

# 5th International Meeting on Cell-Free DNA, cfDNA2023, Copenhagen 25–26 May 2023

## Scientific Program

### DAY 1

8.00 – REGISTRATION

8.25 – OPENING by Frederik Banch Clausen

8.30 – NON-INVASIVE PREDICTION OF FETAL BLOOD GROUPS

#### Introduction to Blood Group Genotyping

Prof. Christoph Gassner (Principality of Liechtenstein)

#### Non-Invasive Prediction of Fetal Blood Groups

Prof. Masja de Haas (Leiden, The Netherlands)

#### Oral Presentations (5 min)

**A.** Fetal *RHD* Screening in RH1 negative pregnant women: Experience in Switzerland

**Rahel Kräuchi** (Switzerland)

**B.** The effect of the nationwide implementation of targeted routine antenatal anti-D prophylaxis in Denmark **Emilie Thorup** (Denmark)

*Chairs: Dr. Åsa Hellberg (Sweden) and Prof. Dr. Tobias Legler (Germany)*

10.30 – Coffee Break

11.00 – NON-INVASIVE PREDICTION OF FETAL BLOOD GROUPS (continued)

#### Recommendations for Validation and Quality Assurance of Fetal *RHD* Genotyping

Prof. Dr. Tobias J Legler (Göttingen, Germany)

#### Oral Presentations

**C.** Implementation of a ddPCR method for non-invasive fetal blood group typing for alloimmunised pregnant women **Camilla Calandrini** (The Netherlands)

**D.** Fetal *RHD* genotyping by droplet digital PCR for D variant mothers or children

**Aicha Ait Soussan** (The Netherlands)

*Chairs: Dr. Åsa Hellberg (Sweden) and Dr. Frederik Banch Clausen (Denmark)*

12.00 – Lunch Break

13.00 – POSTER SESSION

14.00 – CELL-FREE DNA AND TRANSPLANTATION

#### Donor-derived cell-free DNA testing in organ transplantation to improve personalized immunosuppression

Prof. Dr. Michael Oellerich (Göttingen, Germany)

#### Donor-Derived Cell-Free DNA in Allograft Rejection and Risk Assessment

Dr. Olivier Aubert (Paris, France)

#### Oral Presentations

**E.** A novel method to quantify absolute levels of donor-derived cell-free DNA after heart transplantation: a prospective study **Jens Böhmer** (Sweden)

**F.** Multi-centric analytical performance validation of an IVD assay to quantify donor-derived cell-free DNA for solid organ transplant surveillance **Silvia Casas** (USA)

*Chairs: Dr. Frederik Banch Clausen and Prof. Morten Hanefeld Dziegiel (Denmark)*

15.30 – Coffee Break

16.00 – FUTURE TECHNOLOGIES

#### Nanopore sequencing technology for DNA analysis

Dr. Olivier Lucas (Director, Oncology at the Oxford Nanopore Technologies, Oxford, England)

*Chair: Dr. Klaus Rieneck (Denmark)*

16.45–17.00 – END OF DAY 1

19.00 – CONFERENCE DINNER

### DAY 2

08.30 – CELL-FREE DNA AND CANCER

#### Plasma DNA fragmentomics: biology and applications

Prof. Dennis Lo (Hong Kong, China) [*virtual talk*]

#### Netosis is a significant new biological source of circulating DNA: impact of their clinical implementation

Prof. Alain R Thierry (Montpellier, France)

#### Analysis of cell-free DNA in early-stage breast cancer treated with neoadjuvant chemotherapy

Dr. Mark Jesus M Magbanua (San Francisco, USA)

#### Oral Presentation

**G.** Cell-free chromatin immunoprecipitation can determine tumor gene expression in lung cancer patients. **Christoffer Trier Månsson** (Denmark)

*Chairs: Dr. Klaus Rieneck (Denmark) and Dr. Peter Celec (Slovakia)*

10.40 – Coffee Break

11.10 – CELL-FREE DNA BIOLOGY

#### Oral Presentations

**H.** Endogenous deoxyribonuclease activity in mouse sepsis, liver failure and human testicular cancer **Peter Celec** (Slovakia)

**I.** Extracellular DNA in rheumatoid arthritis **Barbora Vlková** (Slovakia)

**J.** Evaluation of variability in cell-free DNA extraction from plasma using an artificial spike-in (CEREBIS) **Fanny Sandberg** (Switzerland)

**K.** Cell-free DNA analyses provide novel insights into hepatic and extra-hepatic organ stress in chronic liver failure syndromes, revealing dynamic alterations based on disease severity **Marilena Stamouli** (England)

*Chairs: Dr. Sofie Lindgren Christiansen and Prof. Morten Hanefeld Dziegiel (Denmark)*

12.00 – Lunch Break

13.00 – NON-INVASIVE PRENATAL TESTING AND DIAGNOSIS

#### Non-Invasive Prenatal Testing: Experiences with genome-wide NIPT, and future developments

Prof. Erik Sistermans (Amsterdam, The Netherlands)

#### Non-Invasive Prenatal Diagnosis of Single Gene Disorders

Dr. Natalie Chandler (London, England)

#### Cell-based NIPT for genome-wide detection of aneuploid and copy number variations, and screening for cystic fibrosis

Dr. Line Dahl Jeppesen (Aarhus, Denmark)

#### Oral Presentations

**L.** Evaluation of fetal ploidy status by cell-free fetal DNA in early pregnancy loss

**Tanja Schlaikjær Hartwig** (Denmark)

**M.** DES-NIPT study: Global approach to detect inherited paternal variants in NIPT samples using deep exome sequencing **Ieva Miceikaite** (Denmark)

*Chairs: Dr. Sofie Lindgren Christiansen and Dr. Marie Balslev-Harder (Denmark)*

15.00 – EMERGING TECHNOLOGIES

#### Raman spectroscopy and AI for fetal phenotyping on maternal blood

Prof. Morten Hanefeld Dziegiel (Copenhagen, Denmark)

*Chair: Dr. Frederik Banch Clausen (Denmark)*

15.30 – Coffee Break

16.00 – POSTER AND GRANT AWARDS

*Chair: Anne Todsén Hansen (Denmark)*

16.30 – CONFERENCE ENDS

The conference is compliant with the Euromed Code of Ethical Business Practice.  
The program may be amended.