



6th Young DZHK Retreat - Program

11 - 12 September, 2019

Seminaris SeeHotel Potsdam, An der Pirschheide 40, 14471 Potsdam

Wednesday, 11th September

10:00 am Young DZHK PostDoc Committee Meeting

11:30 am Registration & lite bites

12:30 pm **Welcome**

Thorsten Kessler, Nadya Al-Wakeel Marquard, Martin Bahls

1:00 pm **1st oral session – Heart disease**

Chair: Sven-Oliver Tröbs/ Djawid Hashemi (10 min presentation + 10 min panel discussion)

1. Role of GPR15 in virus-induced myocarditis, Bastian Stoffers (Hamburg/Kiel/Lübeck)
2. Effects of acute physical stress on heart failure patients with reduced ejection fraction - altered leukocyte reaction, Aycen Koc (Berlin)
3. The role of S100A8/A9 as a potential therapeutic target and biomarker in heart failure with preserved ejection fraction, Irene Müller (Berlin)
4. The interleukin 6 / glycoprotein 130 axis on cardiomyocytes contributes to the pathogenesis of sepsis-induced cardiomyopathy, Sebastian Graeger (Greifswald)
5. Sex-differences in quality of life in patients at risk for heart failure with preserved ejection fraction, Anna Bobenko (Berlin)

2:00 pm **Intensive networking event**

3:15 pm **1st poster session & coffee**

Chair: Aline Jatho / Sebastian Clauß (5 min presentation + 2 min discussion)

A-1. Genome-wide association meta-analyses and fine-mapping elucidate novel pathways influencing albuminuria, Sahar Ghasemi (Greifswald)

A-2. Cathelicidins interfere with neutrophil-monocyte interaction in angiotensin II-driven arterial hypertension but do not influence blood pressure or vascular endothelial dysfunction, Michael Molitor (RheinMain)

A-3. A statistical approach detecting genetic variation as the cause of far-away transcriptional regulation, Nina Baumgarten (RheinMain)

A-4. Identification of cTnT-independent serum-microRNAs for specific diagnosis of acute coronary syndromes, Omid Shirvani Samani (Heidelberg/Mannheim)

A-5. Transcriptome analysis of reticulated platelets, Dario Bongiovanni (München)

A-6. The matrix metalloproteinase 13 (MMP13) is upregulated after myocardial infarction, but depletion is beneficial for survival, Saskia Krüger (Hamburg/Kiel/Lübeck)

A-7. Exercise, but not statins improve endothelial function in obese rats, Ines Urbanek (Greifswald)



- A-8. Homoarginine supplementation ameliorates atherosclerosis, Katrin Nitz (München)
- A-9. Aortic valve stenosis and regurgitation cause pulmonary hypertension due to left heart disease in New Zealand Obese mice, Jana Grune (Berlin)
- A-10. Spironolactone prevents hypoxic pulmonary vasoconstriction via inhibition of Pannexin1, Benjamin Grimmer (Berlin)
- A-11. The role of long noncoding RNA TUG1 in endothelial cell function, Anna Theresa Gimbel (RheinMain)

Chair: Martin Bahls / Nadya Al-Wakeel-Marquard (5 min presentation + 2 min discussion)

- B-1. Deletion of Tfeb in cardiomyocytes leads to a stronger stress response, remodeling and mitochondrial dysfunction in pressure overload-induced left ventricular hypertrophy, Niklas Dörmann (Greifswald)
- B-2. Functional characterization of iPSC-derived endothelial cells reveals increased inducible adhesion molecule upregulation by inflammatory stimulation in high risk CAD patients, Elisabeth Strässler (Berlin)
- B-3. Cardiac Troponin I and incident stroke in European cohorts – Insights from the BiomarCaRE project, Stephan Camen (Hamburg/Kiel/Lübeck)
- B-4. The development of methods for the identification of scramblases in blood cells, Anna Sokol (RheinMain)
- B-5. The long non-coding RNA MALAT1 is required for cardiomyocytes proliferation and postnatal cardiac regeneration, Yosif Manvski (RheinMain)
- B-6. Local or systemic delivery of Lenvatinib effectively inhibits experimental aneurysm progression, Valentina Paloschi (München)
- B-7. The myocardial iron metabolism is impaired in a porcine model of ischemic cardiomyopathy, Jan Alphard Kleeberger (München)
- B-8. Loss of S100A1 protein negatively impacts glucose metabolism and energy homeostasis in cardiomyocytes, Fadwa Abdalla (Heidelberg/Mannheim)
- B-9. Investigating the mechanism of gene expression regulation by BET-proteins in cardiomyopathies, Daniel Marques Rodrigues (Göttingen)

