



DGK.

Basic Science
Cluster

26. – 28.09.2024

Congress Center Hamburg

Basic Science Meeting

Organisation

Dr. Malte Tiburcy (Göttingen)

Prof. Dr. Harald Langer (Mannheim)

Preise des Basic Science Meeting 2024

Details zu den Preisen unter: dggk.org/preise-und-stipendien

Abstractpreis der Segnitz-Ackermann-Stiftung

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Gestiftet von: Deutsche Stiftung für Herzforschung

Hans-Jürgen-Bretschneider-Abstractpreis des Basic Science Meeting

Dotierung: 1. Preis: 500,- Euro (je Postersitzung ein/e Gewinner:in)

Gestiftet von: DGK

Das DGK Basic Science Cluster fördert die Interaktion der Arbeitsgruppen, die sich mit grundlagenwissenschaftlichen Themen sowie der Translation neuer therapeutischer Konzepte beschäftigen, durch entsprechende Programme im Rahmen der DGK-Tagungen und die intersektorale Kommunikation.

Die an dem Cluster beteiligten Arbeitsgruppen organisieren das BSM im Rahmen der DGK Herztage und unterstützen dabei die Förderung des wissenschaftlichen Nachwuchses, insbesondere durch Posterpreise und Vernetzung. Das BSM hat sich als ein wissenschaftlich hochwertiges, translationales und kommunikatives Meeting etabliert. In den letzten Jahren erwies sich eine stärkere translationale Ausrichtung als hilfreich, um auch Zuhörer:innen aus dem klinischen Bereich zu gewinnen. Dies hat die Kommunikation zwischen Grundlagenwissenschaftler:innen untereinander, insbesondere aber auch mit Kliniker:innen gefördert.

Jedes Mitglied der beteiligten Arbeitsgruppen ist automatisch auch Mitglied des Clusters.

Liebe Kolleginnen und Kollegen,

das Basic Science Meeting findet in diesem Jahr zum 14. Mal im Rahmen der DGK Herztage statt. Angesprochen werden insbesondere junge Ärzt:innen und Wissenschaftler:innen, aber auch Arbeitsgruppenleitende unterschiedlicher experimenteller Forschungsschwerpunkte.

Das Basis Science Meeting wird gemeinsam organisiert von den Arbeitsgruppen des DGK Basic Science Cluster:

AG 4 Vaskuläre Biologie

AG 8 Genetik und Molekularbiologie kardiovaskulärer Erkrankungen

AG 12 Kardiomyopathien

AG 13 Myokardiale Funktion und Energetik

AG 18 Zelluläre Elektrophysiologie

AG 31 Kardiovaskuläre Regeneration

Neben den sechs Vortragssitzungen der Arbeitsgruppen wird es wieder Postersitzungen geben. Aus den präsentierten Abstracts werden die neun besten mit dem Hans-Jürgen-Bretschneider-Abstractpreis des Basic Science Meetings ausgezeichnet. Zudem wird zum zehnten Mal der Abstractpreis der „Segnitz-Ackermann-Stiftung“ vergeben.

Wir freuen uns auf Ihre Teilnahme!

Dr. Malte Tiburcy

Sprecher des Basic Science Cluster,
Organisator des BSM

Prof. Dr. Harald Langer

Stellvertreter,
Organisator des BSM

Prof. Dr. Philip Wenzel

Sprecher der AG 4

Prof. Dr. Rabea Hinkel

Sprecherin der AG 8

Prof. Dr. Brenda Gerull

Sprecherin der AG 12

Prof. Dr. Nazha Hamdani

Sprecherin der AG 13

Prof. Dr. Dr. Dominik Linz

Sprecher der AG 18

Prof. Dr. Laura Zelarayán

Sprecherin der AG 31

Sitzungen der Arbeitsgruppen (AG)

Sessions of the Working Groups

Donnerstag, 26.09.2024

Thursday, 26/09/2024

Reparing Signaling Beyond Cardiomyocytes AG 31 „Kardiovaskuläre Regeneration“	04
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Atrial Cardiomyopathy – From Bench to Bedside AG 13 „Myokardiale Funktion und Energetik“	06

Freitag, 27.09.2024

Friday, 27/09/2024

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Heart Failure and Atrial Fibrillation – Chicken or Egg? AG 18 „Zelluläre Elektrophysiologie“	08
Novel Approaches to Treat Inherited Cardiomyopathies AG 12 „Kardiomyopathien“	09

