

# Programme

Sunday 28 September		
15:00 onwards	Hotel accommodation check-in open	Hotel lobby
16:00 - 18:30	Arrival and registration	Kerkyra Ballroom foyer
		(lobby level)
18:30 - 20:30	Welcome drinks and canape reception	La Veranda Restaurant

Monday 29 September		
07:30 - 08:45	Breakfast	Eptanissa Restaurant
08:00	Registration opens	Kerkyra Ballroom foyer
Session One	Fibrinogen – Clinical	Kerkyra Ballroom
08:45 - 09:00	Welcome and introduction	
	Prof Martin Guthold (IFRS)	
	Prof Helen Philippou (ISFP)	
	Co-chairs: TBC	
09:00 - 09:30	State of the art lecture 1	
	Ischaemia duration length increases fibrin film coverage on acute myocardial infarction thrombi Robert A S Ariëns Leeds Institute of Cardiovascular and Metabolic Medicine, University of Leeds, UK	
09:30 – 09:50	O-01 Plasma and tissue fibrin formation associates with severity of obesity and metabolic liver disease: 2-year follow-up after bariatric surgery Nadja Bødker Pedersen Unit for Thrombosis Research, Department of Clinical Biochemistry, University Hospital of Southern Denmark, Esbjerg, Denmark	
09:50 - 10:10	O-02 Plasma fibrin clot characteristics are affected by feminizing and masculinizing gender-affirming hormone therapy, but in opposite	

	directions Mette Bøgehave Department of Clinical Biochemistry, Esbjerg Hospital, University Hospital of Southern Denmark, Esbjerg, Denmark.	
10:10 - 10:30	Refreshments, exhibition, posters	Nausica Ballroom
10:30 - 10:50	O-03 Association of fibrin clot characteristics with development of ischemic stroke in patients with recently diagnosed type 2 diabetes Else Marie Bladbjerg Unit for Thrombosis Research, Department of Clinical Diagnostics, University Hospital of Southern Denmark, Esbjerg, Denmark	
10:50 - 11:10	O-04 Tissue transglutaminase drives fibrin β-Chain cross-linking: a novel fibrin modification observed in trauma patients Nana Kwame Kwabi Boateng Department of Pathobiology & Diagnostic Investigation, Michigan State University, East Lansing, MI, USA	
11:10 - 11:30	O-05 TRIGs trial: Does Tranexamic acid modulate the immune response in gastrointestinal surgery? Tammy Lam Australian Centre for Blood Diseases, Monash University, Australia	
11:30 - 11:50	O-06 <b>The association of HIV status and ART use with coagulation</b> <b>markers in adults living in the Western Cape Province</b> <b>Marlien Pieters</b> <i>North-West University, Faculty of Health Sciences, Centre of</i> <i>Excellence for Nutrition (CEN), Potchefstroom Campus, South Africa</i>	
11:50 - 13:00	Lunch, exhibition, posters	Nausica Ballroom
Session Two	Fibrinogen – Fundamental I	Kerkyra Ballroom
	Co-chairs: TBC	
13:00 - 13:45	IFRS outstanding senior investigator award lecture	
13:45 – 14:05	O-07 Inside Fibrin Clots Red Blood Cell Aggregation Induces Platelet- Independent Clot Contraction John W. Weisel Department of Cell and Developmental Biology, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania, USA	
14:05 – 14:25	O-08 Permanent lengthening of fibrin fibres is present from low strains and only slightly dependent on the αC-region Tímea Feller Leeds Institute of Cardiovascular and Metabolic Medicine, Leeds, UK	
14:25 - 14:40	Flash talks by Best of the Best poster authors	
	P02	

	Admission D-Dimer Levels Can Help Predict Outcomes in Acute Ischemic Stroke Patients Treated with Intravenous Thrombolysis Zsuzsa Bagoly Lendület "Momentum" Hemostasis and Stroke Research Group of the Hungarian Academy of Sciences, Debrecen, Hungary P03 Relationship between Fibrin Clot Structure and Fibrinogen and Thrombin Concentrations Stephen Baker Department of Physics, Wake Forest University, Winston-Salem, NC, USA P18 Alterations in pathways of complement and platelet signalling are evident following proteome profiling of plasma from patients with Vaccine Induced Immune Thrombotic Thrombocytopenia (VITT) Charithani B Keragala The Australian Centre for Blood Diseases, Central Clinical School, Monash University, Melbourne, Victoria, Australia P21 Platelet additive solutions containing phosphates and used in blood component therapies alter fibrin clot formation and delay fibrinolytic degradation Gael B Morrow School of Pharmacy, Applied Sciences & Public Health, Robert Gordon University, Aberdeen, UK P25 Comparative Study Reveals Superiority of New Fibrinogen Test Over Clauss Fibrinogen Method in detecting hypofibrinogenemia in liver disease San Pun AiMorphous Health, Basel, Switzerland	
14:40 - 15:00	Refreshments, exhibition, posters	Nausica Ballroom
15:00 – 15:20	O-09 Conformational protein binders to the fibrinogen αC-region increase clot contractability and reduce <i>in-vivo</i> venous thrombosis Julia S. Gauer Discovery and Translational Science Department, Institute of Cardiovascular and Metabolic Medicine, University of Leeds, Leeds, UK	
15:20 – 15:40	O-10 Structural mechanisms of forced unfolding of double-stranded fibrin oligomers Valeri Barsegov Department of Chemistry, University of Massachusetts, Lowell, USA	
15:40 - 16:00	O-11 Multiscale Modeling of the Structure and Dynamics of Soluble Fibrin	