4:45 pm Rapid fire talks

Chair: Tobias Jakobi (2 sessions of 3 and 4 speakers with 5 min talks)

1. The molecular basis of lung tissue remodeling in age-related pulmonary arterial hypertension, Jonathan Lauryn (Berlin)
2. Blood pressure and resting heart rate trends in children and adolescents in Germany across BMI categories (KiGGS Study 2003-2006 and 2014-2017), Giselle Sarganas (Berlin)
3. Characterization of the arrhythmogenic substrate in patients with scar-related ventricular tachycardia: importance of high-resolution mapping, Ann-Kathrin Kahle (Hamburg/Kiel/Lübeck)

10 min panel discussion



1. A comprehensive metabolomics and lipidomics profile of ischemic stroke, Julica Folberth (Hamburg/Kiel/Lübeck)
2. Exercise intensity and volume differentially impact on innate and adaptive immunity in patients with metabolic syndrome, Sylvia Kia (Berlin)
3. Microvascular perfusion deficit in hypertrophic cardiomyopathy can be quantified noninvasively by cardiac MRI, Min Chi Ku (Berlin)
4. Physical interactions of neutrophils and megakaryocytes drive thrombopoiesis under steady state and during disease, Tobias Petzold (München)

10 min panel discussion

6:00 pm Coffee break

6:15 pm 2nd oral session– Cardiovascular pharmacology

Chair: Eileen Moritz/ Norman Liaw (8 min oral presentations + 10 min panel discussion)

1. Adipose tissue – heart crosstalk: Pharmacological inhibition of non-cardiac ATGL by Atglistatin improves myocardial function in a murine model of cardiac fibrosis, Arne Thiele (Berlin)
2. Effects of dual SGLT-1/2 inhibition by Sotagliflozin on cardiac function of ZSF-1 rats, a model for metabolic syndrome and HFpEF, Niklas Hegemann (Berlin)
3. Drug-eluting balloon delivery of anti-miR-29b blocks abdominal aortic aneurysm development in a preclinical large animal model, Susanne Metschl (München)
4. The Liver X Receptor (LXR) agonist AZ876 attenuates cardiac damage in an isoproterenol induced HFpEF-like cardiomyopathy model, Daniel Ritter (Berlin)

7:30 pm Dinner

8:30 pm Keynote lecture: Genetic and metabolic interactions in diastolic dysfunction, Jake Lusis (UCLA)

Thursday, 12th September

6:30 am Young-DZHK running session – bring your running gear (Aline Jatho)

8:30 am Rapid fire talks

Chair: Maarten Van Den Hoogenhof (2 sessions with 4 speakers with 5 min talks)

1. Clonal hematopoiesis and the relevance of DNMT3a in heart failure, Inga Hemmerling (Heidelberg/Mannheim)
2. Identification of the transcription factor MAFF as an inflammation dependent regulator of the LDLR, Moritz von Scheidt (München)
3. Cardiovascular phenotyping in patients with cancer: impact of arrhythmias and altered cardiac function on prognosis, Markus Anker (Berlin)
4. Haptotactic platelets secure vascular borders during inflammation and infection, Leo Nicolai (München)



10 min panel discussion

1. B cell-specific GPR55 deficiency promotes atherosclerosis, Raquel Guillamat Prats (München)
2. Myocardial inflammation in DCM and mapping: an elusive connection, Tilman Emrich (RheinMain)
3. Differential response to Angiotensin II depends on microbial colonization, Ellen Avery (Berlin)
4. Parathyroid hormone as predictor of cardiac function and outcome in individuals with heart failure – results from the MyoVasc study, Felix Müller (RheinMain)

10 min panel discussion

9:30 am Coffee break

9:45 am 3rd oral session – Vascular biology

Chair: Anca Remes/ Jiong Hu (10 min oral presentations+ 10 min discussion)