Basic Science Poster: Poster Sitzungen

Basic Science Poster: Poster Sessions

Donnerstag, 26.09.2024

Thursday, 26/09/2024

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New Technologies	19

Thursday, 26/09/2024

Hall X9

08:30 – 10:00

Repairing Signaling Beyond Cardiomyocytes

Session of the Working Group 31 „Kardiovaskuläre Regeneration“

Chair	Felix Engel (Erlangen), Laura Zelarayán (Göttingen)
08:30	Introduction Laura Zelarayán (Göttingen)
08:35	Regenerative reprogramming of cardiac stromal cells drives heart regeneration in zebrafish Sven Reischauer (Gießen)
08:50	Discussion
08:55	Human epicardial signaling in regeneration Anke Smits (Leiden, NL)
09:10	Discussion
09:15	Targeting the vasculature as a therapeutic strategy in heart failure Guillermo Luxan (Frankfurt am Main)
09:30	Discussion
09:35	Role of antibodies in post myocardial infarction inflammation and repair Gustavo Ramos (Würzburg)
09:50	Discussion
09:57	Summary Felix Engel (Erlangen)

Thursday, 26/09/2024

Hall X9

14:30 – 16:00

Inflammatory Cells in Vascular Disease

Session of the Working Group 4 „Vaskuläre Biologie“

Chair	Daniel Dürschmied (Mannheim), Sabine Steffens (München)
14:30	Introduction Daniel Dürschmied (Mannheim)
14:35	Role of T-cells after myocardial infarction Stefan Frantz (Würzburg)
14:50	Discussion
14:55	Myeloid cell derived IL-6 in systemic and vascular inflammation Susanne Karbach (Mainz)
15:10	Discussion
15:15	Role of CXCL12 in T-cell recruitment in human atherosclerosis: Insights from a 3D tissue-culture model Laura Parma (München)
15:30	Discussion
15:35	Olfactory receptors in vascular disease Holger Winkels (Köln)
15:50	Discussion
15:55	Summary Sabine Steffens (München)

Thursday, 26/09/2024

Hall X9

17:00 – 18:30

Atrial Cardiomyopathy – From Bench to Bedside

Session of the Working Group 13 „Myokardiale Funktion und Energetik“

Chair	Nazha Hamdani (Bochum), Sophie Van Linthout (Berlin)
17:00	Introduction Nazha Hamdani (Bochum)
17:05	How to predict heart failure in patients with atrial fibrillation Larissa Fabritz (Hamburg)
17:16	Discussion
17:21	Treatment approaches of atrial and ventricular cardiomyopathies Felix Hohendanner (Berlin)
17:32	Discussion
17:37	Translational challenges in atrial and ventricular cardiomyopathies Christian Ukena (Herne)
17:48	Discussion
17:53	Tachycardia-mediated atrial cardiomyopathy Ibrahim Akin (Mannheim)
18:04	Discussion
18:09	Arrhythmogenic right ventricular cardiomyopathy preclinical and clinical studies Lars Eckardt (Münster)
18:20	Discussion
18:25	Helmut-Drexler Award: Transient inhibition of translation improves cardiac function after ischemia/reperfusion by attenuating the inflammatory response Christoph Hofmann (Heidelberg)
18:25	Summary Sophie Van Linthout (Berlin)

Friday, 27/09/2024

Hall X9

08:00 – 09:30

Interaction of Heart and Brain

Session of the Working Group 8 „Genetik und Molekularbiologie kardiovaskulärer Erkrankungen“

Chair	Rabea Hinkel (Göttingen), Kristina Lorenz (Würzburg)
08:00	Introduction Rabea Hinkel (Göttingen)
08:05	The stroke-heart syndrome Jan Scheitz (Berlin)
08:16	Discussion
08:21	Neuro-cardiovascular co-development in innervated engineered human myocardium Maria Patapia Zafeiriou (Göttingen)
08:32	Discussion
08:37	Molecular targeting of the Takotsubo syndrome Bastian Bruns (Heidelberg)
08:48	Discussion
08:53	Regulation of brain states via the heart by applying optogenetics Silvia Rodriguez-Rozada (Würzburg)
09:04	Discussion
09:09	Young Investigation Award Winner DGJM 2024 Mariel Cano-Jorge (Enschede, NL)
09:20	Discussion
09:25	Summary Kristina Lorenz (Würzburg)

Friday, 27/09/2024

Hall X9

09:45 – 11:15

Heart Failure and Atrial Fibrillation – Chicken or Egg?

