

THURSDAY

17 September

| MAIN HALL                                                                                                                                                                                                                                                                                                                                                                                                                                       | HALL 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               | HALL 3                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| 08:00 - 09:30 <b>SESSION 16</b>                                                                                                                                                                                                                                                                                                                                                                                                                 | 08:00 - 09:30 <b>SESSION 17</b>                                                                                                                                                                                                                                                                                                                                                                                                                                      | 08:00 - 09:30 <b>SESSION 18</b>                                                                                                                                                                                                                                                                                                                                                                                              |
| Bone turnover markers for monitoring treatment for osteoporosis                                                                                                                                                                                                                                                                                                                                                                                 | “Illt er í ætt gjarnast”. Hereditary diseases in Iceland (session by IFKE)                                                                                                                                                                                                                                                                                                                                                                                           | Biomarkers of ageing                                                                                                                                                                                                                                                                                                                                                                                                         |
| Chairs: Professor <i>Niklas Rye Jørgensen</i> (Copenhagen DK) and Professor <i>Lasse Kristoffer Bak</i> (Copenhagen DK)                                                                                                                                                                                                                                                                                                                         | Chairs: MscPharm <i>Leifur Franzson</i> (Reykjavik IS) and Senior Consultant <i>Ólöf Sigurðardóttir</i> (Reykjavik IS)                                                                                                                                                                                                                                                                                                                                               | Chair: Professor <i>Jens Petter Berg (Oslo NO)</i>                                                                                                                                                                                                                                                                                                                                                                           |
| 08:00 - 08:45                                                                                                                                                                                                                                                                                                                                                                                                                                   | 08:00 - 08:45                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 08:00 - 08:25                                                                                                                                                                                                                                                                                                                                                                                                                |
| Bone turnover markers for monitoring osteoporosis treatment                                                                                                                                                                                                                                                                                                                                                                                     | Hereditary Cystatin C Amyloid Angiopathy and related amyloidosis: Pathogenesis and clinical evaluation of NACA as a therapeutic candidate<br>Director of Clinical Development <i>Ásbjörg Ósk Snorradóttir</i>                                                                                                                                                                                                                                                        | Insights into Human Aging: Mechanisms and Research Challenges                                                                                                                                                                                                                                                                                                                                                                |
| Professor <i>Per Magnusson</i>                                                                                                                                                                                                                                                                                                                                                                                                                  | Arctic Therapeutics, Iceland                                                                                                                                                                                                                                                                                                                                                                                                                                         | Professor <i>Lene Juel Rasmussen</i>                                                                                                                                                                                                                                                                                                                                                                                         |
| Department of Clinical Chemistry, Linköping University Hospital, Linköping, Sweden                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Department of Cellular and Molecular Medicine, University of Copenhagen, Copenhagen, Denmark                                                                                                                                                                                                                                                                                                                                 |
| Osteoporosis is a major global health concern, with fractures as its most important clinical consequence. Throughout life, bone is continuously renewed through the tightly regulated process of remodeling, involving the coordinated actions of different bone cells. This lecture will provide an overview of bone biology and remodeling and their relevance to the interpretation of bone turnover markers.                                | Hereditary Cystatin C Amyloid Angiopathy (HCCAA) is a rare, fatal cerebral amyloid angiopathy causing recurrent intracerebral hemorrhages and premature death. As cerebral amyloid angiopathy is a common pathological feature of Alzheimer's disease, an open-label study was initiated to evaluate the safety and therapeutic potential of NACA, with the aim of developing a treatment for both HCCAA and Alzheimer's disease.                                    | The pursuit of understanding the molecular mechanisms underlying human longevity has emerged as a central focus in biomedical research, driven by the challenges posed by an aging global population. In this presentation, I will explore recent advancements in the identification and characterization of human longevity genes, shedding light on the complex interplay between genetic factors and lifespan regulation. |
| 08:45 - 09:15                                                                                                                                                                                                                                                                                                                                                                                                                                   | 08:45 - 09:30                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 08:25 - 08:50                                                                                                                                                                                                                                                                                                                                                                                                                |
| Bone turnover markers in CKD-MBD                                                                                                                                                                                                                                                                                                                                                                                                                | Adenine phosphoribosyltransferase deficiency (APRT) ; a treatable rare cause of kidney stones and kidney failure. Is it time for newborn screening?                                                                                                                                                                                                                                                                                                                  | Refining biomarkers of aging                                                                                                                                                                                                                                                                                                                                                                                                 |
| Ass. Professor <i>Hanne Skou Jørgensen</i>                                                                                                                                                                                                                                                                                                                                                                                                      | Professor <i>Vidar O. Edvardsson</i>                                                                                                                                                                                                                                                                                                                                                                                                                                 | Associate professor <i>Sara Hägg</i>                                                                                                                                                                                                                                                                                                                                                                                         |
| Dept. of Clinical Medicine and Dept. of Medicine and Nephrology, Aarhus University Hospital, Aarhus, Denmark                                                                                                                                                                                                                                                                                                                                    | Department of Pediatric Nephrology and Solid Organ Transplantation. Barnaspítali Hringins, Reykjavík, Iceland.                                                                                                                                                                                                                                                                                                                                                       | Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden                                                                                                                                                                                                                                                                                                                               |
| Chronic kidney disease is common, affecting 10% of the population. CKD increases the risk of fracture, but a variable bone phenotype presents a challenge in treatment of CKD-associated osteoporosis. Bone turnover markers may help address the treatment gap by informing on the state of skeletal remodeling. This lecture will discuss the utility of bone turnover markers in the diagnosis and treatment of CKD-associated osteoporosis. | Adenine phosphoribosyltransferase (APRT) deficiency is a rare purine metabolism disorder causing 2,8-dihydroxyadenine urinary stones and crystal nephropathy. Manifestations include acute kidney injury, progressive chronic kidney disease (CKD), and frequently, end-stage kidney disease (ESKD). Timely diagnosis is important as available treatment significantly reduces kidney stone recurrence, slows CKD progression and prevents the development of ESKD. | Advances in molecular epidemiology and omics are enabling more precise measurement of biological aging. This presentation highlights current knowledge in the field, linking aging biomarkers to disease and mortality, with insights into heritability, sexual dimorphism, directionality, and time-varying effects relevant to precision geroscience.                                                                      |
| 09:15 - 09:30                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 08:50 - 09:15                                                                                                                                                                                                                                                                                                                                                                                                                |
| Health Economic Aspects of BTM use for monitoring osteoporosis treatment                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Markers of youth in the blood of centenarians                                                                                                                                                                                                                                                                                                                                                                                |
| Professor <i>Niklas Rye Jørgensen</i>                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Professor <i>Karl-Heinz Krause</i>                                                                                                                                                                                                                                                                                                                                                                                           |
| Department of Clinical Biochemistry, Copenhagen University Hospital – Rigshospitalet, Copenhagen, Denmark                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Department of Pathology and Immunology, University of Geneva, Geneva, Switzerland                                                                                                                                                                                                                                                                                                                                            |

