

Monday 11 June

Lecture hall: The Svedbergsalen, B8

11.00-13.00 **Registration**

Plenary lectures

Chair person: Anders Colmsjö

13.00-13.10 *Opening and welcome*

13.10-13.15 **Prize ceremony**

13.15-14.00 **Torbern Bergman lecture:**
Richard Zare, Stanford University, USA
Laser-induced fluorescence: A personal story

14.00-14.30 **Coffee**

Chair person: Anders Colmsjö

14.30-15.00 **Boris Mitzakoff**, Ulm University, Germany
From systems biology to systems analytics: Multifunctional techniques for advanced bioanalysis

15.00-15.30 **Thomas Laurell**, Lund University, Sweden
Acoustophoresis in medical applications

15.30-16.00 **Pause**

Monday 11 June

Lecture hall: B42

Advances in separation science (Part I)

Chair person: Douglas Westerlund

16.00-16.40 **Ulrich Tallarek**, Marburg University, Germany
Reconstruction and morphological analysis of chromatographic media: From metric properties to structural descriptors of diffusion and dispersion

16.40-17.00 **Audrius Maruška**, Vytautas Magnus University, Lithuania
Application of solid-state fermentation of medicinal and spice plants raw material for development of higher value and safety food products: evaluation of changes of chemical composition by means of chromatographic and related techniques

17.00-17.40 **Torgny Fornstedt**, Karlstad University, Sweden
Insights into retention mechanisms and bio-molecular interactions gained from rigorous evaluation of adsorption data derived from HPLC and modern biosensors

17.40-18.00 **Dennis Åsberg**, Karlstad University, Sweden
Modelling of overloaded gradient elution in reversed-phase liquid chromatography

18.00-20.30 **Get together and exhibition**

Monday 11 June

Lecture hall: B41

Mass spectrometry in forensic sciences and sport drug testing

Chair person: Jonas Bergquist

16.00-16.40 **Mario Thevis**, German Sport University Cologne (GSU), Germany
Recent aspects of sports drug testing

16.40-17.00 **Jürgen Wendt**, LECO, Germany
High-resolution time-of-flight mass spectrometry using folded flight path technology for profiling of steroids and steroid metabolites in urine

17.00-17.20

The journal ABC 10th anniversary lecture

Chair person: Jonas Bergquist

17.20-18.00 **Günter Gauglitz**, Eberhard Karls University, Germany
Biomolecular interaction analysis - tools and applications

18.00-20.30 **Get together and exhibition**

Tuesday 12 June

Lecture hall: B42

Vibrational spectroscopy

Chair person: Lars Österlund

09.00-09.40 **Renato Zenobi**, ETH Zürich, Switzerland
Tip-enhanced Raman spectroscopy

09.40-10.00 **Boris Mizaikoff**, Ulm University, Germany
Miniaturized mid-infrared sensors: Seeing more by looking at less

10.00-10.20 **Lars Hälldal**, K-analys, Sweden
Raman based mapping

10.20-11.00 **Coffee and Poster session 1** (Odd Poster No)

Chair person: Bo Karlberg

11.00-11.40 **Stefan Andersson-Engels**, Lund University, Sweden
Time-of-flight spectroscopy up to 1400 nm for analysis of turbid samples

11.40-12.00 **Olof Svensson**, Astra Zeneca R&D Mölndal, Sweden
Transmission Raman spectroscopy in pharmaceutical applications

12.00-12.20 **Salam Mohammed**, Swedish Defence Research Agency, Sweden
Detection and classification of chemical and biological substances using different spectroscopic techniques

12.20-14.00 **Lunch and Exhibition**

Advances in separation science (Part II)

Chair person: Åsa Emmer

14.00-14.20 **Richard Zare**, Stanford University, CA, USA
TB or not TB

14.20-15.00 **Staffan Nilsson**, Lund University, Sweden
"Airborne" biomolecule sample handling & nanoparticle based electrochromatography

