UNITED Scientific Group
A non-profit organization

ABC-2022
October 17-18, 2022 | Virtual

4th Edition of

Analytical and Bioanalytical Conference

October 17-18, 2022 | Virtual

Meeting Time Zone:
(GMT-4:00) Eastern Time

ZOOM PLATFORM VIRTUAL MEETING INSTRUCTIONS

Join the Zoom Meeting

Meeting Link:
https://us06web.zoom.us/j/82219110521?pwd=ZTNXL1I5Ylo0YmRLVXorVlBzS2NKUT09

Meeting ID: 822 1911 0521
Passcode: 788313

Join the meeting by clicking on a Zoom meeting link provided by the meeting host => follow the prompts to download and run Zoom => enter the meeting ID if prompted => click to join the audio (OR)

if you already have Zoom software installed in your system, simply open Zoom application, click 'join' and enter the meeting code.

Mute/Unmute & Audio Settings

Except for the moderator and the speaker, all attendees' microphones will be muted by the host.

Chat Function

The participants will submit their questions through the Q&A session and the moderator / chair of the session will pick the questions for the discussion.

To direct your question, tag the speakers name to the questions as you submit them to the chat (e.g., For Dr. Will Torres – Question 1).

Audience

We are anticipating over 100 attendees who will come from a range of professional backgrounds with a varied level of knowledge and expertise in technical and commercial aspects across the subject area.

For Speakers

You will be allowed to share your screen during your presentation.

Session chair will pick the questions from the participants and asks the speaker depending on the time available. In case if more questions are left in the chat box, we encourage speakers to answer via chat and continue the discussion.

For Poster Presenters

All the poster presentation recorded videos are made available to all the participants to view at any point of time at their convenience.

According to the program, the presenter will be available during the time slot for the Q&A.

Recording

The session will be recorded for training purpose and some for the video library. Most of the speakers have already consented to recording their presentation but please inform us otherwise if you have some content which should not be recorded.

If you have trouble in login or any technical issues, please write to contact@uniscigroup.net or call us at 469-854-2281.

Please check your e-mail for meeting link

DAY 1 – OCTOBER 17, 2022

Meeting Time Zone:
(GMT-4:00) Eastern Time

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08:50-09:00 Opening Ceremony

Plenary Presentation

Moderator: Parthasarathy Srinivasan, Amrita Vishwa Vidyapeetham, India

09:00-09:40

MA'AT Analysis: Applications to Determine Conformational Equilibria and Dynamics of Molecules in Solution

Anthony S Serianni, University of Notre Dame, Notre Dame, IN

Anthony Serianni is Professor of Chemistry and Biochemistry at the University of Notre Dame. His research interests include (a) methods development for site-specific stable isotopic labeling of carbohydrates and their derivatives, (b) synthesis and conformational studies of simple and complex carbohydrates related to the N-glycans of human glycoproteins by nuclear magnetic resonance (NMR) spectroscopy, x-ray crystallography and other biophysical techniques, (c) applications of density functional theory and molecular dynamics to aid in the interpretation of NMR parameters in saccharides, (d) structure-function studies of non-enzymatic protein glycation, and (e) chemical evolution.

Keynote Presentation

09:40-10:10

Analysis of Drug Interactions with Humic Acid using Entrapment-Based Microcolumns and High-Performance Affinity Chromatography

David S Hage, University of Nebraska-Lincoln, Lincoln, NE

David S. Hage is the James Hewett University Professor in the Department of Chemistry at the University of Nebraska-Lincoln. His research group is interested in theory, development, and use of affinity-based separations in HPLC and capillary electrophoresis. He has over 310 papers, book chapters, and books in this field, along with seven U.S. patents. He has several awards for his work in these areas, including the 2021 American Chemical Society Award in Chromatography and the 2017 Pierce Award in Affinity Technology. He is current Editor-in-Chief for the Journal of Chromatography B, and the editor of the Handbook of Affinity Chromatography.

