomena in Core-shell Particles with Different Particle and Pore Sizes	
11:30-11:50	<b>Egidijus Machtejevas - O-47</b> Understanding New Porous Graphitic Carbon Chromatography Columns: Retention Mechanisms and Applications	
11:50-12:10	<b>Zhuoheng Zhou - O-48</b> Design of Next-generation Polymer-monolithic Stationary Phases Targeting Ultra-high Resolving Power of Proteomic Sequencing	
12:10-12:30	<b>Stefano Cerbelli - O-49</b> Potentialities and Limitations of Vortex Chromatography	

### BARTÓK ROOM

Hours	Bartók Room	Chair: Gertrud Morlock
11:10-11:30	<b>Evgeny E. Tereshatov - O-50</b> Chromatography Study of Fundamental Properties of Medical Radioisotope Astatine-211	
11:30-11:50	<b>Tatiana Chenet - O-51</b> Separation of Heavy Metals from Aqueous Solution Using Scallop Shells as Adsorbent Material. Investigation of the Interactions of Metals with Shell Matrix Components	
11:50-12:10	<b>Juliette Vievard - O-52</b> Flax Fibers as New Filter for Metals Removal from Runoff Waters	
12:10-12:30	<b>Claudia Stevanin - O-53</b> Adsorption Treatments for Water Remediation by Zeolite Y: Removal of Per-poly Fluoroalkyl Substances (PFAS)	

12:30-14:00 **Lunch**

Hours	Pátria Gallery and Entrance Foyer
14:00-15:30	<b>Poster session III.</b>
15:30-16:00	<b>Coffee / Exhibition</b>

## WEDNESDAY, 21 SEPTEMBER

Hours	Pátia Hall	Chair: Deirdre Cabooter
16:00-16:30	<b>Oliver J. Schmitz - KL-17</b> Why Use GC-EL-MS When You Can Do Better?	
16:30-16:50	<b>Attila Gáspár - O-54</b> Intact Protein Analysis by Capillary Zone Electrophoresis – Mass Spectrometry	
16:50-17:10	<b>Fadi Fadil - O-55</b> FastRet: Fast and Simple Retention Time Prediction with SMILES	
17:10-17:30	<b>Janine Boertjes - O-56</b> Trace Analysis of Haloacetic Acids in Environmental Water Samples Using High Pressure Ion Chromatography-Mass Spectrometry	

PÁTIA HALL

Hours	Bartók Room	Chair: László Abrankó
16:00-16:30	<b>Cynthia Nagy - KL-18</b> Development of Immobilized Enzymatic Microreactors for Bottom-Up Proteomic Studies	
16:30-16:50	<b>Matthew R. Linford - O-57</b> A Flow-Through Atmospheric Pressure-Atomic Layer Deposition Reactor for Thin-film Deposition inside Capillary Columns	
16:50-17:10	<b>Matthias Pursch - O-58</b> Fast Online LC Reaction Monitoring Using Sub-minute UHPLC Separations in Combination with "Feed" Injection	
17:10-17:30	<b>Tibor Muellner - O-59</b> The Role of Universal Detection in Modern Liquid Chromatography	

BARTÓK ROOM



## THURSDAY, 22 SEPTEMBER

### PÁTRIA HALL

Hours	Pátria Hall	Chair: Abhijit Tarafder
9:00-9:30	<b>Michal Kohout - KL-19</b> Gradient Supercritical Fluid Chromatography Coupled to Mass Spectrometry with a Gradient Flow of a Make-up Solvent	
9:30-9:50	<b>Quentin Gros - O-60</b> On-line Supercritical Fluid Extraction - Supercritical Fluid Chromatography (SFE-SFC) for Nonpolar and Polar Compounds from Milk Thistle Seeds	
9:50-10:10	<b>Lucie Nováková - O-61</b> Supercritical Fluids in Analysis and Extraction of <i>Amaryllidaceae</i> Alkaloids from <i>Narcissus</i> sp.	
10:10-10:30	<b>Csanád Rédei - O-72</b> Exploring the Difficulties of Neat Carbon Dioxide as the Mobile Phase in Supercritical Fluid Chromatography	

