

Programme

Tuesday 11/10/2022

13:00 **Registration**

14:00 **Workshops (subject to prior registration)**

Session Workshop 1

Room 5, 1st floor

14:00 **Continuous Chromatography for Small Molecules: Principle, Process Development and Large Scale Manufacturing**

Dr Olivier DAPREMONT
(SK PHARMTECO, Rancho Cordova, United States)

Session Workshop 2

Room 3, 1st floor

14:00 **Introduction to Machine-Learning Methods for Process Development. From Multivariate Analysis to Hybrid Models**

Dr Alessandro BUTTE
(DATAHOW, Zurich, Switzerland)

15:30 **Coffee break**

Session Workshop 3

Room 5, 1st floor

16:00 **Prep Chiral and Achiral SFC: Principles and Applications**

Dr Eric FRANCOTTE (FRANCOTTECONSULTING, Nuglar, Switzerland)
Dr Gerard ROSSE (PIC SOLUTION, San Diego, United States)

Session Workshop 4

Room 3, 1st floor

16:00 **Application of Machine-Learning Methods to the Production of Therapeutic Proteins**

Prof. Massimo MORBIDELLI
(POLITECNICO MILANO, Thessaloniki, Greece)

17:45 **Welcome Reception sponsored by SK pharmteco**

Ground floor

19:00 **End of the Day**

Wednesday 12/10/2022

08:00 **Registration**

08:30 **Opening Ceremony**

Prof. José Paulo MOTA
(UNIVERSIDADE NOVA DE LISBOA, Caparica, Portugal)
Auditorium II & Overflow Auditorium III

Session 1: Modeling and Theory

Auditorium II & Overflow Auditorium III

08:40 **Introduction by session chair**

Prof. Massimo MORBIDELLI
(POLITECNICO MILANO, Thessaloniki, Greece)

08:45 **Measurement of Separation Materials to Enable Mechanistic Modelling and Rational Design (KL01)**

Prof. Dan BRACEWELL
(UNIVERSITY COLLEGE LONDON, London, United Kingdom)

09:25 **Models in the SMB and SMBR Process Development (IL01)**

Dr Damien LEINEKUGEL LE COCQ
(IFP ENERGIES NOUVELLES, Solaize, France)

09:50 **Development of Preparative Chromatographic Processes for the Classification of Nanoparticles (OC01)**

Prof. Malte KASPEREIT
(FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG, Erlangen, Germany)

10:10 **Optimizing AAV Full/Empty Separation Using Mechanistic Modeling (OC02)**

Dr Tatjana TRUNZER
(CYTIVA, Karlsruhe, Germany)

10:30 **Coffee break & Exhibitor**

Ground floor

Session 2: Biomolecules I

Auditorium II & Overflow Auditorium III

11:00 **Introduction by session chair**

Prof. Andreas SEIDEL-MORGENSTERN
(MAX PLANCK INSTITUTE FOR DYNAMICS OF COMPLEX TECHNICAL SYSTEMS, Magdeburg, Germany)

11:05 **Proteins at Chromatographic Surfaces – Competitive Binding and On-column Aggregate Formation on Monomodal and Multimodal Anion Exchangers (KL02)**

Prof. Giorgio CARTA
(UNIVERSITY OF VIRGINIA, Charlottesville, United States)

11:45 **Protein Purification Using Magnetic Adsorbents and Magnetic Separation - a Robust Alternative to Conventional Chromatography? (IL02)**

Prof. Mathias FRANZREB
(KARLSRUHE INSTITUTE OF TECHNOLOGY, Karlsruhe, Germany)

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12:10 Intensified Purification of Monoclonal Antibodies with Double Flow-Through Membrane Chromatography (OC03)

Mr Fabian SCHMITZ
(SARTORIUS STEDIM BIOTECH GMBH, Göttingen, Germany)

12:30 Coupling Preferential Precipitation and IEX for Reducing Acidic Variant Content in Monoclonal Antibody Pools (OC04)

Prof. Dorota ANTOS
(RZESZOW UNIVERSITY OF TECHNOLOGY, Rzeszow, Poland)

12:50 Lunch break & Exhibition until 14:05

Ground floor

Session Vendor Seminar 1

Room 2, 1st floor

13:00 Nouryon / Kromasil Seminar
Chromatographic toolbox for Purification of GLP-1 Agonist and Advances in the Development of Stationary Phases and Purifications in Preparative Chromatography

Session Vendor Seminar 2

Room 5, 1st floor

13:00 Osaka Soda Co., Ltd. Seminar
You need a COMPASS!

Session Vendor Seminar 3

Room 3, 1st floor

13:00 Sartorius Seminar
Chromatography challenges to purify Oligonucleotides and mRNA: how to deal with aggressive buffer and high temperature?

