

NPS 2023

15-17 NOVEMBER



Apotekarsocieteten
Swedish Pharmaceutical Society

WEDNESDAY 15/11 2023

11.00 - 13.30 Pre-conference Bruker timsTOF proteomics workshop (by separate registration)

14.00 - 15.00 Registration, poster setup in poster hall

15.00 - 15.10 **Opening of the NPS 2023 meeting**, Lotta Happonen, President of the SPS

15.10 - 15.20 **Welcome address** by Stig Svensson, Deputy Mayor and Deputy Chairman of the Lund City Council

15.20 - 15.25 **Welcome address** by Anna Mannfalk, Deputy Governor, Chairman of the Health Care Board, Region Skåne

Session 1: CLINICAL PROTEOMICS AND BIOMARKERS I



Chair SPS: György Marko-Varga (Lund University, Sweden; SPS)
Thomas Laurell (Lund University, Sweden)

15.30 - 16.10 **Keynote lecture: The route to precision medicine?**
Jennifer van Eyk (Cedars-Sinai Medical Center, LA, USA)

16.10 - 16.30 **Quantitative Synaptic Proteomics: a tool to measure disease progression and investigating the dynamics of synaptic dysfunction in neurodegenerative diseases**
Ann Brinkmalm (Göteborg University, Sweden)

16.30 - 17.00 **4D-Proteomics ecosystems: holding the proteomics promises for clinical research, Gold sponsor presentation by Bruker**
Renata Blatnik, Application Specialist (Bruker Nordic)

17.00 - 17.30 Coffee, poster setup in poster hall, visit exhibition area

Session 2: CLINICAL PROTEOMICS AND BIOMARKERS II



Chair SPS: Ann Brinkmalm (Göteborg University, Sweden; SPS) and
Maria Pernemalm (Karolinska Institutet, Sweden; SPS)

17.30 - 17.50 **Mapping the effect of neurological disorders on the cerebrospinal fluid proteome**
Frode Steingrimsen Berven (University of Bergen, Norway)

17.50 - 18.10 **What happened – a moment of reflection**
György Marko-Varga (Lund University, Sweden)

18.10 - 18.25 **Longitudinal plasma proteome profiling identifies protein clusters associated with overall survival in glioblastoma**
Haris Babačić (Karolinska Institutet, Sweden)

18.25 - 18.35 **OCT1 (SLC22A1) transporter kinetics and regulation in primary human hepatocyte 3D spheroids**
Evgeniya Mickols (Uppsala University, Sweden)

18.35 - 18.55 **The secret of discovery to precision medicine: Coverage of the proteome with precision**, Silver sponsor presentation by Somalogic

Steven Williams, Chief Medical Officer (Somalogic)

18.55 - 19.05 **Comprehensive proteome and proteoform profiling of childhood acute lymphoblastic leukemia cell lines supports precision medicine insights**

Isabelle Leo (Karolinska Institutet, Sweden)

19.05 - 21.30 Mingle dinner with drinks, **Poster session (19.30-21.00)**, visit exhibition area

THURSDAY 16/11 2023

8.30 - 9.00 Registration

Session 3: STRUCTURAL AND INTERACTION PROTEOMICS



Chair Sweden: Lotta Happonen (Lund University, Sweden) and Massimiliano Gaetani (Karolinska Institutet and SciLifeLab, Sweden)

9.00 - 9.20 **Developing structural interactomics and its application in biology**

Fan Liu (Leibniz Forschungsinst. Fur Molek. Pharmak., Germany)

9.20 - 9.40 **From interaction proteomics to structural biology**

Markku Varjosalo (University of Helsinki, Finland)

9.40 - 10.00 **HDX-MS in integrative structural biology**

Simon Ekström (Lund University, Sweden)

10.00 - 10.10 **Revealing a novel interaction between streptolysin O and human plasminogen through integrated proteomics**

Di Tang (Lund University, Sweden)

10.10 - 10.40 Coffee, visit exhibition area

Session 4: SYSTEMS PROTEOMICS



Chair SPS: Fredrik Edfors (KTH & SciLifeLab, Sweden; SPS) and Andreas Hober (AstraZeneca, Sweden; SPS Young Scientist)

10.40 - 11.20 **Keynote lecture: Technological developments in mass spectrometry-based proteomics: from bench to bedside**

Matthias Mann (Max Planck Inst. of Biochemistry, Germany)

11.20 - 11.40 **Systems proteomics for therapy of retinal degeneration: Targeting proteostasis**

Marius Ueffing (University of Tübingen, Germany)

11.40 - 12.05 **Proteomics analyses for effects of ABCA7 in Alzheimer's disease mice, Gold sponsor presentation by Bruker**



Tuula Nyman (University of Oslo, Norway)

12.05 - 12.25 **A region-resolved proteomic map of the human brain enabled by high-throughput proteomics, Silver sponsor presentation by Covaris**

Johanna Tieshaus, Chair of Proteomics and Bioanalytics, Technical University of Munich, Freising, Germany

12.30 - 13.30 Lunch, visit exhibition area, **Internal meeting for the Nordic proteome societies by separate invitation**

Session 5: PROTEOMICS IN HEALTH AND DISEASE

 Chair Denmark: Ole Norregaard Jensen (University of Southern Denmark, Odense, Denmark)
 Pelayo Penanes (University of Southern Denmark, Odense, Denmark)

13.30 - 13.50 **Narrow-window DIA: Ultra-fast quantitative analysis of comprehensive proteomes with high sequencing depth**