Biochemical turnover markers are increasingly used for monitoring oral bisphosphonate treatment in patients with osteoporosis. Their use has recently been included in the Danish national guideline on osteoporosis management from the Danish Society of General Practitioners. The talk will focus on recent studies on the benefit of the markers on both fracture incidence and on socioeconomic aspects.

09:15 - 09:30

Discussion

## MAIN HALL

### 09:45 - 10:30 PLENARY LECTURE

The role of epigenetics in mediating health and disease

Chairs: Professor *Anders Lade Nielsen* (Aarhus, DK) and Professor *Holger Jon Møller* (Aarhus, DK)

Academy Research Fellow *Emma Raitoharju*, Faculty of Medicine and Health Technology, Biomedicine, Tampere University, Finland



Epigenetic profiles regulate cellular function and gene expression without altering the DNA sequence. These profiles, for example, ensure that daughter cells retain the identity (i.e. cell type) of their mother cells. From an individual's perspective, epigenetic mechanisms enable the body to adapt to environmental conditions and even allow the future offspring to adapt to anticipated conditions already during pregnancy. During lifespan, epigenetic profiles are responsive to external exposures, such as smoking and chronological age and can be used to measure these exposures indirectly, when data is not available. Epigenetic profiles also reflect broader phenotypes, such as rate of biological ageing, but the role of epigenetics in the pathology of non-communicable diseases as well as the clinical utility of these measurements is still under investigation.

### 10:45 - 12:15 PLENARY SESSION - PRIZE COMPETITION

The Lorentz Eldjarn prize competition for best publication

Chair: Professor, Managing Editor of SJCLI, *Jens Petter Berg* (Oslo, NO)



Wikipedia

The Scandinavian Journal of Clinical and Laboratory Investigation (SJCLI) has set up a prize committee, that nominates three first authors from the most cited articles in SJCLI. The authors are invited to present their study as a part of the scientific program at the Nordic Congress of Clinical Chemistry. Based on the scientific quality of the studies and the clarity of the presentations, the Prize Committee shall reach a consensus on the recipient of the first (100.000 DKK), the second (50.000 DKK) and the third prize (30.000 DKK). The recipients of the Prize will be announced by the Chairman of the Prize Committee at the banquet Thursday evening.