1. Long non-coding RNA MIAT regulates smooth muscle cells survival and transdifferentiation in advanced atherosclerotic lesions, Valentina Paloschi (München)
2. Tissue factor cytoplasmic tail regulates myeloid cell activation and superoxide formation in chronic myocardial infarction, Venkata Subbaiah Garlapati (RheinMain)
3. Neutrophil extracellular trap (NET)-borne miR-10b contributes to atherosclerotic lesion destabilization, Hanna Winter (München)
4. Neonatal mice adapt to pressure overload by inducing cardiomyocyte proliferation and angiogenesis, Mona Malek Mohammadi (Heidelberg/Mannheim)
5. Acute mental stress promotes atherosclerosis, Julia Hinterdobler (München)

10:45 am Coffee break

11:15 am 4th oral session – Cellular biology of the heart

Chair: Tobias Jakobi/ Katharina Scherschel (oral presentations á 10 min + 10 min discussion)

1. Exploring LZTR1-associated Noonan Syndrome in patient-specific and CRISPR-corrected iPSC-derived cardiomyocytes, Mandy Kleinsorge (Göttingen)
2. Fibroblasts as inflammatory supporter cells – a matter of tissue origin?, Kathleen Pappritz (Berlin)
3. Cell-protective HSP27-mediated TLR4-signaling is increased by Adenine nucleotide translocase 1 overexpression, Julia Winter (Berlin)
4. Defining the lncRNA repertoire of cardiac resident macrophages by deep RNA-Seq and single cell sequencing, Anne Dueck (München)



12:15 pm 2nd poster session & lite bites

Chair: Katharina Scherschel/ Ingo Hilgendorf (5 min presentation + 2 min discussion)

C-1. Molecular assessment of iron deficiency in cardiovascular diseases, Apurva Shrivastava (Hamburg/Kiel/Lübeck)

C-2. Local sympathetic control of cardiac non-myocytes, Karin Ziegler (München)

C-3. Effects of brain natriuretic peptide on atrial inotropy and lusitropy: In-vitro assessment in human myocardium, Peter Maximilian Deissler (Berlin)

C-4. The knock-out of muscle specific ring RING-finger proteins 1 and 3 influences the metabolomic shift during cardiac hypertrophy, Elisa Martin (Greifswald)

C-5. A comparative analysis of circulating non-coding RNAs versus protein biomarkers in the detection of myocardial injury, Christian Schulte (Hamburg/Kiel/Lübeck)

C-6. Planar cell polarity pathway regulates mechanosensitive muscle differentiation program, Anne Merks (Berlin)

C-7. A mouse model of recurrent myocardial infarction reports diminished emergency hematopoiesis and cardiac inflammation, Sebastian Cremer (RheinMain)

C-8. Role of iron during heart failure, Christina Mertens (Heidelberg/Mannheim)

C-9. Association of cardiopulmonary exercise capacity with circulating adipokine concentrations in a general population, Stephanie Zylla (Greifswald)

C-10. Investigation of a SVEP1 locus for its role in coronary disease risk, Philipp Müller (München)

Chair: Thorsten Kessler/Jake Lusic

D-1. Investigating a long intergenic non-coding RNA at the PDE5A coronary artery disease locus, Jana Wobst (München)

D-2. Investigating the molecular and cellular mechanisms involving ADAMTS7 in Atherosclerosis, Amin Sharifi (München)

D-3. Wnt11 compartmentalizes AKAP2-PKA signaling to regulate the L-Type Calcium Channel, Mai Phan (Berlin)

D-4. Early sarcomere and metabolic defects in a zebrafish pitx2c mutant model of cardiac arrhythmia, Michelle Collins (RheinMain)

D-5. Impact of aging pigment lipofuscin on cardiomyocyte contraction, Christiane Ott (Berlin)

D-6. Electromechanical vortex filaments and vortex-substrate interactions during cardiac fibrillation, Jan Christoph (Göttingen)

D-7. Animal models in arrhythmia research: from classic electrophysiology to genetic modification of large animals, Christina Bleyer (München)

D-8. Characterization of a porcine model of ischemic heart failure-associated paroxysmal atrial fibrillation, Dominik Schüttler (München)

D-9. Transcriptional disorganization of fibroblasts is a hallmark of the aging heart, Julian Wagner (RheinMain)



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DEUTSCHES ZENTRUM FÜR
HERZ-KREISLAUF-FORSCHUNG E.V.

- 13:45 pm** **Invited lecture:** Macrophages in atherosclerosis – sick of eating, Ingo Hilgendorf (Freiburg)

- 2:15 pm** **Wrap-up and highlight talks**

- 4:00 pm** **Start DZHK Retreat**