	<b>Georgios Kementzidis</b> Stony Brook University, Department of Applied Mathematics and Statistics, Stony Brook, NY, USA	
16:00	Update on evening social activity	
16:00 - 17:50	Free time	
19:00 - 20:30	Informal dinner	Eptanissa Restaurant

Tuesday 30 September		
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07:30 - 08:45	Breakfast	Eptanissa Restaurant
08:00	Registration opens	Kerkyra Ballroom foyer
Session Thre	ee   Lysis - Clinical	Kerkyra Ballroom
09:00	Welcome day two	
	Co-chairs: TBC	
09:00 - 09:45	ISFP Award lecture	
	Denis Vivien	
	Award for outstanding contributions to the field of Fibrinolysis and Proteolysis	
09:45 - 10:05	0-12	
	Dietary intake of zinc in humans regulates platelet stores and	
	Nicola J Mutch	
	School of Medicine, Medical Sciences and Nutrition, Institute of	
	Medical Sciences, Foresterhill, Aberdeen, UK	
10:05 - 10:25	0-13	
	Effect of hemostasis polymorphisms on the outcome of acute	
	ischemic stroke thrombolysis treatment	
	University of Debrecen; Faculty of Medicine, Department of	
	Laboratory Medicine, Division of Clinical Laboratory Sciences,	
	Debrecen, Hungary	
10:25 - 10:45	Refreshments, exhibition, posters	Nausica Ballroom
10:45 - 11:05	0-14	
	Human plasma kallikrein and urokinase as mediators of crosstalk	
	Guacyara Motta	
	Departamento de Bioquímica and 1Departamento de Biofísica,	
	Escola Paulista de Medicina, UNIFESP, São Paulo, SP, Brasil	
11:05 - 11:25	0-15	
	CRY1-HIF-1 $\alpha$ Crosstalk Modulates Circadian Oscillation of PAI-1:	
	Dysregulation	
	Thomas Kietzmann	
	Faculty of Biochemistry and Molecular Medicine, University of	
	Ouiu, Ouiu, Finiana	
11:25 – 11:45	0-16	
1	innipiting tiprinolysis reduces migratory capacity of neutrophils	1

	through clots Thomas L. C. Palmer-Dench Discovery and Translational Science Department, Institute of Cardiovascular and Metabolic Medicine, University of Leeds, Leeds, UK	
11:45 - 13:00	Lunch, exhibition, posters	Nausica Ballroom
Session Four	Lysis – Fundamental	Kerkyra Ballroom
	Co-chairs: TBC	
13:00 - 13:30	State of the art lecture 2	
	Urokinase plasminogen activator deficiency delays the development of obesity and metabolic sequelae Matthew J. Flick Department of Pathology and Laboratory Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA	
13:30 – 13:50	O-17 Role of plasminogen in acetaminophen-induced acute liver injury Dayita Banerjee Department of Pathobiology & Diagnostic Investigation, Michigan State University, East Lansing, MI, USA	
13:50 – 14:10	O-18 Investigating Thrombolysis in Aged Mice with Varying Leptomeningeal Collaterals Nadine Felizitas Binder Djavad Mowafaghian Centre for Brain Health, Department of Psychiatry, Faculty of Medicine, University of British Columbia, Vancouver, Canada	
14:10 - 14:30	Refreshments, exhibition, posters	Nausica Ballroom
14:30 – 14:50	O-19 Fibrinogen promotes Conversion of tPA into Its More Active Two- Chain Form and Initiation of Fibrinogenolysis: A Comparative Study with TNK Robert L. Medcalf Molecular Neurotrauma & Haemostasis Laboratory, Australian Centre for Blood Diseases, School of Translational Medicine, Monash University, Australia	
14:50 – 15:10	O-20 Oral 20 Fibrinolytic Breakdown of Staphylococcus aureus Fibrin Biofilms Safae Oukrich Department of Medical Microbiology & Infectious Diseases, Erasmus University Medical Center, Rotterdam, The Netherlands	
15:10 - 15:30 15:30 - 15:50	O-21 Relationships between Plasma Clot Structure, Lysis Time, and Fibrinogen and Thrombin Concentrations Martin Guthold Department of Physics, Wake Forest University, Winston-Salem, NC, USA	
	The Halo Fluorescence Fibrinolysis (HoFF) Test Identifies	