15.00-15.20 **Victoria K.H. Barclay**, Uppsala University, Sweden
Development of chiral and achiral LC-MS/MS methods for the analysis of pharmaceuticals and metabolites in environmental water matrices

15.20-16.00 **Coffee and Poster session 2** (Even Poster No)

Chair person: Åsa Emmer

16.00-16.40 **Susanne Wiedmer**, University of Helsinki, Finland
Phospholipid-coatings for capillary electrochromatography

16.40-17.00 **Johan Rosén**, National Food Agency, Sweden
Targeted and non-targeted screening of food contaminants using LC-TOF

17.00-17.20

19.00-01.00 **Conference dinner at Katalin**

Tuesday 12 June

Lecture hall: B41

Innovations in analytical chemistry

Chair person: Anders Colmsjö

- 09.00-09.20 **Stellan Hjertén**, Uppsala University, Sweden
A novel approach to describe (in quantitative terms) interactions in living, as well as non-living systems, including separation science
- 09.20-09.40 **Philipp Mayer**, Aarhus University, Denmark
Analytical passive dosing - binding analytics turned upside down
- 09.40-10.00 **Detlef Jensen**, ThermoFisher Scientific
The world's first integrated capillary high pressure ion chromatography system - Dionex ICS-4000 from Thermo Scientific
- 10.00-10.20 **Thorleif Lavold**, Biomotif AB, Sweden
Investigation of "mode-of-action" using a novel HX-IA Instrument™ and high resolution mass spectrometry

10.20-11.00 Coffee and Poster session 1 (Odd Poster No)

Chair person: Maria Risholm-Sundman

- 11.00-11.20 **Sam Read**, Waters Ltd, United Kingdom
NewUPC2: Expanding the boundaries of LC and GC separations
- 11.20-11.40 **Anders Hanning**, Episentec, Sweden
Transforming SPR from a label-free technology to a labelled technology with enhanced sensitivity and enhanced specificity
- 11.40-12.00 **René Nowka**, Analytik Jena AG, Germany
Fast analysis of metals in soil and sediment using High-Resolution Continuum Source AAS – A simple and economic alternative to classical methods
- 12.00-12.20 **Lo Gorton**, Lund University, Sweden
Electrochemical communication between viable bacterial cells and electrodes

12.20-14.00 Lunch and Exhibition

Chair person: Maria Risholm-Sundman

- 14.00-14.20 **Tomas Sandberg**, Wyatt Technology Scandinavia, Sweden
MP-PALS, a novel technology enabling zeta potential determination of proteins under near-native conditions

General session

Chair person:

- 14.20-14.40 **Ulrika Nilsson**, Stockholm University, Sweden
Contact allergy to terpenoid compounds– some recent findings on exposure, reactivity and analytical methods
- 14.40-15.00 **James Kariuki**, University of Alberta, Canada
Disposable pencil graphite electrode versus commercial carbon electrodes and its application for the determination of antioxidants
- 15.00-15.20 **Giovanna Luongo**, Stockholm University Sweden
Organophosphates and phthalate: Organic contaminants in indoor dust samples

15.20-16.00 Coffee and Poster session 2 (Even Poster No)

Tuesday 12 June

Lecture hall: B41

General session (cont.)

Chair person:

- 16.00-16.20 **Amelie Fagerlund**, Mid Sweden University, Sweden
Fungicides from paper production waste
- 16.20-16.40 **Lave Fischer**, Biovica International AB, Uppsala, Sweden
Precision profiles with lower number of measurements
- 16.40-17.00 **Raphaël Trouillon**, University of Gothenburg, Sweden
Evaluating the diffusion coefficient of dopamine at the cell surface during amperometric detection
- 17.00-17.20

19.00-01.00 **Conference dinner at Katalin**

Tuesday 12 June

Lecture hall: B22

Pre and post analysis – Essential for measurement quality

- Chair person: Bertil Magnusson
- 09.00-09.40 **Pentti Minkkinen**, Lappeenranta University of Technology, Finland
Estimation of sampling uncertainty in process analysis – beyond the EURACHEM guide
- 09.40-10.20 **Nathalie Guigues**, LNE, France
Assessing sampling contribution to measurement uncertainty for a selection of water quality parameters: a case study