Session of the Working Group 18 „Zelluläre Elektrophysiologie“

Chair	Dominik Linz (Maastricht, NL), Constanze Schmidt (Heidelberg)
09:45	Introduction Dominik Linz (Maastricht)
09:50	Heart failure in patients with AF – Incidence and complications Isabel Deisenhofer (München)
10:05	Discussion
10:10	Arrhythmogenic atrial cardiomyopathy in heart failure and AF Sebastian Clauß (München)
10:25	Discussion
10:30	Mechanisms of tachy-cardiomyopathy Samuel Tobias Sossalla (Gießen)
10:45	Discussion
10:50	Atrial contractile failure and AF in heart failure with preserved ejection fraction Frank R. Heinzel (Dresden)
11:05	Discussion
11:10	Summary Constanze Schmidt (Heidelberg)

Friday, 27/09/2024

Hall X9

15:30 – 17:00

Novel Approaches to Treat Inherited Cardiomyopathies

Session of the Working Group 12 „Kardiomyopathien“

Chair	Brenda Gerull (Würzburg), Sabine Klaassen (Berlin)
15:30	Introduction Brenda Gerull (Würzburg)
15:35	Gene therapy – From the preclinical model to the patient Christian Kupatt (München)
15:50	Discussion
15:55	Therapeutic approaches in titin associated cardiomyopathy Wolfgang A. Linke (Münster)
16:10	Discussion
16:15	Pharmacological and CRISPR therapies to treat HCM and cardiac fibrosis in Noonan Syndrome Lukas Cyganek (Göttingen)
16:30	Discussion
16:35	Base editing in hypertrophic cardiomyopathy Daniel Reichart (München)
16:50	Discussion
16:55	Summary Sabine Klaassen (Berlin)



DGK.

Basic Science
Cluster

Basic Science Poster Reception

Conclude the first day of the DGK Heart Days with your colleagues in a relaxed atmosphere with light refreshments.

The DGK Basic Science Cluster warmly welcomes you to the basic science poster reception from 18.30h to 20.30h in the poster area (2nd Floor, Foyer D-G).

Join us for stimulating discussions, networking, and the announcement of the Hans-Jürgen-Bretschneider-poster prize awardees.

Don't miss out on an opportunity to meet and mingle with your peers, poster presenters and awardees, the Young Cardiologists, DGK Council members, DGK staff, and other fellow scientists.

*Information zu den Preisen & Stipendien der DGK
finden Sie auf Herzmedizin.de*

Thursday, 26/09/2024 | 18.30h
Congress Center Hamburg, Poster Area



DGK. Basic Science Poster



Lectures held in English.

Thursday, 26/09/2024

Poster Area 5

10:15 11:45

Cardiovascular development and pharmacology

Chair Christiane Vettel (Mannheim), Michael Wagner (Dresden)

- BS96 (1) **Antiarrhythmic effects of the CNP analogue vosoritide via the PDE2 mediated cGMP/cAMP Crosstalk in diabetic cardiomyopathy**
K. Tergau, R. Firneburg, E. Cachorro Puente, S. Kämmerer, A. El-Armouche (Dresden)
- BS97 (2) **Downregulation of SRF-signaling drives polyploidy development of human induced pluripotent stem cell-derived cardiomyocytes in response to contractile activity**
M. Schubert, S. Arun, M. Hasse, M. Lesche, K. Guan (Dresden)
- BS98 (3) **Essential role of AKAP6 in NE-MTOC formation and LINC complex function in cardiomyocytes**
S. Vergarajauregui, L. Folkendt, L. Sharma, F. Engel (Erlangen)
- BS99 (4) **Disruption of C5/C5a/C5aR1 Axis Promotes Obesity Accompanied by Hypothalamic Leptin Resistance and Subsequent Increased Food Intake**
E. Rawish, C. Gragoll, T. Rusack, T. Stiermaier, I. Eitel (Lübeck)
- BS100 (5) **If currents are uniformly expressed in engineered heart tissue and hiPSC-CM and show similar characteristics as seen in mammalian sinus node cells**
C. Schulz, J. Schlobohm, T. Eschenhagen, T. Christ (Hamburg)
- BS101 (6) **Characterization of Glial Cells as a part of the Intracardiac Nervous System**
A. Daryaie, K. Bekiri, C. Ungefug, Y.-W. Dai, J. A. Gomez-Sanchez, N. Erlenhardt, N. Klöcker, C. Meyer, K. Scherschel (Düsseldorf; San Juan de Alicante, ES)
- BS102 (7) **Exenatide Treatment improves functional post-ischemic outcome in mice with diet induced obesity without infarct size reduction**
A. A. Celik, L. Baensch, K. Shahjerdi, J. Weber, S. Saffak, J. Kielb, S. C. Gray, N. Farahat, O. M. Chavez Talavera, H. Hao, M. Benkhoff, A. Polzin, T. Zeus, M. Kelm, B. Levkau, S. Weske, L. K. Dannenberg (Düsseldorf)
- BS103 (8) **The SKINTox project – a novel model to assess phototoxic properties of cardiovascular drugs**
M. Hohl, F. Götzinger, J. Reichrath, T. Tschernig, L. Wagmann, M. R. Meyer, M. Böhm, F. Mahfoud (Homburg/Saar, Homburg; Basel, CH)