	Hypofibrinolytic Phenotypes in Patients with Sepsis Zikou Liu Molecular Neurotrauma & Haemostasis Laboratory, Australian Centre for Blood Diseases, School of Translational Medicine, Monash University, Australia	
15:50	Update on evening social activity / dinner	
16:00 - 17:50	Free time	
19:00 - 20:30	Informal dinner	Eptanissa Restaurant

Wednesday 1 October		
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07:30 - 08:45	Breakfast	Eptanissa Restaurant
08:00	Registration opens	Kerkyra Ballroom foyer
Session Five	Fibrinogen – Fundamental II	Kerkyra Ballroom
09:00	Welcome day three	
	Co-chairs: TBC	
09:00 - 09:30	IFRS outstanding junior investigator award lecture 25+5	Kerkyra Ballroom
09:30 – 09:50	O-23 A functional study of fibrinogen with extended alpha chains in developmental hemostasis Leonie Konopka Department of Genetic Medicine and Development, Faculty of Medicine, University of Geneva, Switzerland	
09:50 - 10:10	O-24 Inhibiting Fibrin Polymerization with a GPRP-Dextran Conjugate as a Novel Approach to Intravenous Anticoagulant Therapy Rustem I. Litvinov Department of Cell and Developmental Biology, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania, USA	
10:10 - 10:30	Refreshments, exhibition, posters	Nausica Ballroom
10:30 - 11:00	State of the art lecture 3How Does Fibrin Gel? Revisiting Fibrin's PolymerizationMechanismsNathan E. HudsonDepartment of Physics, East Carolina University, Greenville, USA	
11:00 - 11:20	O-25 <b>Targeting the fibrinogen αC-region with Affimers to modulate</b> <b>fibrin clot structure and function</b> <b>Helen R. McPherson</b> <i>Discovery and Translational Science Department, Institute of</i> <i>Cardiovascular and Metabolic Medicine, University of Leeds, UK</i>	
11:20 - 11:40	O-26 Self-assembly of fibrinogen blends into nanofibrous composite scaffolds	

	Dorothea Brüggemann Hochschule Bremen - City University of Applied Sciences, Bremen, Germany	
11:40 - 12:00	O-27 <b>The interaction of fibrin with endothelial N-cadherin promotes</b> <b>fibrin-dependent angiogenesis</b> <b>Leonid Medved</b> <i>Center for Vascular and Inflammatory Diseases and Department of</i> <i>Biochemistry and Molecular Biology, University of Maryland School</i> <i>of Medicine, Baltimore, MD, USA</i>	
12:00 - 13:00	Lunch, exhibition, posters	Nausica Ballroom
Session Six	Fibrinogen & FXIII	Kerkyra Ballroom
	Co-chairs: TBC	
13:00 - 13:30	State of the art lecture 4	
	Dose-dependent role of fibrin polymerization in early acetaminophen-induced liver injury James P. Luyendyk Department of Pathobiology & Diagnostic Investigation, Michigan State University, East Lansing, USA	
13:30 – 13:50	O-28 Minimum Factor XIII Concentration Required for Haemostasis in a Bleeding Model Verena Schroeder Department for BioMedical Research, University of Bern, Bern, Switzerland	
13:50 – 14:10	O-29 Modeling Human Clot Biology: Impact of Cellular Content on Fibrin Crosslinking Kirk C. Hansen Department of Biochemistry and Molecular Genetics, University of Colorado, USA	
14:10 - 14:30	Refreshments, exhibition, posters	Nausica Ballroom
Session Seve	en   Désiré Collen award symposium (ISFP)	Kerkyra Ballroom
14:30 - 14:50	DC-01 New MRI Theranostic Agent for Microthrombi in Ischemic Stroke Audrey Picot Normandie Université, UNICAEN, INSERM, PhIND (Physiopathology and Imaging of Neurological Disorders) Institut Blood and Brain @ Caen-Normandie, Cyceron, Caen, France	
14:50 – 15:10	DC-02 Internal lysis of contracted clots Rebecca A Risman Rutgers University, Department of Biomedical Engineering, 599 Taylor Road, Piscataway, USA	
15:10 – 15:30	DC-03 FXIIIA and TAFI binding Affimers as molecular tools to modulate fibrinolysis Rui-Gang Xu	

	Discovery and Translational Science Department, Leeds Institute of Cardiovascular and Metabolic Medicine, University of Leeds, UK	
15:30 – 15:50	DC-04 Structural and functional determinants of tranexamic acid efficacy in fibrinolysis inhibition Balog Virag K Department of Biochemistry and Molecular Biology, Semmelweis University, Budapest, Hungary	
15:50 – 16:10	DC-05 Evidence of a second cleavage site in tissue plasminogen activator leading to enhanced thrombolytic activity Simon Lebatard University of Caen Normandie, Inserm, Normandie University, PhIND UMR-S 1237, BB@C Institute, GIP Cyceron, F-14000 Caen, France	
16:10	Update on evening social activity	
16:10	Free time	
19:00 - 22:00	Conference gala dinner	Poolside