10.20-11.00 **Coffee and Poster session 1** (Odd Poster No)

- Chair person: Pentti Minkkinen
- 11.00-11.20 **Yngve Bergqvist**, Falu Hospital, Sweden
How reliable are our assessments of compliance with the IVD directive?
- 11.20-12.00 **Joakim Engman**, National Food Agency, Sweden
Sampling as a part of a measurement procedure – a TrainMiC presentation
- 12.00-12.20 **Bertil Magnusson**, SP Technical Research Institute of Sweden, Sweden
EURACHEM guide on compliance

12.20-14.00 **Lunch and Exhibition**

Tuesday 12 June

Lecture hall: B22

Process analytical chemistry (PAC) and chemometrics

Chair person: Magnus Åberg

14.00-14.40 **Ragne Emardsson**, SP Technical Research Institute of Sweden
Challenges in modern measurement technology

14.40-15.00 **Frans van den Berg**, University of Copenhagen
Constrained PARAFAC models for statistical process monitoring

15.00-15.20 **Dominique Hirth**, French Health Products and Safety Agency, France
A new combined LC (ESI+) QTOF impurity fingerprinting and chemometrics approach for discriminating active pharmaceutical ingredient origins: example of simvastatin

15.20-16.00 **Coffee and Poster session 2** (Even Poster No)

19.00-01.00 **Conference dinner at Katalin**

Tuesday 12 June

Lecture hall: B21

Technical session

Chair person:

- 09.00-09.20 **Sam Read**, Waters Ltd, UK
The ultimate solution for making the complex...routine. UPC2: Expanding the boundaries of LC and GC separations
- 09.20-09.40 **Tomas Sandberg**, Wyatt Technology Scandinavia, Sweden
Free-solution, label-free characterization of protein-protein interactions via static and dynamic light scattering
- 09.40-10.00 **Theres Jägerbrink**, AB Sciex, Sweden
The new AB SCIEX 6500 LC-MSMS series introducing IonDrive™ Technology – nothing has changed except everything!
- 10.00-10.20 **Anders Grahn**, Biotech AB, Sweden
Novel poly-functional C18 bonding technique with core shell silica (SunShell™) for unique performance in HPLC / UHPLC

10.20-11.00 **Coffee and Poster session 1** (Odd Poster No)

Chair person:

- 11.00-11.20 **Magnus Olin**, AB Sciex, Sweden
Expanding the AB SCIEX Triple TOF family: MRM-like quantitation on a high resolution instrument - a SWATH enabling technology
- 11.20-11.40 **Sophie Svensson**, Swedac, Sweden
Swedac – The Swedish authority for quality and safety
- 11.40-12.00 **Ulf Grabb**, AGA Gas AB, Sweden
Säker gashantering på laboratoriet
- 12.00-12.20 **Kevin Bayly**, Agilent Technologies
New universal tool for LC screening

12.20-14.00 **Lunch and Exhibition**

Tuesday 12 June

Lecture hall: B21

Technical session (cont.)

Chair person:

- 14.00-14.20 **Anders Fridström**, Sigma-Aldrich, Sweden
Investigation of retention mechanisms in HILIC chromatography: Important considerations for robust method development
- 14.20-14.40 **Anders Medin**, AB Sciex, Sweden
Eksigent - a full range LC-systems all dedicated to mass spectrometry
- 14.40-15.20 **Kevin Bayly**, Agilent Technologies
21st Century HPLC method transfer made easy

15.20-16.00 **Coffee and Poster session 2** (Even Poster No)

19.00-01.00 **Conference dinner at Katalin**

Wednesday 13 June

Lecture hall: B42

Sample preparation

Chair person: Charlotta Turner

09.00-09.40 **Nelson Torto**, Rhodes University, South Africa
Electrospun fiber based strategies for SPE and colorimetric probes