#### 10:45 - 11:15

Phosphatidylethanol (PEth) as an alcohol biomarker: measurement, quality assurance, interpretation of results, and clinical and forensic applications

Docent *Anders Helander*

Department of Laboratory Medicine, Karolinska Institutet; Huddinge, Sweden

#### 11:15- 11:45

Platelet Parameters and Leukocyte Morphology in COVID-19: Scientific Impact and Perspectives in Data-Driven Haematology Research

Dr. *Anne Bryde Alnor*

Department of Clinical Biochemistry, Odense University Hospital, Odense, Denmark

#### 11:45 - 12:15

Mild impairment of renal function and future myocardial infarction in women

Consultant Physician *Elisabet Söderström*

Laboratory Medicine, Sunderby Hospital, Norrbotten County Council, Sweden

### 12:15 - 13:15 LUNCH

12:45 - 13:15 POSTERWALK II

MAIN HALL

13:20 - 14:50 PLENARY SESSION

Transformative Lab-Enabled Best Practices from the 2026 UNIVANTS of Healthcare Excellence Award Program

Chair: Executive Lead of the UNIVANTS of Healthcare Excellence program *Tricia Ravalico* (Abbott, Chicago, Illinois)

13:20 - 13:40

Introduction to the Unviants program

*Tricia Ravalico*

Abbott, Chicago, Illinois

13:40 - 13:55

Reducing cardiovascular morbidity and mortality for patients with lung cancer through proactive screening and intervention

*Zhijun Guo*

Shandong Cancer Hospital and Institute, Shandong First Medical University and Shandong Academy of Medical Sciences, China

13:55 - 14:10

Improving perinatal outcomes and protecting safety through laboratory medicine guided risk-stratification of antenatal alloimmunization

*Ranganayaki Vidyalekshmy*

KIMSHEALTH Trivandrum, India

14:10 - 14:25

The Aynati Initiative: Accelerating diagnostics and enhancing resource utilization through digital lab transformation

*Rasha Khalid Almohaisen*

Jubail Health Network (JHN), Saudia Arabia

14:25 - 14:50

Discussion

MAIN HALL

15:00 - 15:20 COMPANY SESSION

Abbott laboratories A/S

Choosing Diagnostics Wisely: Laboratories can deliver an overall greater impact to the healthcare institution

Phd, Analytical Chemistry *Joel Ljunggren*

Core Diagnostics at Abbott

Learn more about Abbott's game changing Clinical Decision Support and its potential impact to improving healthcare.

15:25 - 15:45 COMPANY SESSION

HALL 2

15:00 - 15:20 COMPANY SESSION

Roche Diagnostics A/S

The potential of blood biomarkers in the diagnostic work-up of Alzheimer's disease

Clinical Associate Professor *Kristian Steen Frederiksen*

Danish Dementia Research Centre

As Alzheimer's cases rise, blood-based biomarkers like p-tau181 and p-tau217 offer cheaper, faster, and less invasive alternatives to scans and spinal taps. This session reviews their biology and how they accelerate diagnosis and access to treatment.

15:25 - 15:45 COMPANY SESSION

Becton Dickinson

Advancing Sample Identification and Traceability through the Digital Sample Pathway

Medical Affairs Manager *Megan Thomas* and Business Development Manager *Katie Dowson*

BD Specimen Management

Explore how BD Unique Sample Identification (USI) and the Digital Sample Pathway (DSP) enhance traceability, identification errors, and support pre analytical quality, while improving sustainability through more efficient, standardised workflows.

HALL 3

15:00 - 15:20 COMPANY SESSION

Bio-rad Laboratories

Outcomes of an International Harm Severity Survey for Incorrect Lab Results : A Risk-Based Approach to Patient Safety  
Quality Control Data Management Expert, *Ileyki Sanha Imu*

Bio-Rad Laboratories

In the context of ISO 15189:2022 and ISO 22367:2020, a first international survey published in CCLM addressed the lack of consensus on assessing severity of harm associated with erroneous reported results in routine laboratory medicine.

15:25 - 15:45 COMPANY SESSION

Ascentry

Streamlining verification of biochemical analysis by using Validation Manager - Report from Norway

Consultant, Professor Emerita, *Karin Toska*

Oslo University Hospital, University of Oslo

The use of Validation Manager, a dedicated method validation and verification program, in an accredited medical laboratory in Oslo University Hospital with 4 separate laboratories. Large benefits and increased result confidence realized through an automated and standardized approach.

## HALL 4 (third floor)

### 16:00 - 17:30 SESSION 19

#### Biomarkers of chronic kidney disease

Chairs: Dr. *Jacob Rudjord Therkildsen* (Aarhus DK) and Associate professor *Søren Andreas Ladefoged* (Aarhus DK)

16:00 - 16:30

Biochemical assessment of kidney function/Which eGFR algorithm should be used?