### Thursday 2 October

07:30 - 08:45	Breakfast	Eptanissa Restaurant
08:00	Registration opens	Kerkyra Ballroom foyer
Session Eigh	t   New Techniques & Diagnostics	Kerkyra Ballroom
09:00	Welcome day four	
	Co-chairs: TBC	
09:00 - 09:30	State of the art lecture 5	Kerkyra Ballroom
	Enhanced Structural Imaging of Fibrin Networks via Expansion Microscopy Oleg V. Kim Department of Biomedical Engineering and Mechanics, Fralin Biomedical Research Institute, Virginia Tech, Blacksburg, USA	
09:30 – 09:50	O-30 Biosensors for monitoring thrombin and FXIIIa activity as fibrin accumulates on growing whole blood clots under flow. Scott L Diamond Institute for Medicine and Engineering, University of Pennsylvania, Philadelphia, PA, USA	
09:50 – 10:10	O-31 Arterial Shear Rate Determines the Structure and Mechanical Properties of Clots Formed in a Microfluidic Thrombosis Model Hande Eyisoylu Department of Haematology, Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands	
10:10 - 10:30	Refreshments, exhibition, posters	Nausica Ballroom

10:30 - 11:00	State of the art lecture 6	
	Fibrin in neurological diseases: From mechanisms to clinical trials	
	Katerina Akassoglou	
	Gladstone Institutes, University of California San Francisco, USA	
11:00 - 11:20	0-32	
	Identifying the Relationship Between Plasma Proteomics, Patient	
	Outcome, and Clot Mechanics	
	Andrew Gosselin	
	Rutgers University Department of Biomedical Engineering,	
	Piscataway, NJ, USA	
11:20 - 11:40	0-33	
	Quantitation of Tranexamic Acid Levels in Plasma Samples from	
	Patients Undergoing Surgery Involving Cardiopulmonary Bypass	
	Paul V Kim	
	Departments of Medicine and Biochemistry. McMaster University.	
	Hamilton, ON, Canada	
11:40 – 12:00	0-34 Desidential Terror Manufality with Marshing Learning. The Dala of	
	Fredicting Trauma Mortality with Machine Learning – The Role of	
	Rutgers University Department of Biomedical Engineering,	
	Piscataway, NJ USA	
12:10 - 12:10	Closing remarks	
12:10 - 13:00	Lunch and farewell	Nausica Ballroom
12:00	Hotel accommodation check-out	

#### POSTERS

#### Poster 1

### TAFI downregulation prevents fibrinolysis shutdown and improves disease severity in SARS-CoV-2-infected K18-hACE2 mice

<u>Roberto Aiolfi</u><sup>1</sup>, Antonella Zampolli<sup>1</sup>, Hiroshi Deguchi<sup>1</sup>, Jose A. Fernández<sup>1</sup>, Angel Gandarilla<sup>1</sup>, Juan Carlos de la Torre<sup>2</sup>, Laurent O. Mosnier<sup>1</sup>

<sup>1</sup>Department of Translational Medicine and <sup>2</sup>Department of Microbiology and Immunology, The Scripps Research Institute, La Jolla, CA, USA

#### Poster 2 (flash talk)

## Admission D-Dimer Levels Can Help Predict Outcomes in Acute Ischemic Stroke Patients Treated with Intravenous Thrombolysis

Balázs Kis<sup>1,2</sup>, Rita Orbán-Kálmándi<sup>2,3</sup>, Linda Lóczi<sup>2,4</sup>, Dóra Bomberák<sup>2,3</sup>, Rebeka Hodossy-Takács<sup>2,3</sup>, István Szegedi<sup>2,5</sup>, Attila Nagy<sup>6</sup>, Zsófia Anna Kádár<sup>2,3</sup>, Nikolett Vasas<sup>1</sup>, Ervin Berényi<sup>1</sup>, George Harston<sup>7</sup>, László Csiba<sup>4,5</sup>, László Oláh<sup>5</sup>, <u>Zsuzsa</u> Bagoly<sup>2,3</sup>

<sup>1</sup>University of Debrecen; Faculty of Medicine, Department of Radiology, Debrecen, Hungary, Kálmán Laki Doctoral School, Egyetem square 1, 4032 Debrecen, Hungary

<sup>2</sup>Lendület "Momentum" Hemostasis and Stroke Research Group of the Hungarian Academy of Sciences, 1 Egyetem square, 4032 Debrecen, Hungary
<sup>3</sup>University of Debrecen; Faculty of Medicine, Department of Laboratory Medicine, Division of Clinical Laboratory Sciences, 1 Egyetem square, 4032 Debrecen, Hungary
<sup>4</sup>HUN-REN-DE Cerebrovascular Research Group, 1 Egyetem square, 4032 Debrecen, Hungary
<sup>5</sup>University of Debrecen; Faculty of Medicine, Department of Neurology, 1 Egyetem square, 4032 Debrecen, Hungary
<sup>6</sup>University of Debrecen; Faculty of Health Sciences, Department of Preventive Medicine, 26 Kassai street, 4012 Debrecen, Hungary
<sup>7</sup>Brainomix Ltd., Seacourt Tower, Botley, Oxford OX2 OJJ, UK

