

Building Networks

March 30 & March 31, 2022

MDC.C, Campus Berlin-Buch

Wednesday, March 30

- 14:00-14:10** **Thomas Sommer & Heike Graßmann** (MDC) – Welcome to MDC
- 14:10-14:20** **Norbert Hübner** (MDC) – Strategic direction of the MDC (POF IV)
- 14:20-14:30** **Hellmut Augustin** (MedMa, UHEI) – The vision of the Helmholtz Institute for Translational AngioCardioScience (HI-TAC)
- 14:30-15:30** Session I: Multiomics meets AngioCardioScience
- Laleh Haghverdi** (MDC) – Trustworthy inference of secondary quantities (e.g. cell state velocities, cell type labels, pseudotime) from single-cell omics data
- Ashley Sanders** (MDC) – Somatic cell mutations and their consequences by single-cell sequencing
- Fabian Coscia** (MDC) – Histopathology meets single cell proteomics for precision medicine
- Daniela Panáková & Jan Philipp Junker** (MDC) – Cellular drivers of injury response and regeneration in the adult zebrafish heart
- Julio Saez-Rodrigues** (MedHD, UHEI) – Spatial multi-omic map of human myocardial infarction
- 15:30-16:00** Coffee
- 16:00-17:30** Session II: Recent developments in AngioScience
- Annette Hammes** (MDC) – The role of Piezo2 in vascularization
- Philipp Reiners-Koch** (MedMa, UHEI) – Hepatic angiogenesis controls organ function and disease
- Armin Rehm** (MDC) – Lymphoma and angiogenesis: An integrative view on lymph node microarchitecture, immune response and clinical disease course
- Mahak Singhal**, (MedMa, UHEI) – Adaptation of vascular homeostasis to pathological challenge
- Jörg Heineke** (MedMa, UHEI) – Endothelial cells as crucial regulators of organ fibrosis

Daniel Dürschmied (MedMA, UHEI) – Blood platelets as a key regulator of inflammatory processes

Thomas Blankenstein (MDC) – The tumor vasculature as target of T cells

17:30-18:30

Session III: Berlin Cooperating Partners

Axel Pries (Charité – Universitätsmedizin Berlin) &

Christopher Baum (Berlin Institute of Health at Charité (BIH)) – Introduction

Ulf Landmesser (Charité) – Clinical research programs in vascular and interventional medicine

Michael Potente (BIH) – Metabolic decisions in vascular development and disease

Claudia Langenberg (BIH) – Plasma proteomics for target discovery and disease prediction

Burkert Pieske (Charité) – Heart failure with preserved ejection fraction – Mechanistic understanding for stratified therapies: the new CRC 1470

Volkmar Falk (Charité) – The future heart center - DHZC

18:30

Get together

Thursday, March 31

09.00-09:30

Coffee

09:30-10:00

Welcome & Campus Tour

10:00-10:30

Session IV: MDC Infrastructure

Jutta Steinkötter (MDC) – Scientific technology platforms at MDC

Michaela Herzig (MDC) – Talent management at MDC

10:30-12:00

Session V: Recent developments in CardioScience

Johannes Backs (MedHD, UHEI) – HDACs in heart diseases: From mechanisms to therapies

Constanze Schmidt (MedHD, UHEI) – Atrial arrhythmopathy - From underlying molecular mechanisms to new therapeutic approaches

Chi-Chung Wu (MedMA, UHEI): Regulatory mechanisms of mammalian cardiomyocyte polyploidy

Gergana Dobрева (MedMa, UHEI) – Genetic and epigenetic regulation of cardiovascular development and disease

Maarten van den Hoogenhof (MedHD, UHEI) – CAMK2D underlies cardiac dysfunction in RBM20 cardiomyopathy

Arica Beisaw (MedHD, UHEI) – Intercellular communication in zebrafish cardiomyocyte regeneration

Norbert Frey (MedHD, UHEI) – Vision for cardiovascular medicine 2030 at Heidelberg University

12:00-12:30

Coffee & Snacks

12:30-13:20

Session VI: Cardiometabolic science & imaging

Mirko Völkers (MedHD, UHEI) – RNA metabolism in diseased cardiomyocytes

Gabriele Schiattarella (MDC) – Molecular underpinnings of cardiometabolic HFpEF

Gary Lewin (MDC) – Hypoxia and metabolism in naked mole-rats

Thoralf Niendorf (MDC) – Cardiovascular MRI

13:20

Concluding remarks