Jesper Velgaard Olsen (University of Copenhagen, Denmark)

13.50 - 14.10 **Imaging protein activity states *in situ***

Ulf Landegren (Uppsala University, Sweden)

14.10 - 14.30 **Acrivon Predictive Precision Proteomics (AP3): A broadly applicable platform designed for clinical success**

Kristina Masson (Acrivon Therapeutics, Lund, Sweden)

14.30 - 14.45 **A single sample proteome score to determine mucosal damage in celiac disease**

Anette Johansen (University of Oslo, Norway)

14.45 - 15.05 **Detecting biomarkers via deep plasma proteome profiling with a nanoparticle-based enrichment workflow, Silver sponsor presentation by SEER**

Michael Wierer (University of Copenhagen, Denmark)



15.05 - 15.30 Coffee, visit exhibition area

MODERATED PANEL DISCUSSION

15.30 - 16.15

Chair: György Marko-Varga (Lund University, Sweden; SPS)

Session 6: COMPUTATIONAL PROTEOMICS

 Chair Norway: Magnus Arntzen (Norwegian University of Life Sciences, Norway) and
 Frode Berven (University of Bergen, Norway)

16.20 - 16.25 **Females in Mass Spectrometry (FeMS)**

Valentina Siino

16.25 - 16.45 **Targeted proteomics for discovery of novel biomarkers in human plasma for early breast cancer diagnosis**

Margrét Thorsteinsdóttir (University of Iceland, Iceland)

16.45 - 17.05 **Improved top-down sequencing of intact, modified proteins by TopdownR-guided MS/MS**

Ole Norregaard Jensen (University of Southern Denmark, Odense, Denmark)

17.05 - 17.15 **Estimation of immune cell infiltration via bulk sample mass spectrometry data deconvolution**

Måns Zamore (Lund University, Sweden)

17.15 - 17.25 **Functional enrichment metric score for proteomic analysis**

Maciej Dulewicz (Gothenburg University, Sweden)

17.25 - 17.35 **Leveraging explainable machine learning to improve the molecular definition of sepsis**

Aaron Scott (Lund University, Sweden)

17.35 - 17.45 **Enzymatic phosphorylation of oxidized tyrosine residues**

Jaakko Teppo (University of Helsinki, Finland)

19.00 - Conference dinner at Tégner's Matsalar in Lund city center

FRIDAY 17/11 2023

Session 7: MICROBIAL PROTEOMICS



Chair Finland: Markku Varjosalo (University of Helsinki, Finland) and Jaakko Teppo (University of Helsinki, Finland)

9.00 - 9.40 **Keynote lecture: The virus microenvironment**

Ileana M. Cristea (Princeton University, USA)

9.40 - 10.00 **Population-based proteomics and pharmacoproteomics in translational sepsis research**

Johan Malmström (Lund University, Sweden)

10.00 - 10.20 **Metaproteomics - status, challenges, opportunities, and future directions of the field**

Magnus Arntzen (Norwegian University of Life Sciences, Norway)

10.20 - 10.30 **Mapping of time-resolved Hsp90-client protein interactions**

Kirill Jefimov (University of Bergen, Norway)

10.40 - 11.10 Coffee, visit exhibition area

Session 8: FOCUS ON SWEDISH LARGE-SCALE INFRASTRUCTURE



Chair SPS: Lotta Happonen (Lund University, Sweden; SPS; BioMS & SciLifeLab) and Maria Pernemalm (Karolinska Institutet, Sweden; SPS; BioMS & SciLifeLab)

11.10 - 11.30 **SciLifeLab - a National Infrastructure for Molecular Life Sciences**

Annika Jenmalm Jensen (SciLifeLab)

11.30 - 11.50 **The Life Science platform at MAX IV**

Marjolein Thunnissen (MAXIV)

11.50 - 12.10 **Structure of model biological membranes with neutron scattering: present developments and future perspectives**

Giovanna Fragneto (ESS ERIC)

12.15 - 13.00 Lunch, visit exhibition area, take down posters

Session 9: SPATIAL PROTEOMICS AND MS IMAGING



Chair Iceland and SPS: Margrét Thorsteinsdóttir (University of Iceland, Iceland) and György Marko-Varga (Lund University, Sweden; SPS)

13.00 - 13.20 **Spatial multimodal analysis exposes novel alterations in Parkinson's disease**

Per Andrén (Uppsala University, Sweden)

13.20 - 13.30 **Tetramodal chemical imaging delineates the lipid-amyloid peptide interplay at single plaques in transgenic alzheimer's disease models**

Junyue Ge (Sahlgrenska Academy at the University of Gothenburg, Sweden)

13.30 - 13.40 **Spatial proteome maps to navigate the uncharted subcellular landscapes of non-model organisms**

Konstantin Barylyuk (Karolinska Institutet, Sweden)

13.40 - 13.55 **Advancing patient Care: Investigating Prognostic and Predictive Approaches in Melanoma Proteomics**

Leticia Szadai (University of Szeged, Hungary)

13.55 - 14.15 **Deep proteomic insight into intra- and extracellular regulation of normal and malignant blood cell development, Silver sponsor presentation by Thermo**

Jenny Hansson (Lund University, Sweden)

14.15 - 14.25 Young Scientists Award

14.25 - 14.35 Poster awards

14.35 - 14.45 Closing of the NPS 2023 meeting, Lotta Happonen, President of SPS

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