Professor *Anders Larsson*

Department of Medical Sciences, Uppsala University, Uppsala, Sweden

Overview of kidney function biomarkers: iohexol clearance, creatinine, cystatin C. Relative GFR is recommended for clinical kidney assessment while absolute GFR is needed for drug dosing. Use relative GFR from age  $\geq 13$ . LM rev or EKFC are recommended for creatinine eGFR; EKFC or CAPA for cystatin C. Combined creatinine–cystatin C eGFR often performs best.

16:30 - 17:00

New biomarkers of CKD — The unfulfilled promise?

Professor *Henrik Birn*

Department of nephrology, Aarhus University Hospital, Aarhus, Denmark

Over the past 20 years, numerous CKD biomarkers have been identified, but clinical practice still relies mainly on eGFR and albuminuria. Why are new biomarkers needed, and why have so many promising candidates failed to reach routine care? This talk examines the gap between discovery and implementation and discuss if next-generation biomarkers can advance precision nephrology.

17:00 - 17:30

Ammonium-pH index in urine – a measure of tubular function independent of GFR in chronic kidney insufficiency?

Postdoctoral researcher *Peder Matzen Berg*

Department of Biomedicine, Aarhus University, Aarhus, Denmark

## HALL 2

### 16:00 - 17:30 SESSION 20

#### From Algorithm to Insight: Practical Applications of AI in Diagnostics

Chairs: Associate professor *Anders Mønsted Abildgaard* (Aarhus DK) and Resident *Doctor Lea Tybirk* (Aarhus DK)

16:00 - 16:30

Creating large-scale AI solutions for prediction from population-wide EHR data

Professor *Søren Brunak*

Department of Public Health & Novo Nordisk Foundation Center for Protein Research, University of Copenhagen, Copenhagen, Denmark

Health data are multimodal and longitudinal and need to be integrated to provide the best basis for predictive and mechanistic studies. At the same time disease manifestations are heterogeneous across populations due to variation in germline genetic risk and life course exposures. Integrative AI approaches for the understanding of complex disease etiologies and the multimorbidity precision medicine agenda will be presented.

16:30 - 17:00

Information-driven care: Some AI use cases

Professor *Mattias Ohlsson*

Computational Science for Health and Environment, Lund University, Lund, Sweden

I will give a few examples of applications where AI is used to provide a second opinion, including the management of patients with chest pain in the emergency department and the prediction of lymph node status in breast cancer patients. Some recent developments in AI models for tabular data will also be highlighted.

17:00 - 17:30

Real-Time Identification of Pancreatic Cancer Cases Using Artificial Intelligence Developed on Danish Nationwide Registry Data

Clinical Data Science Specialist *Anders Bo Bojesen*

Department of Surgery, Aarhus University Hospital, Aarhus, Denmark

## HALL 3

### 16:00 - 17:30 SESSION 21

#### Platelet function and coagulation: old acquaintances and new biomarkers

Chairs: Associate professor *Julie Brogaard Larsen* (Aarhus DK) and Associate professor *Johanne Andersen Højbjerg* (Aarhus DK)

16:00 - 16:30

Platelet function testing: State of the art

Associate professor *Peter Nissen*

Department of Clinical Biochemistry, Aarhus University Hospital, Aarhus, Denmark

How do we best assess platelet function in clinical practice? This lecture explores the current state of platelet function testing, from established laboratory methods to emerging technologies. The session highlights opportunities, limitations, and future perspectives for improving diagnosis, treatment monitoring, and personalized patient care.

16:30 - 17:00

Platelet micro-RNA: novel biomarkers in cardiovascular disease

*Dr Oliver Pedersen*

Department of Cardiology, Aalborg University Hospital, Aalborg, Denmark

Despite advances in cardiovascular medicine, better biomarkers are still needed. Platelet-derived microRNAs have emerged as promising candidates linking platelet biology with disease. This presentation introduces the field and presents findings from our research on their diagnostic and prognostic potential.

17:00 - 17:30

A history of thrombosis and haemostasis research: More than 40 years in the coagulation service.

Professor *Søren Risom Kristensen*

Department of Clinical Biochemistry, Aalborg University Hospital, Aalborg, Denmark

The tubulointerstitial compartment constitutes most of the kidneys' tissue and is a key driver of chronic kidney disease progression. Yet no measure of tubular function is used in routine care. The urine ammonium-pH index, a composite of urine pH and ammonium, is a simple measure of kidney tubular function with potential to improve kidney function assessment and clinical care.

In this period, Factor V Leiden and several other thrombogenic factors in the coagulation system have been discovered, and our knowledge of the traditional factors as antithrombin deficiency has also markedly increased. Thus, venous thrombosis is much better understood now although much remain unknown. Estimating the effect of platelet inhibitors was initiated to improve treatment of arterial thrombosis, but afterwards we have mainly refrained from this. The assay thrombin generation has been optimized and therefore increasingly been used to investigate the complex coagulation system, although the use also has pitfalls. These issues have been the playing field for me for more than 40 years.