### BARTÓK ROOM

Hours	Bartók Room	Chair: Attila Gáspár
9:00-9:30	<b>László Drahos - KL-20</b> RP-HPLC-MS Analysis of Intact Proteins: How to use Deconvolution?	
9:30-9:50	<b>Matt A. James - O-63</b> Achieving Rapid LC-MS Analyses Using Short 10 mm Columns	
9:50-10:10	<b>Trine Grønhaug Halvorsen - O-64</b> Smart Samplers for Mass Spectrometric Bioanalysis of Proteins	
10:10-10:30	<b>Ibrahim Aissa - O-65</b> Strategy for Structural Elucidation of Lipid A: Elucidation of Protonated and Disodiated Molecules Using CID Based MS/MS and MS <sup>n</sup> Methods in Mass Spectrometry	
10:30-11:00	<b>Coffee Break / Exhibition</b>	

## THURSDAY, 22 SEPTEMBER

Hours	Pátia Hall	Chair: Peter Schoenmakers
11:00-11:30	<b>Gyula Vigh - KL-21</b> Carrier Ampholyte-Based Isoelectric Focusing in Capillaries and Gels Is Not a Steady-state Process, It Is Transient Bidirectional Isotachopheresis	

- 11:30-11:50 **Annamária Sepsey - O-66**  
An Adventurous Journey Around the Thermodynamics of Liquid Chromatography
- 11:50-12:10 **Tijmen S. Bos - O-67**  
Computer-aided Multi-level Characterization of Functional Cellulose Ethers Using Liquid Chromatography with Triple and Mass Spectrometric Detection
- 12:10-12:30 **Ardiana Kajtazi - O-68**  
Introduction, Application and Extension of ChromaRIM: A Liquid Chromatography Retention Index Model for Enhancing Structural Identification of Small  $C_xH_yO_z$  Molecules

PÁTIA HALL

Hours	Bartók Room	Chair: László Drahos
11:00-11:30	<b>Lilla Turiák - KL-22</b> Proteomic Analysis of Small Cell and Non-Small Cell Lung Cancer Tissue Samples	

- 11:30-11:50 **Ondrej Peterka - O-69**  
H/D Pooling of Benzoyl Derivatives: Internal Standard per Each Analyte for Lipidomic Quantitation by RP-UHPLC/MS
- 11:50-12:10 **Gábor Tóth - O-70**  
HILIC and Graphite-based Solid-phase Extraction of Heparan Sulfate Disaccharides
- 12:10-12:30 **Fanni Bugyi - O-71**  
Development of Sample Preparation Methods for the Proteomic Analysis of Phosphopeptides

BARTÓK ROOM

12:30-13:30 **Lunch**

Hours	Pátia Hall	Chair: Krisztián Horváth
13:30-14:00	<b>Peter Schoenmakers - PL-3</b> Separations, Dimensions, Actions and Reactions	
14:00-14:30	<b>Michal Holčapek - PL-4</b> UHPLC/MS in Lipidomic Quantitation: Towards the Clinical Screening of Pancreatic Cancer	
14:30-15:00	<b>Tony Edge - PL-5</b> An Assessment of Stationary Phase Selectivity in SFC	
15:00-15:30	<b>Closing Ceremony</b>	

PÁTIA HALL

# COMPANY PROFILES

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## PLATINUM SPONSOR

### Shimadzu



Shimadzu is one of the leading manufacturers of analytical instrumentation. Their systems are essential tools for consumer and product safety in almost all industrial segments, including healthcare, food safety and life sciences. Ever since its foundation in 1875 Shimadzu is in the service of science, ensuring precise, reliable analyses in medicine, chemistry, pharmacy, food or environmental control.

At ISC 2022 Shimadzu will provide you with a good overview of the product portfolio of not only analytical HPLC and LCMS but also preparative HPLC, UHPLC, IC, SFC and GCMS equipment.

