



5th Young DZHK Retreat

12-13 September, 2018

KTC Königstein, Ölmühlweg 65, 61462 Königstein (Taunus)

PROGRAM

Wednesday, 12th September

11:00 am Young DZHK PostDoc Committee Meeting

12:30 pm *Registration & lite bites*

1:30 pm Welcome

Thorsten Kessler, Dorothee Atzler, Martin Bahls

2:00 pm 1st 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 (Munich)
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 (Rhine Main)
4. Systematic analysis of cardiac disease genes reveals genetic variants in PRDM16 as important cause of cardiomyopathies, Christopher Herbst (Berlin)

3:00 pm 1st poster session (A-C) & coffee

Chairs: Nadya Al-Wakeel-Marquard/Tobias Jakobi/Katharina Scherschel/Dorothee Atzler/
Norman Liaw/Aline Jatho/Florian Leuschner

(5 min presentation + 2 min discussion, 3 x 11 posters in parallel)

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

5:15 pm 2nd 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 (Munich)



3. Reliable detection of structural variants in whole genome sequencing data, Thomas Schwarzmayr (Munich)
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 (Rhine Main)

6:30 pm *Dinner*

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

Thursday, 13th September

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

8:30 am **3rd 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 (Munich)
2. Deficiency of CD40-CD40L signaling in DCs and T cells attenuates atherosclerosis, Michael Lacy (Munich)
3. JMJD2B is involved in the epigenetic regulation during endothelial to mesenchymal transition, Simone-Franziska Glaser (Rhine Main)
4. The long noncoding RNA H19 controls angiogenesis and endothelial inflammation, Patrick Hofmann (Rhine Main)

9:30 am **4th oral session: Myocardial disease I**

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

1. Prediction of responsiveness of immunoadsorption 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 (Rhine Main)
4. Extracellular matrix turnover influences myocardial contraction behavior in experimental diabetic cardiomyopathy assessed by two-dimensional speckle-tracking echocardiography, Kathleen Pappritz (Berlin)

10:30 am *Coffee break*



10:45 am 5th oral session: Myocardial disease II

Chairs: Aline Jatho/Nadya Al-Wakeel-Marquard (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 pm 2nd poster session (D-F)

Chairs: Sven-Oliver Tröbs/Thorsten Kessler/Martin Bahls/Ashraf Rangrez/
Elham Kayvanpour/Jiong Hu/Linda van Laake/Katey Rayner
(5 min presentation + 2 min discussion, 3 x 11 posters in parallel)

1:15 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

1st 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 (Rhine Main)
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 (Rhine Main)
5	Developing a new tool for immature platelet analysis, Dario Bongiovanni (Munich)
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 (Rhine Main)
3	Evaluation of cartilage intermediate layer protein (CILP) as a diagnostic biomarker for right ventricular dysfunction in patients with pulmonary hypertension, Stanislav Keranov (Rhine Main)
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 (Munich)
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 (Rhine Main)
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 (Rhine Main)
3	High-sensitive troponin and cardiovascular imaging - a novel combination of biomarkers in lupus myocarditis, Lea Winau (Rhine Main)
4	Impact of chronic kidney disease on the outcomes of interventional left atrial appendage occlusion: results from the ORIGINAL registry, Lucie Kretzler (Berlin)
5	Spirolactone 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 (Munich)
11	The effect of telmisartan on endothelial dysfunction in murine psoriasis-like skin disease, Johannes Wild (Rhine Main)

2nd 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 (Munich)
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 (Rhine Main)
7	Identifying the role of fat body-specific lipolysis for heart function using Drosophila melanogaster, Annelie Blumrich (Berlin)
8	The deubiquitinase USP5 prevents formation of protein aggregates in cardiomyocytes, Mareike Pötsch (Rhine Main)
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 (Munich)



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 (Rhine Main)
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 β -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 (Munich)
11	Cystathionine gamma lyase sulfhydrates the RNA binding protein HuR to preserve endothelial cell function and delay atherosclerosis development, Sofia-Iris Bibli (Rhine Main)

Part F

1	Cardiovascular profiling in the diabetic continuum: results from the population-based Gutenberg Health Study, Jürgen Prochaska (Rhine Main)
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 (Rhine Main)
5	Atrial fibrillation score combining biomarkers and genetics, Christin Susanna Börschel (Hamburg/Kiel/Lübeck)
6	A novel mouse model (Purkinje-Specific CaMKII δ/γ 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 (Munich)
11	Cardiac fibrosis: virtual tissue biopsy by high resolution computed tomography, Amara Khan (Göttingen)