Poster 3 (flash talk)

**Relationship between Fibrin Clot Structure and Fibrinogen and Thrombin Concentrations** Zezhong Zhang<sup>1</sup>, <u>Stephen Baker</u><sup>1</sup>, Keith Bonin<sup>1</sup>, Martin Guthold<sup>1</sup> <sup>1</sup> Department of Physics, Wake Forest University, Winston-Salem, NC 27109, USA

#### Poster 4

#### Modeling the effect of tension on fibrinolysis

<u>Brittany Bannish</u><sup>1</sup>, Roukayatou Ouedraogo<sup>1</sup>, Austin Segrest<sup>1</sup>, Valerie Tutwiler<sup>2</sup>, Nathan E. Hudson<sup>3</sup> <sup>1</sup>Department of Mathematics and Statistics, University of Central Oklahoma, Edmond, OK 73034, USA. <sup>2</sup>Department of Biomedical Engineering, Rutgers University, Piscataway, NJ 08854, USA. <sup>3</sup>Department of Physics, East Carolina University, Greenville, NC 27858, USA.

#### Poster 5

#### Investigation of the effect of ethanol on clot lysis in acute ischemic stroke patients and healthy volunteers

<u>Dóra Bomberák</u><sup>1,2</sup>, Rita-Orbán Kálmándi<sup>1,2</sup>, Linda Lóczi<sup>1,2</sup>, Rebeka Hodossy-Takács<sup>1,2</sup>, Anna Zsófia Kádár<sup>1</sup>, Tamás Árokszállási<sup>3</sup>, István Szegedi<sup>2,3</sup>, László Csiba<sup>3</sup>, László Oláh<sup>3</sup>, Zsuzsa Bagoly<sup>1,2</sup>

<sup>1</sup>University of Debrecen; Faculty of Medicine, Department of Laboratory Medicine, Division of Clinical Laboratory Sciences, 1 Egyetem tér, 4032 Debrecen, Hungary

<sup>2</sup>Lendület "Momentum" Hemostasis and Stroke Research Group of the Hungarian Academy of Sciences, 1 Egyetem tér, 4032 Debrecen, Hungary

<sup>3</sup>University of Debrecen; Faculty of Medicine, Department of Neurology, 1 Egyetem tér, 4032 Debrecen, Hungary

#### Poster 6

#### **Establishing Reference Intervals for Fibrin Clot Measures**

<u>M. Vakur Bor</u><sup>1,2,\*</sup>, Nicoline Daugaard <sup>1,2</sup>, Anette Larsen <sup>1,2</sup>, Else-Marie Bladbjerg <sup>1,2</sup> <sup>1</sup> Department of Clinical Biochemistry, University Hospital of Southern Denmark, Esbjerg, Denmark, <sup>2</sup>Unit for Thrombosis Research, Department of Regional Health Research, University of Southern Denmark, Esbjerg, Denmark

#### Poster 7

### A novel missense variant (FGG c.875A>C, p.Lys292Thr) in the gamma chain of fibrinogen causing congenital dysfbrinogenemia in a asymptomatic patient with Factor V Leiden mutation

Mustafa Vakur Bor<sup>1,2,\*</sup>, Julie Brogaard Larsen<sup>3,4</sup>, Inge SøkildePedersen<sup>5,6</sup>

<sup>1</sup> Department of Clinical Biochemistry, University Hospital of Southern Denmark, Esbjerg, Denmark, <sup>2</sup>Unit for Thrombosis Research, Department of Regional Health Research, University of Southern Denmark, Esbjerg, Denmark, <sup>3</sup>Thrombosis and Haemostasis Research Unit, Department of Clinical Biochemistry, Aarhus University Hospital, Aarhus, Denmark, <sup>4</sup>Department of Clinical Medicine, Aarhus University, Aarhus, Denmark, <sup>5</sup>Department of Clinical Medicine, Aalborg University, Aalborg, Denmark, <sup>6</sup>Molecular Diagnostics, Aalborg University Hospital, Aalborg, Denmark,

#### Poster 8

#### Endothelial membrane-anchored serine protease testisin in the resolution of angiogenesis

Marguerite S. Buzza and Toni M. Antalis

Center for Vascular and Inflammatory Diseases and Department of Pharmacology and Physiology, University of Maryland School of Medicine, 800 West Baltimore Street, Baltimore, MD 21201, USA.