09.40-10.00 **Tran Thi Thuy**, Stockholm University, Sweden
Glycosylation analysis of therapeutic antibodies in serum samples using a microfluidic CD platform and MALDI-MS

10.00-10.20 **Jiayin Liu**, Lund University, Sweden
Pressurized hot water extraction of polyphenols from red onions

10.20-11.00 Coffee and Poster session 1 (Odd Poster No)

Chair person: Charlotta Turner

11.00-11.40 **Stig Pedersen-Bjergaard**, University of Oslo, Norway and University of Copenhagen, Denmark
Liquid-phase microwxtraction based on passive diffusion and electro.kinetic migration across supported liquid membranes – a highly flexible platform for analytical sample preparation

11.40-12.00 **Estelle Larsson**, Lund University, Sweden
The application of hollow fiber liquid phase microextraction on aqueous as well as semi-solid samples: Sludge removal of anti- inflammatory drugs during sewage treatment

12.00-12.20 **Julia V. Paraskova**, Uppsala University, Sweden
Extraction and quantification of phosphorus bound to lipids and nucleic acids in environmental samples

12.20-13.30 Lunch

Chair person: Charlotta Turner

13.30-14.10 **Luke Chimuka**, Wits University, South Africa
Novel developments and applications in sample preparation for chromatographic analysis

14.10-14.30 **Mohamed Abdel-Rehim**, Stockholm University, Sweden
High throughput sample preparation techniques for bioanalysis

14.30-15.00 Coffee and Poster session 2 (Even Poster No)

Chair person: Charlotta Turner

15.00-15.20 **Saara Mikkonen**, KTH Royal Institute of Technology, Sweden
Sample preconcentration in micro channels

15.20-16.00 **Jan Åke Jönsson**, Lund University, Sweden
HF-LPME (hollow fiber liquid phase microextraction) for solid and semisolid samples

16.00-16.30 Closing ceremony (in Lecture hall B42)

16.30-17.00 Annual meeting for Division of analytical chemistry (in Lecture hall B42)

Wednesday 13 June

Lecture hall: B41

Molecular imaging methods and applications

Chair person: Andrew Ewing

09.00-09.40 **Nicholas Winograd**, Penn State University, USA
Nanoscale chemical imaging of biomaterials with mass spectrometry

09.40-10.20 **Volker Deckert**, University of Jena, Germany
Structural surface investigations with nanometer resolution

10.20-11.00 **Coffee and Poster session 1** (Odd Poster No)

Chair person: Andrew Ewing

11.00-11.40 **Malin Andersson**, Uppsala University, Sweden
Imaging mass spectrometry of neuropeptides in Parkinson's disease

11.40-12.00 **Annica Enejder**, Chalmers, Sweden
Three-dimensional neuronal cell growth in biomimicking scaffolds studied by CARS microscopy

12.00-12.20 **Peter Sjövall**, SP Technical Research Institute of Sweden, Sweden
High-resolution imaging of biomolecules by ToF SIMS - applications in biomedicine and geochemistry

12.20-13.30 **Lunch**

Chair person: Nicholas Winograd

13.30-13.50 **Richard Zare**, Stanford University, USA
DESI Imaging of Hepatocellular Carcinomas

13.50-14.10 **Per Andren**, Uppsala University, Sweden
Mass spectrometry imaging of drugs, small molecules and neuropeptides

14.10-14.30 **Jörg Hanrieder**, Chalmers, Sweden
MALDI imaging of post mortem human spinal cord in amyotrophic lateral sclerosis

14.30-15.00 **Coffee and Poster session 2** (Even Poster No)

15.00-15.20 **Melissa Passarelli**, University of Gothenburg, Sweden
Single cell lipidomics: Imaging and characterizing lipids in NGF activated PC12 cells

15.20-15.40 **John Fletcher**, Gothenburg University, Sweden
Ar_n⁺ cluster ion beams for the analysis of biological samples by ToF-SIMS