10:10-10:20 Break

Oral Presentations

Analysis: Bio-Analysis, Pharmaceutical, Biomedical, Forensic & Food

Chair: Seren Kecili, Izmir Institute of Technology, Turkey

10:20-10:40 **Quantitative Analysis of Biological Compounds using a Pillar Array Column**
Makoto Tsunoda, The University of Tokyo, Japan

10:40-11:00 **Analysing the Physicochemical Properties of Ultra-Sonicated Tapioca Starch to use as a Potential Pharmaceutical Binder**
Chathuni Jayathilake, University of Sri Jayewardenepura, Sri Lanka

11:00-11:20 **Analytical Approaches for Chemo/ Bio-Sensing: Surface and Electrochemistry Perspective**
Parthasarathy Srinivasan, Amrita Vishwa Vidyapeetham, India

11:20-11:40 **Development and Application of Electrochemical Sensors for the Detection of the SARS-CoV-2 Antigen and Antibody Proteins**
Lokman Liv, The Scientific and Technological Research Council of Turkey, Turkey

11:40-12:00 **Magnetic Levitation-Based Cell Response Analysis**
Seren Kecili, Izmir Institute of Technology, Turkey

12:00-12:20 **A Paper-Based Chemiluminescent Immunoassay on Magnetic Microbeads Format for Food Allergen Traces Detection**
Donato Calabria, University of Bologna, Italy

12:20-12:40 **Application of Metallomics and Metabolomics to Environmental Metal Toxicity Assessment**
Jose-Luis Gomez-Ariza, University of Huelva, Spain

12:40-13:00 **Simple and Cheap Potentiometric Sensor for Chloride Monitoring in Water Samples**
Cecylia Wardak, Maria Curie-Sklodowska University in Lublin, Poland

13:00-13:20 **Post-Deconvolution MS/MS Spectra Extraction with Data-Independent Acquisition for Comprehensive Profiling of Urinary Conjugated Metabolome**
Pao-Chi Liao, National Cheng Kung University, Taiwan

13:20-13:30 Break

13:30-13:50 **Voltammetric Analysis of Δ9-Tetrahydrocannabinol and Cannabidiol in Seized Samples using Disposable Electrodes Chemically Modified with Graphene Oxide**
Marcelo Firmino de Oliveira, University of São Paulo, Brazil

13:50-14:10 **Mapping Differential Intracellular Trafficking of Quantum Dot Cargo with Machine Learning**
Oleg Kovtun, Vanderbilt University, Nashville, TN

14:10-14:30 **Challenges in Bioanalysis of INCB000928 in Human Saliva**
Zhiyin Xun, Incyte Research Institute, Wilmington, DE

14:30-14:40 Break

Chromatographic & Spectroscopic Methods

Chair: Haishan Zeng, University of British Columbia, Canada

14:40-15:00 **Portable and Laboratory Analytical Photometric and Fluorometric Systems Based on the use of 3d Printed Devices**
Victor Cerda, University of the Balearic Islands, Spain

15:00-15:20 **Qualitative and Quantitative Analysis of Organic Matter and Dissolved Organic Matter in Agricultural Soils Amended with Biochar**
Alessandro Girolamo Rombolà, University of Bologna, Italy

15:20-15:40 **Predictive In Vitro Sensing Tools Exploiting 3d Spherical Bioluminescence Microtissues**
Maria Maddalena Calabretta, Alma Mater University of Bologna, Italy

15:40-16:00 **Influence of Ionic Liquids as Mobile Phase Additives on the Behavior of Selected Cyto Static Drugs on Alkyl and Phenyl Based Stationary Phases in Reversed-Phase Liquid Chromatography**
Alina Plenis, Medical University of Gdansk, Poland

16:00-16:20 **Green Sample Preparation for the Analysis of High Carbon Content Matrices**
Erico Marlon Moraes Flores, Federal University of Santa Maria, Brazil

16:20-16:40 **Real-time Raman Spectroscopy for Endoscopy Lung Cancer Detection**
Haishan Zeng, University of British Columbia, Canada

16:40-17:00 **Automated Machine Learning Applied in Analytical Chemistry**
Aderval S Luna, Rio de Janeiro State University, Brazil

End of Day 01

DAY 2 – OCTOBER 18, 2022

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Keynote Presentations

09:00-09:30

An Automated Multicycle Immunoaffinity Enrichment Approach Developed for Sensitive Mouse IgG1 Antibody Drug Analysis

Linlin Dong, Takeda Pharmaceuticals, Cambridge, MA

Dr. Dong obtained his B.S. in Analytical Chemistry from Yunnan University (Kunming, China) and earned his Ph.D. in Pharmacognosy from Prof. Richard van Breemen's group in the College of Pharmacy at University of Illinois (Chicago, IL). His Ph.D. work was focused on the analysis of natural products using LC/MS.