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### Thermo Fisher Scientific Inc.



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### Waters

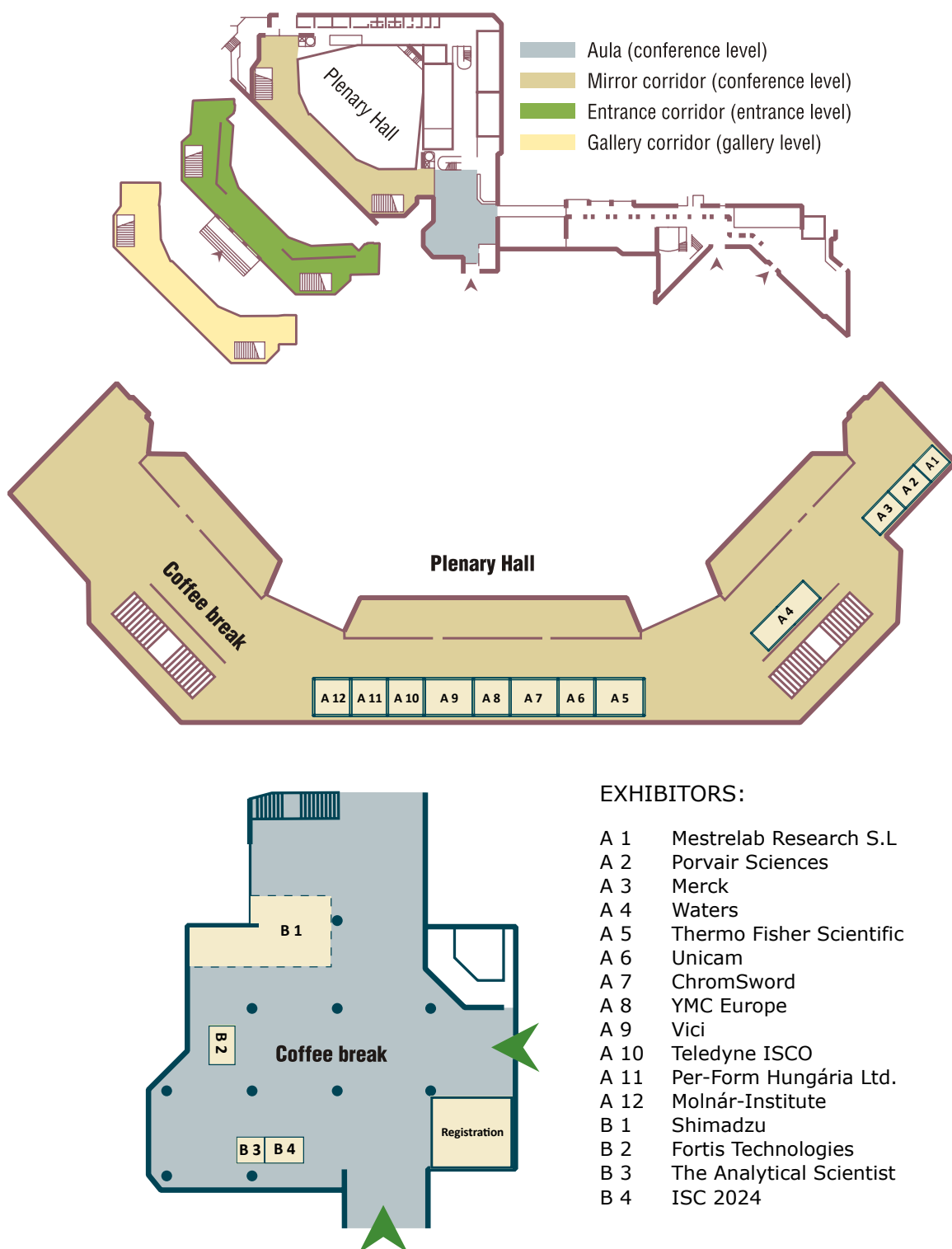
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# FLOOR PLAN OF ISC 2022 EXHIBITION