Thursday, 26/09/2024

Poster Area 6

10:15 – 11:45

New mechanisms in cardiomyopathies

- Chair** Katrin Streckfuß-Bömeke (Würzburg), Karl Toischer (Göttingen)
- BS104 (1) **Plasma of patients with acute myocardial infarction induces apoptosis and a pro-fibrotic phenotype in healthy human iPSC-cardiomyocytes**
K. Sattler, X. Fan, E. Yellice, J. Buhmann, G. Yücel, L. Cyganek, K. Bieback, G. Dobrev, X. Zhou, D. Dürschmied, I. Akin (Mannheim, Göttingen)
- BS105 (2) **Targeting Takotsubo Syndrome: Molecular Mechanisms and Treatment Efficacy through cMyBP-C Phosphorylation Modulation**
K. Kurz, E. Rawish, C. Gragoll, T. Rusack, T. Kurz, I. Eitel, T. Stiermaier (Lübeck)
- BS106 (3) **Acute activation of protein phosphatase-1 by a novel photoactivatable protein phosphatase-1 disrupting peptide prevents cellular arrhythmias in murine cardiomyocytes**
J. Herting, M. Vogel, L. F. Gerres, M. Köhn, C. Maack, S. Frantz, T. H. Fischer (Würzburg, Freiburg)
- BS107 (4) **Distinct Mechanosensory and Metabolic Dysregulation in Left and Right Ventricles in HFpEF: Implications for Comprehensive Treatment Strategies**
M. Herwig, S. Delalat, I. Sultana, A. Mügge, S. Zhazykbayeva, M. Sieme, I. El-Battrawy, M. Khan, L. van Heerebeek, N. Hamdani (Bochum; Amsterdam, NL)
- BS108 (5) **Depletion of non-classical monocytes abolishes sex differences in angiotensin II- induced cardiac fibrosis**
Y. X. Shia, J. Duchêne, S.-L. Puhl, S. Steffens (München, Würzburg)
- BS109 (6) **Novel human heart-derived adeno-associated viruses are cardiac-specific gene carriers for effective in vivo gene delivery to mammalian hearts and human iPSC-derived cardiomyocytes.**
H. Wurzer, D. Zeissler, S. Grieskamp, D. Kehr, S. Simon, P. Schlegel, E. Meinhardt, H. A. Katus, M. Busch, A. Jungmann, J. Ritterhoff, P. Most (Heidelberg)
- BS110 (7) **SGLT-2 inhibitors alter the cardiomyocytes' function and reduce cytosolic calcium transients in a rat model of diabetic HFpEF**
V. Paar, P. Jirak, F. Marmullaku, G. Schulze-Tanzil, M. Kokozidou, B. Söllner, B. Minnich, F. Schrödl, A. Trost, J. Preishuber-Pfütz, M. Lichtenauer, U. C. Hoppe, L. J. Motloch (Salzburg, AT; Nuremberg)
- BS111 (8) **Impact of titin cleavage in vivo on cardiac tissue structure and function**
P. Hartmann, J. K. Freundt, A. Unger, L. Wachsmuth, C. Faber, O. J. Müller, W. A. Linke (Münster, Kiel)