Session 3: Biomolecules II

Auditorium II & Overflow Auditorium III

14:05 Introduction by session chair

Dr Michael SCHULTE
(MERCK KGAA, Darmstadt, Germany)

14:10 Process Scale MCSGP Purification of large Synthetic Molecules (KL03)

Dr Ralf EISENHUTH
(BACHEM, Bubendorf, Switzerland)

14:50 Making Affinity Chromatography an Integral Part of Vaccine Development and Manufacturing (IL03)

Dr Mikkel NISSUM
(GSK, Siena, Italy)

15:15 Integration of Chromatography and Allied Separation Technologies Towards Autonomous Continuous mRNA Production (OC05)

Dr Axel SCHMIDT
(INSTITUT FÜR THERMISCHE VERFAHRENSTECHNIK, TUC, Clausthal-Zellerfeld, Germany)

15:35 Continuous Purification of Virus-Based Biologics Using Periodic Counter-Current Chromatography (OC06)

Programme

Dr Ricardo SILVA
(IBET, Oeiras, Portugal)

15:55 Coffee break

Ground floor

Session 4: Small Molecules

Auditorium II & Overflow Auditorium III

16:25 Introduction by session chair

Dr Olivier DAPREMONT
(SK PHARMTECO, Rancho Cordova, United States)

16:30 The Evolution of Chromatographic Processes for Small Molecules Between Research and Production of APIs (KL04)

Dr Gunnar GARKE
(BAYER AG, Wuppertal, Germany)

17:10 Large Scale SFC to Enable Delivery of Candidate Drugs; Cost Savings, Sustainability and Fundamental Learnings (IL04)

Dr Hanna LEEK
(ASTRAZENECA R&D, Mölndal, Sweden)

17:35 Fixed-Bed and Simulated Moving Bed Chromatography Using Achiral and Chiral Adsorbents for the Complete Preparative Separation of a Quaternary Mixture (OC07)

Mr Rami ARAFAH
(POLYTECHNIC INSTITUTE OF BRAGANÇA, Braganca, Portugal)

17:55 High-Throughput Analytical and Purification Capabilities at Janssen Research and Development, Toledo (OC08)

Dr Alberto FONTANA
(JANSSEN, Toledo, Spain)

18:15 Poster Session 1 sponsored by Cytiva & Networking

Foyer 1st floor

19:15 End of the Day

Thursday 13/10/2022

Session 5: Pharmaceutical Industry

Auditorium II & Overflow Auditorium III

- 09:10 Introduction by session chair**
Dr Pilar FRANCO
(CHIRAL TECHNOLOGIES EUROPE, Illkirch, France)
- 09:15 Preparative Separation by Chromatography from Laboratory to Industrial Scale in a Pharmaceutical Environment Applied to Small Molecules (IL05)**
Dr Antoni SEVERINO
(UCB, Braine-l'Alleud, Belgium)
- 09:40 New Purification Strategy of Polyether Block Copolymers by Means of Simulated Moving Bed Size Exclusion Chromatography (OC09)**
Dr Pedro SÁ GOMES
(BASF SE, Ludwigshafen am Rhein, Germany)
- 10:00 New Approaches in Preparative Chromatography for Lipid Nanoparticle (LNP) Building Blocks (OC10)**
Dr Markus JUZA
(CORDEN PHARMA SWITZERLAND, Liestal, Switzerland)
- 10:20 Coffee break & Exhibition**

Ground floor

Session 6: Automation and Simulation

Auditorium II & Overflow Auditorium III

- 10:50 Introduction by session chair**
Dr Alessandro BUTTE
(DATAHOW, Zurich, Switzerland)
- 10:55 Automation and Digitalization in the Manufacturing of Therapeutic Proteins (KL06)**
Prof. Massimo MORBIDELLI
(POLITECNICO MILANO, Thessaloniki, Greece)
- 11:35 Strategies and Emerging Technologies for Downstream Purification (IL06)**
Dr Gunnar MALMQUIST
(CYTIVA, Uppsala, Sweden)
- 12:00 General Bio-Chromatographic Digital Twin in Quality-By-Design Based Process Design and Machine-Learning Based Process Control (OC11)**
Mr Florian VETTER
(TU CLAUSTRAL, Clausthal-Zellerfeld, Germany)
- 12:20 Hybrid Models for the Simulation and Prediction of Chromatographic Processes (OC12)**
Dr Alessandro BUTTE
(DATAHOW, Zurich, Switzerland)
- 12:40 Lunch break & Exhibition until 13:55**

Ground floor

Programme

Session Vendor Seminar 4

Room 2, 1st floor

- 12:50 Tosoh Bioscience Seminar**
Multi-column chromatography – A powerful tool to enhance productivity in downstream processing

Session Vendor Seminar 5

Room 5, 1st floor

- 12:50 RotaChrom Technologies LLC Seminar**
CPC Simulator – Accelerating Method Development in Centrifugal Partition Chromatography

Session Vendor Seminar 6

Room 3, 1st floor

- 12:50 De Dietrich & Thar Process Seminar**
Sustainable API/Excipient Purification : After Years of Success in Discovery Laboratories, SFC is Finally Emerging as a Manufacturing Technique

