



## 5<sup>th</sup> Young DZHK Retreat

12-13 September, 2018

KTC Königstein, Ölmühlweg 65, 61462 Königstein im Taunus

### Preliminary programme

#### Wednesday, 12<sup>th</sup> September

11:00 am Young-DZHK PostDoc Committee Meeting

12:30 am Registration & lite bites

**1:30 pm Welcome**

Thorsten Kessler, Dorothee Atzler, Martin Bahls

**2:00 pm 1<sup>st</sup> oral session: Genetics/Genomics**

Chairs: Djawid Hashemi/Thorsten Kessler (10 min presentation + 5 min discussion)

1. CRIP1 (Cystein rich protein 1) – a novel blood pressure related candidate gene, Olga Schweigert (Hamburg/Kiel/Lübeck)
2. The transcription factor MAFF regulates a network connecting inflammation and cholesterol metabolism, Moritz von Scheidt (München)
3. Single-cell RNA-sequencing defines monocyte clusters in patients with mutations leading to clonal hematopoiesis: implications for prognosis of ischemic heart disease, Wesley Abplanalp (RheinMain)
4. Systematic Analysis of Cardiac Disease Genes Reveals Genetic Variants in PRDM16 as Important Cause of Cardiomyopathies, Christopher Herbst (Berlin)

**3:00 pm 1<sup>st</sup> poster session (A-C) & coffee**

Chairs: Nadya Al-Wakeel/Tobias Jakobi/Katharina Scherschel/Dorothee Atzler/  
Norman Liaw/Aline Jatho/Florian Leuschner (5 min presentation + 2 min discussion)  
3 x 11 posters in parallel (33 posters)

**4:30 pm Invited lecture I: Florian Leuschner (Chair: Tobias Jakobi)**

**5:15 pm 2<sup>nd</sup> oral session: OMICs**

Chairs: Tobias Jakobi /Kristin Lehnert (10 min presentation + 5 min discussion)

1. DZHK OMICS (PLUS) Resources Enable First Association Studies For Genomic Structural Variations In Patients And Controls, Jan Haas (Heidelberg/Mannheim)
2. A human variation panel for German population from 1205 WGS samples, Riccardo Berutti (München)
3. Reliable detection of structural variants in whole genome sequencing data, Thomas Schwarzmayr (München)



4. **Rapid fire** (5 min presentation + 5 min discussion): A highly selective and sensitive method for quantification of endogenous production of polysulfides in biological samples, Sven Zukunft (RheinMain)

6:30 pm *Dinner*

7:30 pm **Keynote lecture:** Katey Rayner (Chairs: Dorothee Atzler/Thorsten Kessler)

### Thursday, 13<sup>th</sup> September

6:30 am **Y-DZHK running session (5 km) – bring your running gear** (Aline Jatho)

8:30 am **3<sup>rd</sup> oral session: Atherosclerosis/Vascular Disease**

Chairs: Ashraf Rangrez/Dorothee Atzler (10 min presentation + 5 min discussion)

1. Inhibition of the antisense transcript NUDT6 enhances atherosclerotic lesion stability and limits progression of aortic aneurysms, Hanna Winter (München)
2. Deficiency of CD40-CD40L signaling in DCs and T cells attenuates atherosclerosis, Michael Lacy (München)
3. JMJD2B is involved in the epigenetic regulation during endothelial to mesenchymal transition, Simone-Franziska Glaser (RheinMain)
4. The long noncoding RNA H19 controls angiogenesis and endothelial inflammation, Patrick Hofmann (RheinMain)

9:30 am **4<sup>th</sup> oral session: Myocardial disease I**

Chairs: Katharina Scherschel/Norman Liaw (10 min presentation + 5 min discussion)