# VENDOR SEMINARS

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## SEMINAR OF SHIMADZU EUROPE

19 September 2022

### **Experience New Clarity and a New Peak in the Analysis of Biopolymers**

*Dr. Gesa J. Schad, Shimadzu Europa GmbH, Duisburg, Germany*

### **Dual Deconvolution of LC-PDA-MS Data: A Fast-Track Approach for Chemical Composition and Impurity Analysis**

*Anja Grüning, Philipp Jochems, Shimadzu Europa GmbH, Duisburg, Germany*

After this long time of isolation and distance learning, we are pleased and excited to take this opportunity to introduce a brand-new product line-up, ranging from bioinert method scouting, over a new compact single-quadrupole LCMS detector, to novel approaches of data evaluation – all developed to improve data quality and reliability, while keeping an eye on ease-of-use and traceability. We will be presenting the new Nexera XS inert, a truly bioinert UHPLC system that has been designed to resolve the most common problems encountered in the analysis of biopharmaceuticals. In a second presentation Shimadzu's new compact MS detector, the LCMS-2050 will be introduced. Now easily integratable into liquid chromatograph systems, mass spectrometry (MS) is increasingly recognized as an orthogonal detector that adds extra information to UV-based photodiode array (PDA) detectors. One barrier to the adoption of MS detectors has been software to simplify the interpretation of PDA and MS data. This seminar will reveal a streamlined workflow based on the dual deconvolution for resolving complexities caused by insufficient chromatographic separations. The approach is suited for both routine and research laboratories seeking to reduce time from samples to results.

## SEMINAR OF THERMO FISHER SCIENTIFIC

20 September 2022

### Semi-Preparative LC Purification and Analytical Characterization of Genetic Chemical Scissors for Impurity Precision Profiling and Genomic Fingerprinting

*Alexander Schwenger*

The impressive success of mRNA vaccines in the Covid-19 pandemic has fueled the hope for further applications that may open a new age of medical therapies. As for any kind of pharmaceutical agent strict control strategies from early process development to final product is an essential precondition. Assembled of several thousand nucleotides, the molecular mass of these compounds is in the megadalton range. The large size coupled with the lability against chemical, enzymatic or even mechanical treatment are responsible for the stability of chemically sensitive mRNAs. Failure in the essential regions such as the Cap structure and poly A tail can have critical consequences on the integrity and/or translation. To handle the challenges of purification and analytical characterizations of these complex molecules, modern fingerprinting techniques utilizing chemical scissors play a leading role by cleaving regions of interest with high precision into qualifiable and quantifiable fragments [1]. The mapping of subsequent digest fingerprints as well as the analysis and purification of synthetic reagents require highly precise analytical and semi-preparative chromatographic methods and instrumentation to facilitate the precise purification and characterization.

[1.] US WO EP CA SG Patent nr. WO2020127959A1, 2019



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# PRACTICAL INFORMATION

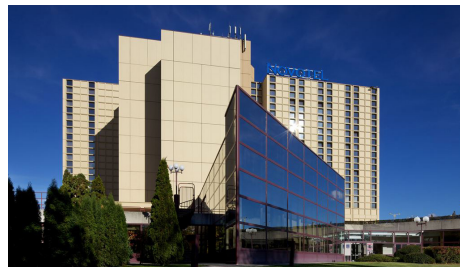
## CONFERENCE VENUE

### Budapest Congress Center

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### Parking facilities for visitors

For guests arriving by car, we can offer great and convenient parking facilities for additional parking fee. **In front of Budapest Congress Center, with entrance on Jagelló street, near the Chestnut park – Mom Sport's parking lot (marked red on the map)** Entrance and location of the parking lot from/on Jagelló street – 140 parking places

Fee and payment: 725 HUF / 60 minutes, payment at the ticket machine in the parking lot.