Session 7: Continuous Chromatography

Auditorium II & Overflow Auditorium III

- 13:55 Introduction by session chair**
Dr Lars AUMANN
(CHROMACON AG, Zürich, Switzerland)
- 14:00 Cyclic Adsorption Processes. What else? (KL07)**
Prof. Alirio RODRIGUES
(UNIVERSITY OF PORTO, Porto, Portugal)
- 14:40 Chromatography in Colour – Application of Processes Chromatography to the Efficient Recycling of Critical Metals (IL07)**
Dr Paul O'SHAUGHNESSY
(JOHNSON MATTHEY, Oxfordshire, United Kingdom)
- 15:05 Continuous Size Fractionation of Nanoparticles for Biomedical Purposes Using Magnetic Field Controlled SMB (OC13)**
Ms Laura KUGER
(KARLSRUHE INSTITUTE OF TECHNOLOGY (KIT), Eggenstein-Leopoldshafen, Germany)
- 15:25 Simulated Moving Bed Chromatography - Mass Spectrometry (SMB-MS): Continuous On-Line Sample Preparation for Process Analytical Technology (OC14)**
Ms Juliane DIEHM
(KARLSRUHE INSTITUTE OF TECHNOLOGY, Karlsruhe, Germany)
- 15:45 Coffee break**

Ground floor

Session 8: Optimization & Prediction

Auditorium II & Overflow Auditorium III

- 16:15 Introduction by session chair**

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Prof. Dorota ANTOS
(RZESZOW UNIVERSITY OF TECHNOLOGY, Rzeszow, Poland)

16:20 What is the Right Level of Purity? Benefits of Overpurifying and Underpurifying in Chromatography (KL08)

Prof. Tuomo SAINIO
(LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, Lappeenranta, Finland)

17:00 Exploring Enhanced Selectivity of Mixed Mode Cation Exchange Resins in Bispecific and Complex Immunoglobulin Purification (IL08)

Mr Wolfgang KOEHNLEIN
(F. HOFFMANN-LA ROCHE, Penzberg, Germany)

17:25 Short-Cut Design of Four-Zone Simulated Moving Bed Chromatography for Multi-Component Systems: Langmuir-Type Isotherms (OC15)

Dr Ju Weon LEE
(OTTO VON GUERICKE UNIVERSITY, Magdeburg, Germany)

17:45 Robustness Analysis by Predictive Distribution for Various Operating Configurations for Simulated Moving Bed Chromatography (OC16)

Mr Kensuke SUZUKI
(NAGOYA UNIVERSITY, Nagoya, Japan)

18:05 Poster session 2 sponsored by Cytiva & Networking

Foyer 1st floor

19:15 End of the Day

**20:30 Gala dinner at Monte Mar Restaurant, sponsored by Cytiva
(subject to prior registration)**

Friday 14/10/2022

Session 9: SFC & Natural Products

Auditorium II & Overflow Auditorium III

08:30 Introduction by session chair

Dr Hanna LEEK
(ASTRAZENECA R&D, Mölndal, Sweden)

08:35 The Role of CO₂ Separation (SFC) in the Eco-Sustainable Production of APIs and Hemp Ingredients (IL09)

Dr Gerard ROSSE
(PIC SOLUTION, San Diego, United States)

09:00 The Thar Process Journey Regarding Green Chemistry Application Using Supercritical Carbon Dioxide (IL10)

Dr Lalit CHORDIA
(THAR PROCESS INC., Pittsburgh, United States)

09:25 Industrial Application of Supercritical Fluid Simulated Moving Bed in the Separation of N-3 Pufa from Fish Oil (OC17)

Ms Xiaoqing BAO
(JOPE TECHNOLOGY CO., LTD , Kaohsiung, Taiwan)

09:45 Process Stabilization by Online Monitoring of a Mini-Plant Coupling Enantioselective SMB Chromatography and Enzymatic Racemization (OC18)

Ms Isabel HARRIEHAUSEN
(MAX-PLANCK-INSTITUTE, Magdeburg, Germany)

10:05 Study of Liquid-Liquid Chromatography Operation in the Nonlinear Range of the Partition Equilibria (OC19)

Mrs Melanie GERIGK
(TECHNICAL UNIVERSITY OF MUNICH, Freising, Germany)

10:35 Coffee break

Ground floor

Session 10: Biomolecules III

Auditorium II & Overflow Auditorium III

11:05 Introduction by session chair

Prof. Malte KASPEREIT
(FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG, Erlangen, Germany)

11:10 Progress and Trends of Virus Based Biopharmaceuticals Purification (IL11)

Dr Cristina PEIXOTO
(IBET, Oeiras, Portugal)

11:35 Advanced Gradient SMBC Applied to Antibody Purification (OC20)

Mr Masahiro OGINO
(ORGANO CORPORATION, SAGAMIHARA-shi, Japan)

11:55 Design and Operation of an Integrated Continuous Downstream Process for Acid-Sensitive Mabs Based on a Calcium-Dependent Protein a Ligand (OC21)

Prof. Bernt NILSSON
(LUND UNIVERSITY, Lund, Sweden)

Programme

12:15 Protein Separation by Simulated Moving Bed (OC22)

Ms Albertina RIOS
(UNIVERSITY OF PORTO, Porto, Portugal)

12:35 Closing

Prof. José Paulo MOTA
(UNIVERSIDADE NOVA DE LISBOA, Caparica, Portugal)