1. Prediction of Responsiveness of Immunoabsorption Therapy by analyzing Anti-heart Autoantibodies and Cardiodepressive Activity in Patients with Dilatative Cardiomyopathy, Bishwas Chamling (Greifswald)
2. Translational regulation determines the acute cardiac response to ischemia/reperfusion, Christoph Hofmann (Heidelberg/Mannheim)
3. Determinants of early diastolic strain rate and its relation to NT-proBNP in heart failure, Sven-Oliver Tröbs (RheinMain)
4. DNMT3A knock-out in a human engineered heart tissue model of cardiac hypertrophy, Alexandra Löser (Hamburg/Kiel/Lübeck)

10:30 pm *Coffee break*

10:45 am **5<sup>th</sup> oral session: Myocardial disease II**

Chairs: Aline Jatho/Nadya Al-Wakeel (10 min presentation + 5 min discussion)

1. CRISPRa mediated in vivo activation of endogenous gene expression in the postnatal mammalian heart, Eric Schoger (Göttingen)
2. Assessing the role of PDEs in a catecholamine-dependent altered cAMP signaling in a patient-specific induced pluripotent stem cell takotsubo-model, Daniela Hübscher (Göttingen)



3. S100A8/S100A9 alarmin as a potential biomarker in patients with acute myocarditis, Irene Müller (Berlin)
4. Exploring hypertrophic cardiomyopathy in iPSC-derived cardiomyocytes from patients with a novel autosomal recessive form of Noonan syndrome, Ulrich Hanses (Göttingen)

**11:45 am**    **Lite bites**

**12:00 am**    **2<sup>nd</sup> poster session (D-F)**

Chairs:

3 x 11 posters in parallel (33 posters)

**13:15 pm**    **Invited lecture II:** Linda van Laake (Chair: Martin Bahls)

**2:00 pm**    **Prizes and Wrap-up**

**4:00 pm**    **Start DZHK Retreat**



## Poster sessions

### 1<sup>st</sup> poster session:

#### Part A

1	Prognostic value of different biomarkers in patients with diastolic dysfunction and heart failure with preserved ejection fraction, Leonhard Schleußner (Berlin)
2	Single cell sequencing reveals novel insights into the kinetic of EndMT after myocardial infarction, Lukas Tombor (RheinMain)
3	Neonatal mice adapt to pressure overload by inducing cardiomyocyte proliferation and angiogenesis, Mona Malek Mohammadi (Heidelberg/Mannheim)
4	Extracellular vesicles mediated small non-coding RNAs in the progression of chronic thromboembolic hypertension, Christoph Lipps (RheinMain)
5	Developing a new tool for immature platelet analysis, Dario Bongiovanni (München)
6	Extracellular matrix turnover influences myocardial contraction behavior in experimental diabetic cardiomyopathy assessed by two-dimensional speckle-tracking echocardiography, Kathleen Pappritz (Berlin)
7	Exacerbated Cardiac Remodeling And Differential Proteome Regulation in Mice Lacking An Endogenous Mechanism of Proteasome Regulation, Felix Armin Trogisch (Heidelberg/Mannheim)
8	NZO mice - A Research Model for the Metabolic Syndrome?, Jana Grune (Berlin)
9	The absence of Brd4 from cardiomyocytes leads to a basal concentric hypertrophy and increased mortality after pressure overload, Dawid Lbik (Göttingen)
10	Quantification of single muscle contractile measurements using the ImageJ-Macro „Myocyter“, Christiane Ott (Berlin)
11	Alterations of the ubiquitin-proteasome system and autophagy-lysosomal pathway in a transgenic model of heart failure, Kristin Wenzel (Greifswald)