15.40-16.00

16.00-16.30 **Closing ceremony (in Lecture hall B42)**

16.30-17.00 Annual meeting for Division of analytical chemistry (in Lecture hall B42)

Wednesday 13 June

Lecture hall: B22

Quantitative NMR

Chair person: Thomas Andersson

09.00-09.40 **Ulrike Holzgrabe**, University of Würzburg, Germany
Pros and cons of NMR spectroscopy in quality assessment of drugs

09.40-10.00 **Ian McEwen**, Medical Products Agency, Sweden
NMR in pharmacopoeia

10.00-10.20 **Torgny Rundlöf**, Medical Products Agency, Sweden
¹H NMR internal reference standards for quantitative analysis

10.20-11.00 **Coffee and Poster session 1** (Odd Poster No)

Chair person: Douglas Westerlund

11.00-11.40 **Thomas Andersson**, Astra Zeneca R&D Mölndal, Sweden
Using quantitative NMR in pharmaceutical development

11.40-12.20 **Claire Daykin**, University of Nottingham, UK
"i"-Metabolomics – plasma analysis goes interactive

12.20-13.30 **Lunch**

Chair person: Douglas Westerlund

13.30-13.50 **Mikael Engskog**, Uppsala University, Sweden
¹H-NMR spectroscopy analysis of intracellular metabolites; investigation of important experimental parameters

Analytical techniques for genotoxic impurities

Chair person: Martin Lavén

13.50-14.30 **David Q Liu**, GlaxoSmithKline, USA
Leveraging the use of chemical derivatization and mass spectrometry in analysis of genotoxic impurities

14.30-15.00 **Coffee and Poster session 2** (Even Poster No)

Chair person: Martin Lavén

15.00-15.40 **My Moberg**, Medical Products Agency, Sweden
Genotoxic impurities – regulatory and analytical aspects

15.40-16.00

16.00-16.30 **Closing ceremony (in Lecture hall B42)**

16.30-17.00 Annual meeting for Division of analytical chemistry (in Lecture hall B42)

Poster presentations

Poster session 1 (Odd Poster No): Tuesday 12 June, 10.20-11.00 and Wednesday 13 June, 10.20-11.00

Poster session 2 (Even Poster No): Tuesday 12 June, 15.20-16.00 and Wednesday 13 June, 14.30-15.00

- 01** **Abdel Rahman, Ismail**
Analytical tools to study the chemistry of hydrothermal lignin depolymerization
- 02** **Abrahamsson, Victor**
Determination of carotenoids in microalgae using supercritical fluid extraction and chromatography
- 03** **Agmo Hernández, Víctor**
Immobilization of lipid bilayer disks on QCM-D sensors for the study of peptide-lipid interactions
- 04** **Ahmed, Trifa Mohammad**
Automated on-line clean-up, separation and detection of Polycyclic Aromatic Hydrocarbons (PAHs) in particulate matter extracts using a hyphenated LC-LC-LCGC/FID-GC/FID system
- 05** **Aldaeus, Fredrik** *Determination of lignin content in kraft black liquors using capillary zone electrophoresis*
- 06** **Amini, Nahid**
Identification of PET radiometabolites by Cytochrome P450, UPLC/Q-ToF-MS and Fast Radio-LC: Application to [¹⁸F]FE-PE2I
- 07** **Carlsson, Henrik**
An adductomic approach to measure and identify hemoglobin adducts of possible genotoxic compounds using LC-MS
- 08** **Dirks, Caroline**
Development of an LC-MS/MS multi-method for the detection of hormones in bovine and porcine urine: observations and pitfalls
- 09** **Elmsjö, Albert**
The effects of important parameters when intracellular metabolites are at focus; a metabolomic studie with ¹H-NMR spectroscopy
- 10** **Enmark, Martin**
A thermodynamic and kinetic study of an unusual adsorption behavior-Methyl Mandelate on commercially available Tris-(3,5-dimethylphenyl)carbamoyl Cellulose Chiral Stationary Phase
- 11** **Eriksson, Anna**
On-target phosphopeptide enrichment and separation prior to MALDI-MS using mesoporous TiO₂
- 12** **Fornstedt, Torgny**
HPLC vs UHPLC - a comparison of peak asymmetry and plan to step forward using Quality by Design (QbD) related to analytical methods
- 13** **Fornstedt, Torgny**
A more reliable procedure for estimating interactions between drugs and biomolecules using biosensors; a comparison with chromatography
- 14** **Fridén, Mikael**
Identification of flavonoids in red onion using RPLC-ESI-MS
- 15** **Gibb, Iain**
Increasing selectivity in LC/MS/MS analysis using techniques such as MRM³ (MS/MS/MS), differential ion mobility and high resolution LC/MS/MS
- 16** **Gylestam, Daniel**
Dry sampler for airborne isocyanates