Right after receiving his Ph.D. in 2013, Dr. Dong joined the Global DMPK group at Takeda Pharmaceuticals where he has been involved in carrying out discovery bioanalysis of novel small molecules, therapeutic proteins, antibody drug conjugates, and biomarkers using LC/MS or ligand binding assay. Dr. Dong is currently a Principal Scientist in the group and his research interests are mainly focused on protein analysis using hybrid LC/MS.

09:30-10:00

Quantitative Immuno-MRM of the PD-1/PD-L1 Axis Predicts Survival in Non-small Cell Lung Cancer (NSCLC)

Christoph Borchers, McGill University, Canada

Borchers is a Professor in the Department of Oncology at McGill University, where he is also Director of the Segal Cancer Proteomics Centre. Dr. Borchers' expertise includes improvement, development and application of proteomics and metabolomics technologies with a major focus on techniques for quantitative proteomics and metabolomics for clinical diagnostics. Dr. Borchers is actively involved in promoting proteomics research and education through his involvement with HUPO (International Council Member), the British Columbia Proteomics Network, and the Canadian National Proteomics Network. He is also a member of the Canadian Academy of Health Sciences, with >300 publications in proteomics and metabolomics.

10:00-10:15 Break

Oral Presentations

Analytical and Bioanalytical Chemistry Applications Separation Techniques | Voltammetry & Electrophoresis

10:15-10:35 **Challenges in Sample Preparation Methods for Trace Element Determination by Multi Techniques**
Marcia Foster Mesko, Federal University of Pelotas, Brazil

10:35-10:55 **A Highly Sensitive and Simple-to-use 3D Protein Detection Platform**
Huiyan Li, University of Guelph, Canada

10:55-11:15 **The Crosstalk, Lipidomics and Redox Proteomics, for Understanding the Role of Dietary Lipids in Brain**
Isabel Medina, Institute of Marine Research, Spain

11:15-11:35 **Stroboscopic Flashes on the Netherworld**
Pier Giorgio Righetti, Polytechnic University of Milan, Italy

11:35-11:55 **Targeting Out of Range Biomolecules: Chemical Labeling Strategies for Qualitative and Quantitative MS-based Detection**
Cantel Sonia, University of Montpellier, France

11:55-12:15 **Comparison of Chiral Separation Performance of sub-2 mm and Conventional Polysac Charide-based Chiral Columns**
Brian He, Bristol Myers Squibb Company, New Brunswick, NJ

12:15:12:35 **Electrochemical Monitoring of Biomarkers using Nanochannels**
Alfredo de la Escosura-Muñiz, University of Oviedo, Spain

12:35-13:00 Break

13:00-13:20 **Separation of Urolithin Glucuronides in Biological Samples by using Supercritical Fluid Chromatography**
Ana M Ares, University of Valladolid, Spain

13:20-13:40 **A Preconcentration Method Using Magnetic Dispersive Solid-Phase Microextraction with Go-Γfe2o3 Nanoparticles for the Determination of Se in Fish Samples by FIA-HG-AAS**
Jefferson S de Gois, Rio de Janeiro State University, Brazil

13:40-14:00 **Enhancement of Sensitivity and Quantification Quality in the LC MS/MS Measurement of Large Biomolecules with Sum of MRM (SMRM)**
Liang Tang, SRI International, Menlo Park, CA

14:00-14:20 **Pyrolytic Graphite Electrode in Nucleic Acid Electroanalysis**
Ales Danhel, Czech Academy of Sciences, Czech Republic

14:20-14:40 **Responsive Probe for Luminescence Bioanalysis and Imaging**
Run Zhang, The University of Queensland, Australia

End of Day 02

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