



## Basic Vascular Science at the Langenbeck-Virchow-House, Luisenstr. 58/59, 10117 Berlin

23<sup>rd</sup> – 24<sup>th</sup> February 2024

### BVS Morning Workshop 9:00-12:30 Friday 23<sup>rd</sup> Feb Advances in -Omics technology

Johannes Müller-Reif Max Planck Institute of Biochemistry, München, Germany  
Discovery proteomics in clinical research

Florian Heigwer University of Applied Sciences, Bingen, Germany  
Exploiting cell-to-cell heterogeneity in functional genomics: single-cell analysis and machine learning shed new light on gene-gene interactions

Christoph König NanoString Technologies, Berlin, Germany  
Nanostring spatial solutions: Multi-analyte assays with highest flexibility and accuracy

### Friday 23<sup>rd</sup> Feb and Saturday 24<sup>th</sup> Feb morning meeting

#### DAY 1 WELCOME

##### 13:40-15:40 Session 1 Clinical challenges

13:40-14:10 **Keynote lecture: Long-term outcomes of venous thrombosis**

**Erik Klok, Netherlands**

14:10-14:30 **Keynote lecture: Different aetiological background of aortic pathologies**

**Maani Hakimi, Switzerland**

14:30-14:35 Development and assessment of a pathway to investigate underlying cause for acute limb ischaemia

Nicole Tay, UK

14:35-14:40 Infective Native Aortic Aneurysms – Pathogenic and imaging considerations and retrospective single-centre results

Juan Antonio Celi de la Torre, Switzerland

14:40-14:45 Circulating Cell-Free DNA in Plasma of Patients with Abdominal Aortic Aneurysm – A Potential Biomarker?

Carolin Kaduk, Germany

14:45-14:50 miRNA expression before and after EVAR – biomarkers for aortic remodeling and endoleak?

Xinji Tan, Germany

14:50-14:55 Long-term stroke reducing drug therapy following carotid endarterectomy (CEA)

Daryll Baker, UK

14:55-15:00 Elevated sgp130 as a biomarker for diabetic peripheral arterial disease

Mark Portou, UK

15:00-15:05 Patient acceptability and adherence to the COMPASS trial drug recommendations following symptomatic carotid endarterectomy

Lucinda Cruddas, UK

15:05-15:10 Symptomatic Carotid Webs – a case series of endarterectomy from a tertiary referral unit

Daniel Curley, UK

15:10-15:15 Using sirolimus to treat patients with congenital vascular malformations: Improving essential remote patient monitoring

Nicholas Evans, UK

15:15-15:20 The multi-disciplinary team: EndoAVFs

Amy Bolsworth, UK

15:20-15:50 PANEL DISCUSSION

##### 16:10-17:30 Session 2 Advanced imaging and engineering

16:10-16:30 **Keynote lecture: Recent advances in vascular imaging and blood flow analysis**

**Adrien Desjardins, UK**

16:30-16:40 Photoacoustic imaging demonstrates differences in microvasculature in peripheral artery disease compared to controls: results of a pilot study

Conrad Von Stempel, UK

16:40-16:50 **Development of a flexible ultrasonic patch for continuous ambulatory monitoring of dialysis access blood flow**

**Matthew Bartlett, UK**

16:50-17:00 Understanding the role of altered hemodynamics in restenosis of peripheral arterial disease using engineering tools

Federica Ninno, UK

17:00-17:10 Personalized modeling of abdominal aortic aneurysm with strain and stress analysis

Wojciech Derwich, UK

17:10-17:20 Computational fluid dynamics virtual angiogram for AVM pre-interventional treatment planning

Aloma Blanch Granada, UK

17:20-17:30 3D Printed Phantoms for Simulation and Training in Vascular Medicine

Jia-En Danny Chen, UK

#### DAY 2 Session 3 Preclinical models and vascular biology

9:10-9:30 **Keynote lecture: Non-invasive ultra-high frequency ultrasound and photoacoustics imaging: focus on the vessel wall**

**Margreet de Vries, Netherlands**

9:30-9:50 **Keynote lecture: Sex differences in flow-mediated atherosclerotic plaques in thrombospondin-1 KO animals**

**Luke Brewster, USA**

9:50-10:00 Creating a Diet-Induced CKD Mouse Model to Study the Effect of PVAT Browning on Vascular Remodeling in Arteriovenous Fistulas

Nicky Kruit, Netherlands

10:00-10:10 Correlative Analysis of Highly Resolved AAA Wall Composition and Strain in Mice

Achim Hegner, Germany

10:10-10:20 The hydrogen sulfide donor Sodium Thiosulfate promotes matrix degradation and abdominal aortic aneurysm in wild type male mice

Florent Allagnat, Switzerland

10:20-10:30 ALK2/3 signaling inhibition reduces pro-inflammatory cytokine expression in macrophages and prevents murine vein graft failure

Vincent Sier, Netherlands

10:30-10:40 Platelet independent NO-sGC-cGMP axis promotes arteriogenesis

Franziska Heim, Germany

10:40-10:50 Therapeutic inhibition of biomechanically-activated YAP-TAZ signaling prevents Vein Graft Atherosclerosis

Thijs Sluiter, Netherlands

##### 11:10-12:30 Session 4: Vascular biology

11:10-11:30 **Keynote lecture: Leukocyte transendothelial migration process**

**Jaap van Buul, Netherlands**

11:30-11:40 Lenti-viral overexpression of RhoGEF Trio reduces CD8 T cell extravasation into atherosclerotic vein graft lesions in mice.

Thijs Sluiter, Netherlands

11:40-11:50 Tissue Resident Memory T Cells and PD-1 in Atherosclerotic Diseases

Kayleigh van Dijk, Netherlands

11:50-12:00 Short-term low protein high carbohydrate diet preconditioning improves neovascularization in a model of murine hindlimb ischemia

Clémence Bechelli, Switzerland

12:00-12:10 Gut Microbiome in Ageing Atherosclerotic Patients

Racha El Hage, Germany

12:10-12:30 **Keynote lecture: How to promote revascularization: lessons from developmental biology**

**Ferdinand le Noble, Germany**

12:30-13:00 CLOSE

Organisers: Margreet De Vries, Elisabeth Deindl, Kerstin Troidl, Maani Hakimi, George Hamilton, Simon Parvin, Paul Quax, Thomas Schmitz-Rixen, Janice Tsui

Registration fee includes Friday night dinner: Seniors € 190, Juniors (Undergraduate and Postgraduate students, trainees) € 90

Supported by the German Society of Surgery