

Fibrinogen Workshop 2024

Sunday June 2

16.00 - 18.30 *Arrival and registration*

18.30 *Reception at restaurant Plates*

Monday June 3

08.00 - 08.45 *Breakfast at the venue*

08.45 - 09.00 *Welcome and introduction* Else Bladbjerg

Session 1: Biomechanics

Chairpersons: Else Bladbjerg and Rebecca Risman

09.00 - 09.30 **State of the art** Rustem Litvinov: Mechanobiology and Pathophysiology of Blood Clot Contraction

09.30 - 09.50 O-1 - Christine Helms: Variability in Fibrin Fiber Mechanics

09.50 - 10.10 O-2 - Antoine Eyram Kwame: Influence of Metal Ions on Fibrinogen Nanofiber Assembly

10.10 - 10.30 *Coffee and talk*

10.30 - 10.50 O-3 - Martin Guthold: The Mechanical Properties of Electrospun Human Fibrinogen Nanofibers

10.50 - 11.10 O-4 - Adam Hansen: Understanding the Influence of Surfaces on Initiating Fibrin Fiber Formation in the Absence of Thrombin

11.10 - 11.30 O-5 - Volodymyr Chernyshenko: Alternative Role of B:b Knob-hole Interactions in the Fibrin Assembly

11.30 - 11.50 O-6 - Ranjini Ramanujam: Rupture Mechanics of Blood Clots: Influence of Fibrin Structure on the Rupture Resistance

11.50 - 13.00 *Lunch and walk*



Session 2: Clinical I

Chairpersons: Vakur Bor and Ziyuan Niu

- 13.00 - 13.30 **State of the art** Anetta Undas: Fibrin Clot Properties in Cardiovascular Disease: from Basic Mechanisms to Clinical Practice
- 13.30 - 13.50 O-7 - Dorothea Brüggemann: Cell Interaction and Stability of Self-assembled Fibrinogen Nanofiber Scaffolds
- 13.50 - 14.10 O-8 - Safae Oukrich: Early Fibrin Network Development in Staphylococcus Aureus Fibrin Biofilms
- 14.10 - 14.25 **Poster pitches** P1 (Rita Marchi), P2 (Dóra Ilona Bomberák), P3 (Linda Lóczi), P4 (Vakur Bor)
- 14.25 - 14.50 *Coffee and talk*
- 14.50 - 15.10 O-9 - Matt Flick: Nonpolymerizable Fibrinogen as an Antithrombotic
- 15.10 - 15.30 O-10 - Martin Guthold: Low Density Lipoprotein (LDL) Alters Fibrin Fiber Mechanical Properties
- 15.30 - 15.50 O-11 - Miriam Rafailovich: Initiation of Thrombosis following Viral Infection: Mechanism and Prevention
- 15.50 - 16.00 *Introduction to evening event* Else Bladbjerg
- 18.15 *Bus departure from the hotel*
- 19.00 *Dinner at restaurant Sjelborg Strand*

Tuesday June 4

- 08.00 - 08.45 *Breakfast at the venue*

Session 3: Clot Structure

Chairpersons: Moniek de Maat and Christine Helms

- 09.00 - 09.30 **State of the art** Kirby Lattwein - Fibrinogen in Biofilms
- 09.30 - 09.50 O-12 - Valeri Barsegov: In Silico Modeling of Effects of Platelet Counts on Kinetics of Fibrin Clot Contraction
- 09.50 - 10.10 O-13 - Leonie Konopka: Carboxy-terminal Amino Acids in the Fibrinogen A α E Chain are essential for Fibrinogen-420 Secretion
- 10.10 - 10.50 *Coffee and poster viewing*



- 10.50 - 11.10 O-14 - Nathan Hudson: Chorographic Mapping of Human Fibrinogen Structures in Solution
- 11.10 - 11.30 O-15 - Daria Korolova - Catalog of Monoclonal Antibodies for the Study of Fibrin(ogen) Structure and Functions
- 11.30 - 11.50 O-16 - Daniel Gil Fraga: Prime Editing the Zebrafish Genome to Study Fibrinogen in Vivo

11.50 - 13.00 *Lunch and walk*

Session 4: Factor XIII

Chairpersons: Nathan Hudson and Verena Schroeder

- 13.00 - 13.30 **State of the art** Jim Luyendijk: Interaction Transglutaminases (FXIII and TG2) and Fibrinogen
- 13.30 - 13.50 O-17 - Kirk Hansen: The Fibrinogen and Fibrin Crosslinking Profiles of Coagulation Factor XIIIa and Tissue Transglutaminase
- 13.50 - 14.10 O-18 - Jim Luyendyk: Coagulation Factor XIII and Tissue Transglutaminase Cooperatively Mediate Atypical Fibrin(ogen) Cross-linking in the Acetaminophen-injured Liver
- 14.10 - 14.30 *Coffee and talk*
- 14.30 - 14.50 O-19 - Verena Schroeder: Role of Tissue Transglutaminase 2 in Fibrin Formation and Haemostasis
- 14.50 - 15.10 O-20 - László Muszbek: Cellular FXIII in Macrophage Derived Foam Cells of the Atherosclerotic Plaque
- 15.10 - 15.30 O-21 - Zsuzsa Bagoly: Inactivation of Factor XIII
- 15.30 - 15.50 O-22 - Ranjini Ramanujam: Understanding Blood Clot Stability: The Role of FactorXIII-mediated Fibrin Crosslinking in Rupture Resistance
- 15.50 - 16.00 *Introduction to the hospital tour* Else Bladbjerg
- 17.00 *Tour and dinner at Esbjerg Hospital*