Thursday, 26/09/2024

Poster Area 7

10:15 – 11:45

Arrhythmias and channelopathies

- Chair** Christiane Jungen (Essen), Niels Voigt (Göttingen)
- BS112 (1) **Impact of arrhythmic tachypacing on fibroinflammatory cross-talk between cardiomyocytes and non-myocytes in engineered heart tissue**
T. Meier, J. Schrapers, K.-F. Müller, K. Wrona, S. Stoter, T. Eschenhagen, J. Stenzig, M. Hirt, für die Studiengruppe: DZHK (Hamburg)
- BS113 (2) **Circumventing Cardiac Reperfusion Arrhythmias in a Translational Pig Model**
C. Zgierski-Johnston, E. Chleilat, T. Kok, C. Snitchler, P. Kohl (Freiburg im Breisgau)
- BS114 (3) **Roles and mechanisms of NLRP3 inflammasome related signaling in pathogenesis of Brugada Syndrome**
C. Yan, Z. Meng, X. Lei, X. Fan, L. Cyganek, I. El-Battrawy, X. Zhou, I. Akin, für die Studiengruppe: UMM-Akin (Mannheim, Göttingen, Bochum)
- BS115 (4) **Exosomes secreted from endothelial cells affected the electrophysiological properties of cardiomyocytes via miR-126-3p in Takotsubo Cardiomyopathy**
X. Fan, G. Yang, Y. Wang, S. Haojie, G. A. Matschuck, K. Nitschke, R. Liu, B. Zhao, C. Yan, X. Lei, Z. Meng, K. Sattler, M. Abumayyaleh, C. Hölscher, L. Cyganek, G. Dobrev, I. El-Battrawy, D. Dürschmied, X. Zhou, I. Akin, for the study group: DZHK (Mannheim, Senftenberg, Göttingen, Bochum)
- BS116 (5) **C-type natriuretic peptide and vericiguat reduce proarrhythmic Ca²⁺ signals via PDE2 in heart failure**
K. Kocas, R. Firneburg, E. Cachorro Puente, A. El-Armouche, S. Kämmerer (Dresden)
- BS117 (6) **Consistent Analysis of Action Potential Parameters for Various Types of Cardiomyocytes**
C. Goetz, A. Paasche, M. Kraft, M. Prüser, F. Wiedmann, N. Frey, A. Loewe, C. Schmidt (Heidelberg, Karlsruhe)
- BS118 (7) **Modulation of cardiomyocyte contractility and action potentials with chemogenetic chloride currents**
M. Sönmez, T. Stüdemann, C. Manthey, N. Shehata, B. Schwarzova, J. Rössinger, R. Srikantharajah, A. Shibamiya, E. Schwedhelm, T. Eschenhagen, T. Christ, F. Weinberger (Hamburg)
- BS119 (8) **Phenotypic feature and underlying mechanism of SLC4A3 variant associated short-QT syndrome in human induced pluripotent stem cell derived cardiomyocytes**
Z. Meng, für die Studiengruppe: DZHK (Mannheim)