**In front of Budapest Congress Center, with entrance on Jagelló street, near to Alkotás street – Budapest Congress Center's parking lot (marked green on the map)**

Entrance and location of the parking lot from/on Jagelló street – 90 parking places

Fee and payment: 400 HUF / hour / car or 4.000 HUF / day / car, payment at the ticket machines on the side of the parking lot by cash or card, at the reception of Novotel Budapest City by cash or card, or using the mobile app marked already at the entrance (at the gate).

In case you choose to pay at the reception of Novotel Budapest City, you can enter the hotel from the parking lot level, walking along the building in the direction of Alkotás street.

The vicinity of the venue belongs to parking zone „A” of the city of Budapest. This is a short parking zone where you can park for 3 hours maximum at a rate of 600 HUF/hour.



## ELECTRICITY

The electricity is 230 V, 50 Hz. Japanese, UK, USA and other visitors: please note that in Hungary Continental European German-style CEE7/4 sockets ("Schuko sockets") are used, which also accepts CEE7/16 "Europlugs".

## LIABILITY AND INSURANCE

The organisers cannot accept liability for any personal accidents, loss of belongings or damage to private property of participants and accompanying persons that may occur during the meeting. Participants are advised to make their own arrangements to obtain health, travel and property insurance before their departure to the symposium.

## PUBLIC TRANSPORT IN BUDAPEST

Public transport in Budapest is provided by Center for Budapest Transport Ltd. (known to all Hungarians simply as BKK). Budapest has an efficient public transport network. In general the buses, trams and trolleybuses operate between 4.30 AM and 11 PM. All-night bus service operate on the major thoroughfares in the city (night bus timetables are posted at stops and in most metro stations). Three metro lines intersect at Deák Square in the centre of the town. Metros run at 2-15 minutes intervals from about 4.30 AM to 11.15 PM. There are also five suburban railway lines (HÉV) serving the outskirts of the city. For maps, timetables, ticket and pass information etc. see the home page of the BKK Ltd. (Center for Budapest Transport Ltd.)

## TAXIS IN BUDAPEST

Budapest taxis have yellow number plates and a taxi sign in yellow. Any vehicle without these features is operating illegally. It's a good idea to avoid drivers who volunteer their services but don't have a registered taxi sticker on their car. This can prevent unpleasant surprises when it comes time to pay. All cars must have a taximeter installed, and these also print out a receipt. Taxi drivers are required to give an invoice on request. Tipping: in general 10% of the fare is acceptable.

The total charge that has to be paid by the passenger is made up of three separate parts:

basic charge: 1.000 HUF

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## TELEPHONE

The international code for Hungary is 36, the area code for Budapest is 1. To call a number within Hungary, first dial 06. Budapest telephone numbers have seven digits, all other areas have six digits (in addition to the area codes). To make an international call from Hungary, first dial 00, then the country code followed by the area code and the subscriber's telephone number.

## IMPORTANT PHONE NUMBERS

(English is usually spoken at the emergency numbers listed below. In case English is not spoken, dial 112)

Ambulance: 104

Fire brigade: 105

Police: 107

Central help number: 112

General enquiries: 197

Inland enquiries: 198

International enquiries: 199

Hungarian Automobile Club help number: 188

## TIME

Hungary is in the Central European Time Zone. In the summer months clocks are set at GMT + 2 hours.

## WEATHER

The weather in Hungary in September is usually sunny but rain is possible, it is worth to prepare your travel clothing accordingly this. Temperatures are usually in the range between 20-25 °C during the day.

# PRESENTER INFORMATION

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## ORAL PRESENTATION

The schedule of the oral presentations can be seen in the detailed programme of this booklet. Speakers and session chairs are kindly requested to keep the time of the presentations. Make sure to bring your presentation file written on a USB flash drive. Presenters are kindly requested to give their presentation file to the technicians in the lecture rooms preferably half day before beginning of the corresponding session.

