

TUESDAY

15 September

12:00 - 12:45 LUNCH

MAIN HALL

12:45 - 13:00 WELLCOME ADDRESS

13:00 - 13:45 OPENING LECTURE

Gastro-intestinal peptide hormones, from basic research in clinical biochemistry to major public impact

Chairs: Professor *Ebba Nexø* (Aarhus, DK)

Professor *Jens Juul Holst*, The Novo Nordisk Foundation Center for Basic Metabolic Research and Department of Biomedical Sciences, University of Copenhagen, Denmark



Jens Juul Holst is Professor at the Department of Biomedical Sciences and Senior Group Leader at the Novo Nordisk Foundation Centre for Basic Metabolic Research, University of Copenhagen, Denmark. His scientific work has focused on peptide hormones of the gastrointestinal tract. Among his major scientific achievements is work on the peptide hormone GLP-1 (glucagon-like peptide 1) and its significance for insulin secretion, food intake, and appetite control. His work has been of major importance for the development of GLP-1 analogue therapeutics now in use around the world to treat type 2 diabetes and obesity.

MAIN HALL

14:00 - 15:30 SESSION 1

Novel diagnostic opportunities in neurological disease and cognitive decline

Chairs: Professor *Ruth Frikke-Schmidt* (Copenhagen, DK) and Associate professor *Tina Parkner* (Aarhus, DK)

14:00 - 14:25

From Ambulance to Bedside and Back: Blood-Based Biomarkers in Acute Stroke

Associate Professor *Rolf Blauenfeldt*

Department of Neurology, Aarhus University Hospital, Aarhus, Denmark

Acute stroke requires rapid diagnosis, but distinguishing ischemic stroke from intracerebral hemorrhage before hospital arrival remains challenging.

This talk reviews the need for prehospital stroke diagnosis, current blood-based biomarkers, emerging point-of-care technologies, and ongoing studies evaluating biomarker-guided triage to improve early treatment decisions.

14:25 - 14:45

Blood-based biomarkers in early Alzheimer's disease

Associate Professor *Niels Okkels*

Department of Neurology, Aarhus University Hospital, Aarhus, Denmark

HALL 2

14:00 - 15:30 SESSION 2

Sustainability in the clinical laboratory

Chair: Associate professor *Peter H. Nissen* (Aarhus, DK) and Associate professor *Rie Harboe Nygaard* (Aarhus, DK)

14:00 - 14:35

Sustainability in the clinical laboratory – from procurement to waste

Sustainability consultant *Dang Quang Svend Le*

Central Region Midt, Aarhus, Denmark

14:35 - 15:00

Towards a greener biobank – initiatives in Bio- and GenomBank Denmark

Professor *Estrid V. Høgdall*

Department of Pathology, Copenhagen University Hospital – Herlev and Gentofte, Copenhagen, Denmark

HALL 3

14:00 - 15:30 SESSION 3

Thyroid function tests – past, present, and beyond

Chairs: Lead consultant *Stine Linding Andersen* (Aalborg DK) and Professor *Tuija Männistö* (Kuopio, FI)

14:00 - 14:30

Efforts of harmonization and standardization

Chair of the IFCC Committee on Standardization of Thyroid Function Tests *Katleen Van Uytanghe*

Department of Bioanalysis, University of Ghent, Ghent, Belgium

The IFCC Committee for Standardization of Thyroid Function Tests (C-STFT) has established reference systems for TSH harmonization and free T4 standardization. Implementation activities include the maintenance of the reference systems, their use to standardize and harmonize assays, and educational activities to inform stakeholders on anticipated changes in the measurement values.