Thursday, 26/09/2024

Poster Area 8

10:15 – 11:45

Atherosclerosis and vascular biology

- Chair** Jörg Heineke (Mannheim), Sebastian Clauß (München)
- BS120 (1) **MicroRNA-31-5p is upregulated during neointima formation and significantly impacts human coronary artery smooth muscle cell functions through its interaction with STK40**
K. Kalies, S. Gürlach, F. Daniel, L. Hehl, J. Köster, S. Böttcher, K. Knöpp, D. G. Sedding (Halle (Saale))
- BS121 (2) **Unveiling Immune Dynamics in Atherosclerosis: Insights from a bone marrow chimeric murine model**
M. Sauter, N. Anto Michel, K. Händler, Z. Aherrahrou, F. Emschermann, M. Olbrich, H. Nording, H. Emami, R. J. Sauter, C. A. Gleißner, S. Autenrieth, D. Wolf, D. Dürschmied, T. Chavakis, K. Stellos, N. Nahrendorf, M. Spielmann, H. Langer (Mannheim, Lübeck, Tübingen, Eggenfelden, Heidelberg, Freiburg im Breisgau, Dresden; Graz, AT; Boston, US)
- BS122 (3) **Therapeutic Potential of miR-148a-3p Inhibition to Enhance Neovascularization and cellular senescence**
F. Daniel, L. Hehl, K. Kalies, T. D. Wils, J. Dutzmann, K. Knöpp, D. G. Sedding (Halle (Saale))
- BS123 (4) **MiR-127-3p impairs cellular functions associated with vascular remodeling, but does not induce a senescent phenotype in VSMCs**
F. Daniel, K. Kalies, L. Hehl, J. Köster, S. Gürlach, T. D. Wils, K. Knöpp, J. Dutzmann, D. G. Sedding (Halle (Saale))
- BS124 (5) **Differential regulation of endothelial and smooth muscle cell functions by miR-32- 5p: Consequences for vascular remodeling in the context of cellular senescence**
T. D. Wils, K. Kalies, L. Hehl, F. Daniel, D. G. Sedding (Halle (Saale))
- BS125 (6) **The influence of miR-331-3p on vascular remodeling with emphasis on vascular smooth muscle cells**
S. Laube, K. Kalies, N. Waurick, F. Daniel, L. Hehl, J. Köster, S. Gürlach, J. M. Daniel, D. G. Sedding (Halle (Saale))
- BS126 (7) **Does Acetylcholine-testing form the bridge to the diagnosis of chest pain and myocardial bridges? - Results from Vivantes Friedrichshain Berlin**
S. Kubik, M. C. Manstein, S. Joshi, C. Paul, E. Piel, D. O h-Ici, A. Bärtsch, S. Kische (Berlin)
- BS127 (8) **Abstract-Preis der Segnitz-Ackermann-Stiftung: Olfactory receptor 2 drives abdominal aortic aneurysm by promoting CX3CR1- mediated monocyte recruitment**
P. Schelemei, F. S. R. Picard, H. Nemade, D. Mehrkens, Y. Park, S. Grimm, K. Tinaz, M. Orecchioni, J. Roy, M. L. Liljeqvist, M. Wagenhäuser, H. Schelzig, S. Baldus, M. Mollenhauer, H. Winkels (Köln, Düsseldorf; Augusta, US; Solna, SE)

Thursday, 26/09/2024

Poster Area 9

10:15 – 11:45

Heart repair and regeneration

- Chair** Steffen Just (Ulm), N.N. (N.N.)
- BS132 (1) **Electrically Conductive Biohybrid Hydrogel Prevents Post-Infarct Cardiac Arrhythmia and Supports hiPSC-Cardiomyocyte Function**
K. Roshanbinfar, M. Schiffer, E. Carls, M. Angeloni, M. Kolesnik-Gray, S. Schrüfer, F. Ferrazzi, V. Krstic, B. Fleischmann, W. Röhl, F. Engel (Erlangen, Bonn)
- BS128 (2) **CRISPR-mediated Activation of DLK1 to Induce a Regenerative Pattern In Engineered Human Myocardium**
N. Bader, A. Rika, B. Berecic, E. Schoger, E. Buchholz, K. Toischer, L. Zelarayán, S. von Haehling, W.-H. Zimmermann, M. Tiburcy (Göttingen)
- BS129 (3) **The fine line between efficient maturation and metabolic stress in human engineered heart tissues**
P. Beck, M. Schubert, K. Guan (Dresden)
- BS130 (4) **Endogenous gene activation of cell cycle regulators promotes cell cycle re-entry in human induced pluripotent stem cell-derived cardiomyocytes**
R. Kim, S. Nagel, N. Liaw, W.-H. Zimmermann, A. Hofemeier, E. Schoger, L. Zelarayán (Göttingen)
- BS131 (5) **Locally increased Dysferlin expression improves left-ventricular function by stabilizing membrane nanodomains of cardiomyocytes in the myocardial infarction border zone**
Y. Zühlke, J. B. Wegener, C. Fleischhacker, N. J. Paulke, J. Wedemeyer, G. C. Riedemann, T. Kohl, G. Hasenfuß, C. Lenz, S. Lehnart, S. Brandenburg (Göttingen)
- BS133 (6) **IGFBP5 mediates cellular cross-talk triggering epicardial cell reprogramming in the diseased heart**
L. Priesmeier, J. Fischer, M. Jassyk, K. Hazzouri, F. Bleckwedel, C. Rocha, S. Doroudgar, O. J. Müller, M.-J. Goumans, A. Smits, E. Schoger, K. Toischer, L. Zelarayán, für die Studiengruppe: AG31 (Göttingen, Kiel, Leiden; Phoenix, US)
- BS134 (7) **ER-Stress Promoted GRP78 Secretion Alleviates Vascular Endothelial Inflammation in Coronary Artery Disease**
M. Al Zaidi, E. Reppes, S. Sommer-Weisel, A. Zietzer, B. Al-Kassou, F. Jansen, V. Tiyerili, G. Nickenig, S. Zimmer, A. Aksoy (Bonn, Köln, Waldbröl)
- BS135 (8) **Modulating endothelial function and vascular regeneration through inhibition of microRNA-762**
N. Waurick, K. Kalies, S. Laube, L. Hehl, F. Daniel, S. Böttcher, J. M. Daniel, D. G. Sedding (Halle (Saale))