**Please note that speakers will not be able to use their own laptops!**

## OPENING HOURS OF CONFERENCE ROOMS

Sunday, 18 September 2022:	15:00 – 19:00
Monday, 19 September 2022:	08:30 – 18:00
Tuesday, 20 September 2022:	08:30 – 18:00
Wednesday, 21 September 2022:	08:30 – 18:00
Thursday, 22 September 2022:	08:30 – 15:00

## POSTER EXHIBITION INSTALLATION

Poster format: A0, portrait (841 x 1189 mm)

Poster presenters of ALL poster numbers are kindly requested to mount their posters before the opening of the conference (or latest till the beginning of the first poster session) and remove them on Thursday till 13:30 the latest.

Posters will be identified by poster numbers, which are indicated in the programme booklet and in the conference application.

## POSTER SESSIONS

Poster presentations are an opportunity to enter the scientific world, especially for young scientists. Poster Awards will be presented to the authors of the best posters selected in a peer-review process; an international panel of scientists will review the participating posters.

**ODD numbered posters should be presented on Monday, 19 September; 14:30-16:00.**

**EVEN numbered posters should be presented on Tuesday, 20 September; 14:30-16:00.**

After the poster sessions on Monday and Tuesday, finalists are selected by the poster jury. Posters that are selected for the final round of evaluation, will be flagged and will be judged once again during the Wednesday poster session at 14:00-15:30.

Poster presenters who make it to the final round are asked to stay until the Poster Award ceremony during the closing plenary session on Thursday afternoon, 22 September.

# SOCIAL PROGRAMMES

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## WELCOME RECEPTION

The organisers of ISC 2022 invite you to attend the Welcome Reception to be held on 18 September 2022 between 19:00-21:00 in the Aula of the conference venue. Fingerfood with special delicacies and wines will be served during the event. The Welcome Reception will serve as an initial get-together for social networking in a relaxed atmosphere. It is a chance to catch-up with friends, meet new people, make connections, discuss ideas and find new insights with great company.



Join us for drinks and snacks following the Plenary Session!

Date: **Sunday, 18 September 2022**

Location: **Budapest Congress Centre (BCC), AULA**

Time: **19:00 – 21:00**

## SYMPOSIUM DINNER WITH RIVER CRUISE – EUROPE BOAT

Our symposium dinner with river cruise gives you the opportunity to marvel in the breathtaking panorama of the capital. Be sure not to leave your photo device home! The best pictures of the capital and the House of Parliament are taken from the deck of the boat!

The symposium dinner will be held on the Europe event-boat, which is the biggest and the most equipped river event-boat not only in Hungary, but in Central Europe as well. The elegant and stylish basic mood of the Europe event-boat is coming from the harmony of the different colours which have been used.

It's an unforgettable experience to take a look to Budapest from the deck and praise its beauty, for you are not able to do that from any other part of the capital city. Make the most of your Budapest experience by combining a cruise with a fantastic dinner, and join us for this event!



Date: **Wednesday, 21 September 2022**

Price of the symposium dinner: **70 Euro / person**

Not included in the registration fee. Please don't forget to bring your banquet ticket, which you can collect during registration.

Please note: there are no stops along the cruise route.

**Bus transportation will be provided, gathering in front of the main entrance of Novotel Budapest City Hotel (NOT the Budapest Congress Center) 18:30 - 18:45.**

Departure to Europa boat at 18:45.

**Transfer back to the hotel between 22:00 - 22:15.**





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Hours	Sunday 18 Sept.	Monday 19 Sept.			Tuesday 20 Sept.		Wednesday 21 Sept.		Thursday 22 Sept.		
9:00	Registration										
9:30		S1	S2	S3	S9	S10	S15	S16	S21	S22	
10:00											
10:30		Coffee			Coffee		Coffee		Coffee		
11:00											
11:30		S4	S5	S6	S11	S12	S17	S18	S23	S24	
12:00											
12:30		Lunch			Lunch		Lunch		Lunch		
13:00											
13:30		Vendor Seminar			Vendor Seminar				Plenary Lectures		
14:00									Closing Ceremony		
14:30		Coffee			Coffee		Coffee				
15:00		Poster session			Poster session		Poster session				
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17:00		Opening Ceremony	S7	S8		S13	S14	S19	S20		
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20:30											
21:00											

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