Wednesday June 5

08.00 - 08.45 *Breakfast at the venue*

Session 5: Fibrinogen variants

Chairpersons: Martin Guthold and Nicoline Daugaard

09.00 - 09.30 **State of the art** Jaap Koopman: Production of Recombinant Fibrinogen Variants

09.30 - 09.50 O-23 - Alexander Couzens: Beyond Monogenic Inheritance: Investigating Oligogenic Traits in Congenital Fibrinogen Disorders

09.50 - 10.10 O-24 - Leonid Medved: Identification of Amino Acid Residues Critical for the Interaction of Fibrin with its Novel Receptor N-cadherin

10.10 - 10.30 *Coffee and talk*

10.30 - 11.00 **State of the art** Richard Fish: Zebrafish and Fibrinogen Research

11.00 - 11.20 O-25 - Nadja Bødker Pedersen: The Association of Metabolic Dysfunction-associated Steatotic Liver Disease with Fibrinogen Splice Variants in Patients with Severe Obesity: Effects of Weight-loss Surgery

11.20 - 11.30 O-26 - Nicoline Daugaard: A new Enzyme-linked Immunosorbent Assay to Quantify Glycosylated Fibrinogen in Plasma

11.30 - 11.50 O-27 - Vakur Bor: Congenital Hypofibrinogenemia due to Large Heterozygous Deletion including FGA, FGB and FGG Diagnosed in a Patient with Recurrent Venous Thrombosis

11.50 - 13.00 *Lunch and walk*

Session 6: Fibrinolysis

Chairpersons: Marlien Pieters and Ranjini Ramanujam

13.00 - 13.30 **State of the art** Valerie Tutwiler: Clot Structure and Fibrinolysis

13.30 - 13.50 O-28 - Brittany Bannish: Plasmin Degradation of Fibrin Increases Lysis Rates by speeding up tPA Movement through the Clot

13.50 - 14.10 O-29 - Rebecca Risman: Distinctive Structural and Biochemical Modulation of Internal and External Fibrinolysis

14.10 - 14.30 *Coffee and talk*



Session 7: Clinical II

Chairpersons: Anna-Marie Bloch-Munster and Anetta Undas

- 14.30 - 14.50 **Established investigator award** To be announced
- 14.50 - 15.10 O-30 - Ziyuan Niu: In silico Studies of Fibrinogen-PLA Interactions and Implications for Thrombosis
- 15.10 - 15.30 O-31 - Andrew Gosselin: Improved Techniques to Measure Blood Clot Structure and Stability as Indicators of Poor Outcome
- 15.30 - 15.50 O-32 - Hande Eyisoğlu: In vitro Flow Models for Arterial Thrombosis, Advantages and Shortcomings: a Systematic Review
- 15.50 - 16.00 *Introduction to social event* Nicoline Daugaard
- 16.15 - 17.30 *A walk in the park*
- 19.00 *Congress dinner at Restaurant Plates*

Thursday June 6

- 08.00 - 08.45 *Breakfast at the venue*

Session 8: Clot structure

Chairpersons: Matt Flick and Alexander Couzens

- 09.00 - 09.30 **State of the art** Szusza Bagoly: Plasma Fibrin Clots in Patients with Deficiencies
- 09.30 - 09.50 O-33 - Marlien Pieters: Results of a Proposed Standardized Method for Analysis of Fibrin Clots by Scanning Electron Microscopy
- 09.50 - 10.10 O-34 - Hande Eyisoğlu: Flow Affects the Structural and Mechanical Properties of the Fibrin Network in Plasma Clots
- 10.10 - 10.30 *Coffee and talk*
- 10.30 - 10.50 O-35 - Martin Guthold: Relationship between Fibrin Clot Structure and Fibrinogen and Thrombin Concentrations
- 10.50 - 11.10 O-36 - Nathan Hudson: What is the Diameter of a Fibrin Fiber?
- 11.10 - 11.30 O-37 - Yaseelan Palarasah: Immunoassay Specific for Complement Activation Split-product C3dg in Complex with Fibrinogen.
- 11.30 - 11.50 *Closing remarks* Moniek de Maat
- 11.50 - 13.00 *Lunch and goodbye*