#### Part B

1	Usefulness of Paulus criteria for predicting outcome in patients with asymptomatic diastolic dysfunction, Anna Bobenko (Berlin)
2	Comparison of different cardiac magnetic resonance imaging sequences of T1 mapping, Hui Zhou (RheinMain)
3	Evaluation of Cartilage intermediate layer protein (CILP) as a diagnostic biomarker for right ventricular dysfunction in patients with pulmonary hypertension, Stanislav Keranov (RheinMain)
4	Fibroblast-mediated atrial mechanical dysfunction in HFpEF and hypertensive heart disease, David Bode (Berlin)
5	Matrix metalloproteinase 13 (MMP13) knock-out is beneficial for the outcome after myocardial infarction, Saskia Krüger (Hamburg/Kiel/Lübeck)
6	Characterization of miR-21 in cardiac resident macrophages, Deepak Ramanujam (München)
7	DNA Methylation Regulates Cardiac Alternative Splicing in Dilated Cardiomyopathy, Weng-Tein Gi (Heidelberg/Mannheim)
8	HDAC inhibition regulates the cardiac stress response through nuclear accumulation of class II HDACs, Daniel Finke (Heidelberg/Mannheim)
9	In-depth landscape of cardiac protein phosphorylation, Anne Konzer (RheinMain)
10	Phosphodiesterases 4B and 4D differentially regulate cAMP signaling in calcium handling microdomains of adult mouse cardiomyocytes, Axel Kraft (Hamburg/Kiel/Lübeck)
11	Extracellular Cyclophilin A inhibitor MM284 supports proliferation and migration of human coronary artery endothelial cells, Lisa Maletzki (Greifswald)



*Part C*

1	Circulating miRNAs as a prognostic tool for heart failure related morbidity and mortality in patients suffering from stable HFpEF: A subgroup analysis of the ALDO-DHF trial, Johannes Petutschnigg (Berlin)
2	Standardisation of myocardial T1 mapping measurements for reproducible clinical use in the presence of health and disease, Mengzhen Chen (RheinMain)
3	High-sensitive Troponin and Cardiovascular Imaging - a Novel Combination of Biomarkers in Lupus Myocarditis, Lea Winau (RheinMain)
4	Impact of chronic kidney disease on the outcomes of interventional left atrial appendage occlusion: Results from the ORIGINAL registry, Lucie Kretzler (Berlin)
5	Spironolactone prevents hypoxic pulmonary vasoconstriction via inhibition of Pannexin1, Benjamin Grimmer (Berlin)
6	A novel role for S100A1 in primary hemostasis: impact on platelet glycoprotein 6 expression and platelet function in arterial thrombosis, Nils Gade (Heidelberg/Mannheim)
7	RBM20 Mutations Induce an Arrhythmogenic Dilated Cardiomyopathy Related to Disturbed Calcium Handling, Maarten van den Hoogenhof (Heidelberg/Mannheim)
8	Discovery and characterization of short open reading frames in cardiac hypertrophy, Ellen Malovrh (Heidelberg/Mannheim)
9	Loss of CSPA in zebrafish results in heart failure, Diana Martins Bordalo (Heidelberg/Mannheim)
10	lncRNAs in cardiac resident macrophages, Anne Dueck (München)
11	The Effect of Telmisartan on endothelial dysfunction in murine psoriasis-like skin disease, Johannes Wild (RheinMain)

**2<sup>nd</sup> poster session**

*Part D*

1	In patients with atrial fibrillation, low-voltage areas assessed by ultra-high-density electroanatomical mapping correlate with left atrial function, Felix Hohendanner (Berlin)
2	Soluble ST2 in patients with Heart Failure with Preserved Ejection Fraction and its Prognostic Value: results from the Aldo-DHF trial, Felix Lucas Baehr (Berlin)
3	Using the Plasma Proteome to Decipher Metabolic Syndrome Pathophysiology and Discover a Diagnostic Biomarker Panel, Mohamed Ahmed Elhadad (München)
4	A heart/hard condition: Imaging the progression of hypertrophic cardiomyopathy, Min Chi Ku (Berlin)
5	Role of Y-Box Binding Protein 1 (YBX-1) in cardiac remodelling, Eshita Varma (Heidelberg/Mannheim)
6	Single-nucleus sequencing to identify cellular heterogeneity in the aging mouse heart, Julian Wagner (RheinMain)
7	Identifying the role of fat body-specific lipolysis for heart function using <i>Drosophila melanogaster</i> , Annelie Blumrich (Berlin)
8	The deubiquitinase USP5 prevents formation of protein aggregates in cardiomyocytes, Mareike Pötsch (RheinMain)
9	Changes in Cardiomyocyte cGMP Dynamics during Hypoxia/Reoxygenation, Nadja Bork (Hamburg/Kiel/Lübeck)
10	Alteration of GPR15 methylation and gene expression through cigarette smoking, Tina Haase (Hamburg/Kiel/Lübeck)
11	Palmitoylethanolamide Promotes a Pro-Resolving Macrophage Phenotype and Attenuates Atherosclerotic Plaque Formation in Mice, Raquel Guillamat Prats (München)