14:30 - 14:45

Reference intervals in non-pregnant adults

Lead consultant *Stine Linding Andersen*

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

What if we could identify Alzheimer's disease before symptoms emerge? In this presentation, I will share longitudinal data from Danish blood donors with up to 15 years of follow-up. Our findings suggest that plasma p-tau217 may reveal the disease process more than a decade before diagnosis

14:45 - 15:05

NFL measurements in multiple sclerosis

Professor *Finn Sellebjerg*

Danish Multiple Sclerosis Center,
Rigshospitalet, Copenhagen, Denmark

15:05 - 15:25

Prognostication of cognitive status after cardiac arrest by plasma NFL

Professor *Christian Hassager*

Department of Cardiology, Rigshospitalet,
Copenhagen, Denmark

Prediction of outcome in comatose resuscitated out-of-hospital-cardiac arrest patients is difficult and relies on multimodality results obtainable only later than 72 hours after the resuscitation. New studies show that plasma Neurofilament Light chain (NfL) has a strong prognostic value much earlier. This indicates that NfL will allow reliable neuroprognostication already 24 h after cardiac arrest.

MAIN HALL

15:45 - 17:15 SESSION 4

What's new: Lipids, lipoproteins, and cardiovascular risk

Chairs: Professor *Marianne Benn* (Copenhagen, DK) and Professor *Pia Rørbye Kamstrup* (Copenhagen, DK)

15:50 - 16:10

Lipid metabolism – an overview

Professor *Jan Boren*
Department of Molecular and Clinical Medicine, University of Gothenburg, Gothenburg, Sweden

The presentation of the Danish Regions' Bio- and Genome Bank provides insight into the national biobank infrastructure and how standardized collection, and storage of biological samples form the basis for research into. Results of experiences with storage at –70°C as a sustainable alternative to the traditional –80°C standard, including the implications for sample quality, energy consumption, and the future operation of biobanks will be presented.

15:00 - 15:25

Blood collection tubes – from hazardous waste to valuable resource

Special consultant *Caroline Strudwick* and Health Innovation Centre of Southern Denmark and Department of Clinical Biochemistry, Odense University Hospital, Odense, Denmark

How can we reduce laboratory waste and increase circularity in healthcare? Join us to hear the key insights from a promising feasibility study on recycling PET blood collection tubes, a key source of hazardous plastic waste. And learn how these results are shaping the next steps towards a circular model for single use plastics in healthcare laboratories

HALL 2

15:45 - 17:15 SESSION 5

ctDNA for early detection and screening

Chairs: Postdoctoral researcher *Sia Viborg Lindskrog* (Aarhus, DK) and Associate professor *Ole Halfdan Larsen* (Aarhus, DK)

15:45 - 16:05

ctDNA in cancer screening of the general population: Navigating test statistics and downstream harms

Professor *Stig Egil Bøjesen*
Department of Clinical Biochemistry, Herlev Gentofte Hospital, Copenhagen University Hospital, Copenhagen, Denmark

Symptoms of thyroid diseases are often unspecific and biochemical assessment of thyroid function plays a key role in patient diagnosis and monitoring. Clinical laboratories have an important role in establishment and verification of reference intervals, and certain aspects apply to the establishment of reference intervals for thyroid function tests in non-pregnant adults.

14:45 - 15:05

Considerations in pregnant women

Professor *Tuija Männistö*

University of Eastern Finland, Kuopio, Finland

Thyroid diseases are common in pregnant women and may affect the health of the mother and the fetus. Pregnancy is a physiological stress test for the thyroid gland that challenges the biochemical assessment. Several hormonal changes, including the rise in human chorionic gonadotropin and binding proteins, affect maternal thyroid function parameters in pregnancy.

15:05 - 15:30

Free thyroid hormones measured with mass spectrometry

Research Scientist *Alexander Bauer Westbye*

Hormone Laboratory, Department of Medical Biochemistry, Oslo University Hospital, Oslo, Norway

The 'gold standard' for measurements of free T4 and free T3 uses equilibrium dialysis followed by liquid chromatography tandem mass spectrometry (ED-LC-MS/MS). These methods overcome many interferences of immunoassays and can be implemented in specialized laboratories. Pros and cons of mass spectrometry-based measurements of free thyroid hormones in a clinical setting is discussed.