#### Poster 9

#### Congenital Fibrinogen Deficiencies: Not So Rare

Alexander Couzens<sup>1,2</sup>, Marguerite Neerman-Arbez<sup>1,2\*</sup>

<sup>1</sup> Department of Genetic Medicine and Development, Faculty of Medicine, University of Geneva, Switzerland

<sup>2</sup> Institute of Genetics and Genomics in Geneva (iGE3), Geneva, Switzerland

#### Poster 10

#### Exploring the Functional Role of Tandem Repeats in Fibrin(ogen) aC Region

<u>Caela Flake</u><sup>1</sup>, Helen R. McPherson<sup>2</sup>, Robert A. S. Ariëns<sup>2</sup>, Nathan E. Hudson<sup>3</sup>, Hope Maultsby<sup>1</sup>, Lourdes Lopez<sup>1</sup>, Martin Guthold<sup>1</sup>

<sup>1</sup> Department of Physics, Wake Forest University, 1834 Wake Forest Rd, Winston-Salem, NC 27109, USA

<sup>2</sup> Discovery and Translational Science Department, Institute of Cardiovascular and Metabolic Medicine, University of Leeds, Leeds, LS2 9LU, UK.

<sup>3</sup> Department of Physics, East Carolina University, E 5th St, Greenville, NC 27858

#### Poster 11

#### Fibrin(ogen) drives the host thrombotic response in septicemia

Catherine Lapointe, PhD, Woosuk S. Hur, PhD, Kadri Kangro, PhD, Alisa S. Wolberg, PhD and <u>Matthew J. Flick, PhD</u>. Department of Pathology and Laboratory Medicine, UNC Blood Research Center, UNC School of Medicine, University of North Carolina at Chapel Hill, NC, USA.

#### Poster 12

#### Novel transgenic zebrafish to study hemostasis gene regulation during development

Daniel Gil Fraga<sup>1,2</sup>, Leonie Konopka<sup>1,2</sup>, Hannah Butterworth<sup>1,2</sup>, Alexander Couzens<sup>1,2</sup>, Corinne Di Sanza<sup>1,2</sup>, Marguerite Neerman-Arbez<sup>1,2</sup> and Richard J. Fish<sup>1,2\*</sup>.

<sup>1</sup> Department of Genetic Medicine and Development, Faculty of Medicine, University of Geneva, Switzerland <sup>2</sup>Institute of Genetics and Genomics in Geneva (iGE3), Geneva, Switzerland

#### Poster 13

### CRYOFIBRINIGENEMIA: Molecular insights on the pronounced increase in fibrin solubility in plasma and fibrinogen solutions by albumin

<sup>1</sup>Adam Hansen, <sup>2</sup>Dennis K. Galanakis, <sup>1</sup>Miriam Rafailovich <sup>1</sup>Department of Material Science, <sup>2</sup>Department of Pathology, Stony Brook University, NY, USA

#### Poster 14

Characterizing the Impact of Transfusion Products on Blood Clot Failure <u>Andrew Gosselin</u><sup>1</sup>, Julie Goswami<sup>2,3</sup>, Valerie Tutwiler<sup>1</sup> *1- Rutgers University, Department of Biomedical Engineering, 599 Taylor Rd., Piscataway, NJ, USA 08854*  2- Rutgers Robert Wood Johnson Medical School, Department of Surgery, Division of Acute Care Surgery, 125 Paterson Street, Suite 4100, New Brunswick, NJ, USA 08901

3- Rutgers Acute Care Surgery Research Laboratory (RASR), 125 Paterson Street, Suite 4100, New Brunswick, NJ, USA 08901

#### Poster 15

Importance of Fibrinogen, D-dimers and thrombocytopenia in malaria complicated by *Plasmodium vivax* <u>Miriam Elena Cantero</u><sup>1,2</sup>; María Fernanda Yasnot <sup>1</sup>; María Camila Velasco <sup>1</sup>; Yuranis Garcia<sup>1</sup> 1. Microbiological and Biomedical Research Group of Cordoba, Faculty of Health Sciences, Department of Bacteriology. University of Cordoba, Colombia.

2. Microbiological and Biomedical Research Group of Cordoba, Faculty of Basic Sciences, Department of Chemistry. Universidad de Córdoba, Carrera 6 No. 77- 305 Montería - Córdoba, Colombia. Postal Code: 230002

#### Poster 16

Low Density Lipoprotein (LDL) Significantly Alters Fibrin Clot Structural Properties and Lysis Time Arezoo Nameny<sup>1</sup>, Austin Desmet<sup>2</sup>, Richard Pope<sup>1</sup>, Ali Daraei<sup>1</sup>, Martin Guthold<sup>1\*</sup>

<sup>1</sup> Department of Physics, Wake Forest University, Winston-Salem, NC 27109, United States

<sup>2</sup> Department of Biology, Wake Forest University, Winston-Salem, NC 27109, United States

#### Poster 17

Individual crosslinked fibrin fibers behave differently under cyclic stress-strain manipulation than whole fibrin clots <u>Christine Helms</u>, Nathan Gaid *University of Richmond, Richmond, VA, USA*.