*Part E*

1	Presence of late gadolinium enhancement and left atrial ejection fraction as predictors of stroke and thrombembolism in patients with HCM, Anna Hohneck (Heidelberg/Mannheim)
2	Functional analysis of iPSC-derived endothelial cells from risk stratified CAD patients and comparison with primary endothelial cells, Elisabeth Strässler (Berlin)
3	A Convolutional Neural Network for ECG Annotation as the Basis for Classification of Cardiac Rhythms, Philipp Sodmann (Greifswald)
4	A Close Up on Murine Pressure-Volume-Analysis under Beta-Adrenergic Stimulation: Positive End-Expiratory Airway-Pressure, Hypertonic Saline Injection and Endystolic Pressure-Spikes, Lucas Bacmeister, Hamburg/Kiel/Lübeck
5	Vitamin B6 increases cardiomyocyte oxygen sensitivity under cardiac stress, Marie Hammer (RheinMain)
6	Proteins Secreted in Response to ER Calcium Depletion Protect Against ER Stress-mediated Cell Death, Shirin Doroudgar (Heidelberg/Mannheim)
7	TRPC3 regulates fibrotic processes in cardiac myofibroblasts, Abdul Rehman (Göttingen)
8	17 $\beta$ -Estradiol regulates periostin in a sex-specific manner in human cardiac fibroblasts, Jasmin Zernikow (Berlin)
9	Investigation of CXCR1 on myeloid cells in atherosclerosis, Katrin Nitz (Berlin)
10	Time-dependent biopathological changes in atherosclerotic lesions of the carotid artery after a neurological index event, Jessica Pauli (München)
11	Cystathionine gamma lyase sulfhydrates the RNA binding protein HuR to preserve endothelial cell function and delay atherosclerosis development, Sofia-Iris Bibli (RheinMain)

*Part F*

1	Cardiovascular Profiling in the Diabetic Continuum: Results from the population-based Gutenberg Health Study, Jürgen Prochaska (RheinMain)
2	Relation of chemerin and cardiopulmonary exercise capacity, Frederik Lendeckel (Greifswald)
3	MYOM2 Implication in Tetralogy of Fallot and Hypertrophic Cardiomyopathy Using the Drosophila Heart as a Model, Olga Olejniczak (Berlin)
4	Towards an imaging biosignature of cardiac involvement due to cancer-related treatment, Jasmin Haslbauer (RheinMain)
5	Atrial Fibrillation Score Combining Biomarkers and Genetics, Christin Susanna Börschel (Hamburg/Kiel/Lübeck)
6	A Novel Mouse Model (Purkinje-Specific CaMKII $\delta/\gamma$ DKO): Targeting the suppression of focal arrhythmogenesis in chronic heart failure, Safak Chasan (Heidelberg/Mannheim)
7	Influence of the Soluble Guanylate Cyclase Stimulator Riociguat on Myocardial Function and Proteome after Experimental Aortic Stenosis in Mice, Alexander Benkner (Greifswald)
8	Modeling Human Heart Muscle and Neuronal Co-development in Bioengineered Heart Muscle, Farah Raad (Göttingen)
9	Unravel Genetic Heterogeneity of Congenital Heart Diseases by large-scale in vivo functional analyses using a Drosophila melanogaster heart model, Tanja Nielsen (Berlin)
10	Treatment with Rivaroxaban attenuates arterial thrombosis, Tobias Petzold (München)
11	Cardiac Fibrosis: virtual tissue biopsy by high resolution computed tomography, Amara Khan (Göttingen)