HALL 3

15:45 - 17:15 SESSION 6

Establishing robust pediatric reference intervals

Chairs: Associate professor *Ingrid Alsos Lian* (Trondheim NO) and Dr *Lea Tybirk* (Aarhus DK)

15:45 - 16:15

Pediatric reference intervals in newborns and at 2 and 14-16 months of age - data from the Copenhagen Baby Heart Study

Professor *Ruth Frikke-Schmidt*
Department of Clinical Medicine, Rigshospitalet, Copenhagen, Denmark

Lipid metabolism is central to energy homeostasis and cardiovascular risk. This presentation will highlight key pathways regulating lipoprotein production and clearance, with a focus on triglyceride-rich lipoproteins and remnants. New insights from genetics and translational studies will be discussed in relation to atherosclerosis and emerging therapeutic targets.

16:10 - 16:25

Lipoprotein(a)

Professor *Pia Rørbæk Kamstrup*

Department of Clinical Biochemistry, Herlev and Gentofte Hospital, Copenhagen, Denmark

16:25 - 16:40

Remnant cholesterol

Professor *Børge Nordestgaard*

Department of Clinical Biochemistry, Herlev and Gentofte Hospital, Copenhagen, Denmark

16:40 - 16:55

Women, lipids and cardiovascular risk

Professor *Kirsten Bjørklund Holven*

Institute for Nutrition Research, University of Oslo, Norway

16:55 - 17:15

Cardiometabolic disease

Professor *Stefano Romeo*

Department of Medicine, Karolinska Institute, Sweden

The use of a blood test to screen for presence of preclinical stages of cancer seems like the holy grail for laboratory physicians interested in cancer. The perspectives are dizzying, but unfortunately, the search has been as unsuccessful.

The talk outlines several layers of fundamental – and unavoidable – reasons why this concept may be further away from reality than we like to think.

16:05 - 16:25

Tissue-naïve tumour detection using plasma cell-free DNA

Professor *Jakob Skou Pedersen*

Department of Molecular Medicine (MOMA), Aarhus University Hospital, Aarhus, Denmark

16:25 - 16:45

ctDNA guided vs opportunistic colonoscopy screening for CRC detection after acute colonic diverticulitis

Associate prof *Thomas Bjørsum-Meyer*

Department of Surgery, Odense University Hospital, Odense, Denmark

Could a blood test transform colorectal cancer diagnostics after diverticulitis? We present new evidence on a circulating tumor DNA methylation assay as a non-invasive triage tool that may substantially reduce unnecessary follow-up colonoscopies while maintaining a high cancer detection rate. Discover the future potential of liquid biopsy in everyday clinical practice.

16:45 - 17:15

16:15 - 16:45

Pediatric reference intervals from the joint Nordic study including Swedish and Danish data, and challenges of the pediatric reference intervals

Associate professor *Peter Rødefelt*

Department of Medical Sciences, Clinical Chemistry, Uppsala University, Uppsala, Sweden

The last decade has seen substantial improvement in the field of pediatric reference intervals for clinical chemistry analyses. The talk gives an outline of Nordic and other recent projects. Also, some aspects and challenges for potential future development in the field of indirect reference intervals are discussed.

16:45 - 17:00

Establishing a pediatric reference interval for plasma calprotectin

Clinical associate professor *Anne-Birgitte Blavnsfeldt*

Department of Clinical Medicine - Department of Clinical Biochemistry, Horsens Regional Hospital, Horsens, Denmark

17:00 - 17:15

Approach to the Verification of Neonatal Reference Values for Red Blood Cell Parameters

Medical laboratory specialist *Dmitri Šišmintsev*

Tallinn Children's Hospital, Tallinn, Estonia

In this section, we share our experience using a graphical analysis technique to retrospectively verify reference intervals via an indirect approach

MAIN HALL

17:30 - 18:00 OPENING CEREMONY