- 17 **Gylestam, Daniel**
Fractionated sampling of gas and particle borne isocyanates
- 18 **Hakkarainen, Birgit**
Analysis of active pharmaceutical ingredients in illegal medical products
- 19 **Hanning, Anders**
Transforming SPR from a label-free technology to a labelled echnology with enhanced sensitivity and enhanced specificity
- 20 **Hellman Edman, Camilla**
An HR-MAS NMR method for measuring ligand concentration in chromatography media
- 21 **Hellqvist, Alexander**
Electroosmotic markers
- 22 **Hellqvist, Alexander**
A robust and reliable capillary electrophoretic method for quantitative determination of iohexol in plasma
- 23 **Hirth, Dominique**
Advantages and limitations of corona charged aerosol detectors in chromophore lacking compounds analysis: case studies for active pharmaceutical ingredient controls
- 24 **Jiang, Liying**
Selective LC-MS/MS method for the identification of BMAA from its isomers in biological samples
- 25 **Jones, Gavin**
Streamlined Method Development Approaches using Supported Liquid Extraction (SLE) prior to LC-MS/MS Analysis
- 26 **Jägerbrink, Theres**
Analysis of water for Pesticides at low parts per trillion (ppt) levels using large volume injections and LCMSMS without any sample pretreatment
- 27 **Khohon Rokhas, Maria**
Analysis of reproduction proteins from butterflies using capillary electrophoresis and mass spectrometry
- 28 **Korvela, Marcus**
Determination of Mn bound to biomolecules in bovine liver
- 29 **Lock, Stephen**
The detection ethyl glucuronide (ETG), a marker for alcohol consumption, in hair by LC/MS/MS
- 30 **Mustafa, Arwa**
Green technology for enriching vegetable oils by high-value compounds from agricultural by-products - Case study using supercritical fluid extraction and supercritical fluid chromatography
- 31 **Musunuri, Sravani**
Comparison of different extraction methods towards comprehensive study of brain proteome
- 32 **Nakao, Ryuji**
Rapid metabolite analysis of PET radioligands by direct plasma injection combining micellar cleanup with fast-micellar liquid chromatography
- 33 **Plaza, Merichel**
Profiling of different phenolic compounds in Myrciaria cauliflora fruit by High-Performance Liquid Chromatography
- 34 **Plaza, Merichel**
Extraction and identification of antioxidant compounds from apples
- 35 **Rahmani, Ritza**
SPME collection of volatile compound from Polygraphus poligraphus

- 36** **Rydevik, Axel**
A mass spectrometric study of bupivacaine metabolites found in fungi and horse
- 37** **Springer, Valeria**
Combined use of ionic liquids and carbon nanotubes in capillary electrophoresis. An alternative to use of organic solvents
- 38** **Stenholm, Åke**
Comparison of different analysis techniques in the quantification of nitrogen containing compounds in complex wastewaters
- 39** **Åsberg, Dennis**
An experimental and theoretical investigation on mobile phase effects on competitive adsorption isotherms in preparative LC
- 40** **Masala, Silvia**
Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in diesel particulate matter