#### Poster 18 (flash talk)

Alterations in pathways of complement and platelet signalling are evident following proteome profiling of plasma from patients with Vaccine Induced Immune Thrombotic Thrombocytopenia (VITT)

<u>Charithani B Keragala</u><sup>1,2,3</sup>, Samantha J Emery-Corbin<sup>4,5</sup>, Sam WZ Olechnowicz<sup>4,5</sup>, Jumana Yousef<sup>4,5</sup>, Rory Bowden<sup>4,5</sup>, Chantal Attard, Laura F Dagley<sup>4,5</sup>, Robert L Medcalf<sup>1</sup>, Paul Monagle<sup>6,7,8,9</sup>, Sanjeev Chunilal<sup>2,3</sup>, Huyen Tran<sup>1,11</sup>, James McFadyen<sup>1,10,11,12</sup>, Hannah Stevens<sup>1,10,11</sup>, Heidi Ho<sup>1</sup>

- 1. The Australian Centre for Blood Diseases, Central Clinical School, Monash University, Melbourne, Victoria, Australia.
- 2. The School of Clinical Sciences, Monash Health, Monash University, Clayton, Victoria, Australia.
- 3. Department of Haematology, Monash Health, Clayton, Victoria, Australia
- 4. Division of Advanced Technology and Biology Division, Walter and Eliza Hall Institute of Medical Research, Parkville, Victoria, Australia.
- 5. Department of Medical Biology, The University of Melbourne, Parkville, Victoria, Australia.
- 6. Department of paediatrics, University of Melbourne, Melbourne, Victoria, Australia
- 7. Haematology Research, Murdoch Children's Research Institute, Melbourne, Victoria, Australia.
- 8. Clinical Haematology, Royal Children's Hospital, Parkville, Victoria, Australia.
- 9. Kids Cancer Centre, Sydney Children's Hospital, Randwick, New South Wales, Australia.
- 10. Atherothrombosis and Vascular Biology Program, Baker Heart and Diabetes Institute, Melbourne, Victoria, Australia.

- 11. Department of Haematology, Alfred Hospital, Melbourne, Victoria, Australia.
- 12. Baker Department of Cardiometabolic Health, the University of Melbourne, Parkville, Victoria, Australia.

#### Poster 19

#### Divergent Roles of Phosphate and Chloride Salts in Fibrinogen Nanofiber Self-Assembly

<u>Antoine Eyram Kwame</u><sup>1</sup>, Aparna Sai Malisetty<sup>2</sup>, Lucio Colombi Ciacchi<sup>2</sup>, Susan Köppen<sup>2</sup>, Dorothea Brüggemann<sup>1</sup> <sup>1</sup> Biophysics and Applied Biomaterials, Hochschule Bremen - City University of Applied Sciences, Bremen, Germany <sup>2</sup> Hybrid Materials Interfaces Group, Faculty of Production Engineering, University of Bremen, Bremen, Germany

#### Poster 20

#### Ionic Shielding of Electrostatic Interactions of Fibrinogen during Aggregate Formation

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#### Poster 21 (flash talk)

### Platelet additive solutions containing phosphates and used in blood component therapies alter fibrin clot formation and delay fibrinolytic degradation

Emma Bailly<sup>1,2</sup>, Siobhan Gordon<sup>2</sup>, Nicola Curry<sup>3</sup>, Mike Laffan<sup>4</sup>, Thomas Woolley<sup>5,6</sup>, <u>Gael B Morrow</u><sup>2</sup> <sup>1</sup>Institute of Technology, University Clermont Auvergne, Clermont-Ferrand, France <sup>2</sup>School of Pharmacy, Applied Sciences & Public Health, Robert Gordon University, Aberdeen, United Kingdom <sup>3</sup>Radcliffe Department of Medicine, University of Oxford, Oxford, United Kingdom <sup>4</sup>Centre for Haematology, Imperial College London, London, United Kingdom <sup>5</sup>Faculty of Health, University of Plymouth, Plymouth, United Kingdom <sup>6</sup>Defence Medical Services, Lichfield, United Kingdom

#### Poster 22

#### **Going Smaller: Passive Microrheology to Study the Dynamic Microenvironment During Fibrin Formation and Lysis** <u>Daniel S. Norris</u><sup>2</sup>, Karen Hemmings<sup>1</sup>, Robert A.S. Ariëns<sup>1</sup>, Tímea Feller<sup>1</sup>, and Simon D. A. Connell<sup>2</sup> <sup>1</sup>Leeds Institute of Cardiovascular and Metabolic Medicine, LS2 9JT, UK; <sup>2</sup>Molecular and Nanoscale Physics, Leeds, LS2 9JT, UK.

#### Poster 23

#### TAFIa-Mediated Inhibition of Fibrinolysis: Insights from a Novel Plasmin Generation Assay

<u>Kieran Pocknell</u><sup>1</sup>, Ilaria De Simone<sup>2</sup>, Samia Tufaha<sup>1</sup>, Bas de Laat<sup>2</sup>, Claire S Whyte<sup>1</sup>, Dana Huskens<sup>2</sup>, Nicola J Mutch<sup>1</sup> <sup>1</sup>Aberdeen Cardiovascular and Diabetes Centre, School of Medicine, Medical Sciences and Nutrition, Institute of Medical Sciences, University of Aberdeen, Aberdeen, UK <sup>2</sup>Synapse Research Institute, Maastricht, The Netherlands

#### Poster 24

The physical properties of fibrin(ogen) matrices deposited on the surface of biomaterials control macrophage fusion <u>Nataly Podolnikova<sup>1</sup></u>, Arnat Balabiyev<sup>1</sup>, Woosuk S. Hur<sup>2</sup>, Matthew Flick<sup>2</sup>, Tatiana Ugarova<sup>1</sup> <sup>1</sup> School of Life Sciences, Arizona State University, USA, Tempe, AZ 85287, and the <sup>2</sup> University of North Carolina, USA, Chapel Hill, NC 27599

Poster 25 (flash talk)

### Comparative Study Reveals Superiority of New Fibrinogen Test Over Clauss Fibrinogen Method in detecting hypofibrinogenemia in liver disease

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#### Poster 26

The role of surfaces in non-thrombogenic clot formation: initiation and prevention Adam Hansen, Giorgos Kementzidis, Dennis Galanakis, Jawaad Sheriff, Yuefan Deng, <u>Miriam Rafailovich</u> Stony Brook University, Stony Brook, NY 11794-2275 USA Volodymyr Chernyshenko, Daria Korolova, Department of Protein Structure and Function, Palladin Institute of Biochemistry of NAS of 16 Ukraine, Kyiv, Ukraine

#### Poster 27

#### Low-field fast field-cycling NMR relaxometry to determine fibrin clot microstructure

Madeleine Rhodes<sup>1\*</sup>, NJ Mutch<sup>1</sup>, and Lionel M. Broche<sup>1</sup>

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#### Poster 28

Automated Computational Analysis of Fibrin Network Morphology in Scanning Electron Microscopy Images of Clots Abmael Oliveira, <u>Rebecca Risman</u>\*, Mark Pierce, Valerie Tutwiler Rutgers University, Department of Biomedical Engineering, 599 Taylor Road, Piscataway NJ, USA 08854

#### Poster 29

#### Functional and molecular characteristics of genetic variants in inherited fibrinogen disorders

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#### Poster 30

Role of Fibrin(ogen) in Regulation of Thrombin Generation <u>Anastasiia V. Udovenko</u>\*, Yevhen M. Makogonenko, Volodymyr O. Chernyshenko Palladin Institute of Biochemistry, NAS of Ukraine, Kyiv, Ukraine.

Poster 31

Structural instability of the upper surface of the fibrinogen multilayer contributes to its nonadhesive properties

Valeryi K. Lishko, Nataly P. Podolnikova, Aibek Mursalimov and <u>Tatiana P. Ugarova</u> School of Life Sciences, Arizona State University, USA, Tempe, AZ 85287

#### Poster 32

#### Direct oral anticoagulants differentially alter susceptibility to fibrinolysis

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#### Poster 33

### Elevated FVIIa-AT is associated with more compact fibrin clot networks and impaired fibrinolysis in patients with acute ischemic stroke: impact on stroke severity

Marek Kachnic<sup>1</sup>, Martyna Matysiewicz<sup>1</sup>, Joanna Natorska<sup>2,3</sup>, Anetta Undas<sup>2,3</sup>, \*<u>Michał Ząbczyk<sup>2,3</sup></u>

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#### Poster 34

Higher citrullinated histone H3 is associated with hypofibrinolysis in patients following deep-vein thrombosis who developed postthrombotic syndrome

Julia Krupa-Zabiegała<sup>1</sup>, Patryk Stanisław Michel<sup>1</sup>, Konrad Stępień<sup>2,3</sup>, Joanna Natorska<sup>2,4</sup>, Anetta Undas<sup>2,4</sup>, \*<u>Michał</u> Zabczyk<sup>2,4</sup>

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#### Poster 35

### The Effect of Three Candidate Novel Variants in *FGB* and *FGG* Donor Splice-Sites on transcription, expression, and function

<u>Liyang Zhou</u><sup>a</sup>, Haoyang Wu<sup>a</sup>, Wenman Wu<sup>a</sup>, Jing Dai<sup>a</sup>, Xuefeng Wang<sup>a</sup>, Qiulan Ding<sup>a</sup> a, Department of Laboratory Medicine, Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, Ching

#### Poster 36

#### Assessment of 9 Recurrent Heterozygous Fibrinogen Variants identified in Thrombophilia Panel

Liyang Zhou<sup>a</sup>, Haoyang Wu<sup>a</sup>, Wenman Wu<sup>a</sup>, Jing Dai<sup>a</sup>, Xuefeng Wang<sup>a</sup>, Qiulan Ding<sup>a</sup> a, Department of Laboratory Medicine, Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China