Thursday, 26/09/2024 **Poster Area 10**
10:15 – 11:45

Genetics, Genomics, Epigenomics

- Chair** Mirko Völkens (Heidelberg), Tanja Zeller (Hamburg)
- BS136 (1) **Circular RNA circCHPC is a regulator of hypertrophy and calcium handling in cardiomyocytes**
 H. J. Hunkler, W. Pan, S. Chatterjee, K. Xiao, N. Weber, T. Thum, C. Bär (Hannover)
- BS137 (2) **Influence of genetic predisposition as a mechanism in the development of Arrhythmia-induced cardiomyopathy**
 M. B. A. Anders, N. Dybkova, C. Brand, N. Hartmann, S. Rebs, P. Tirilomis, A. Zibat, D. Vollmann, B. Wollnik, G. Hasenfuß, S. T. Sossalla, K. Streckfuß-Bömeke (Göttingen, Würzburg, Gießen)
- BS138 (3) **Degradation of MYBPC3 with Hypertrophic Cardiomyopathy-truncation mutations presumably takes place at Z-discs via nonsense mediated decay factor UPF3B**
 J. Montag, K. Kowalski, M. Kosanke, T. Kraft, V. Burkart (Berlin, Hannover)
- BS139 (4) **The role of NO/sGC signaling in erythropoiesis: Lessons from erythroid-specific knock-out and knock-in mice**
 M. Cortese-Krott (Düsseldorf)
- BS141 (5) **Investigating Cellular Dynamics in LEMD2 associated Cardiomyopathy of hiPSC- derived Microtissues**
 S. Buchmann, E.-S. Diem, A. Janz, A. Cirnu, E. Klopocki, B. Gerull (Würzburg)
- BS142 (6) **Heterozygous Shox2 Knockout Mice and Patient-specific iPSCs in the Context of Atrial Arrhythmias**
 M. L. H. Böckers, D. Rheinert, L. Weirauch, K. Räddecke, A. Löwen, S. B. Cayir, G. Rappold, C. Schaaf, C. Schmidt, S. Hoffmann (Heidelberg)
- BS143 (7) **Rare genetic variants in LDLR, APOB, and PCSK9 are associated with aortic stenosis in over 650,000 people**
 S. Kany, S. Juergens, J. Rämö, S. H. Choi, X. Wang, A. Smirnov, S. Friedman, M. Maddah, S. Khurshid, P. Ellinor, J. Pirruccello (Hamburg; Cambridge, US)

Thursday, 26/09/2024 **Poster Area 11**
10:15 – 11:45

New insight into cardiometabolic disease

- Chair** David M. Poitz (Dresden), Susanne Rohrbach (Gießen)
- BS144 (1) **Mitochondrial reactive oxygen species determine murine macrophage responses to pressure-overload in a sex-dependent manner**
 M. Palm, J. Heuser, C. Maack, S.-L. Puhl (Würzburg)
- BS145 (2) **Cardiomyocyte metabolic remodeling through the TBL1/TBLR1 co-factor complex**
 S. Hartmann, N. Bogert, N. Frey, S. Herzig, M. Konstandin (Heidelberg, München)
- BS146 (3) **Cellular response to β -adrenergic and frequency-dependent stress in a murine model of HFpEF following in vivo treatment with Salbutamol and Bisoprolol**
 N. A. Aliyar, T. Jeising, R. Roshanbin, P. Sander, J. Huettemeister, L. Semmler, F. Hohendanner, F. R. Heinzel (Berlin, Dresden)
- BS147 (4) **Impaired β -adrenergic inotropic reserve in organotypic cardiac slices of a murine cardiometabolic HFpEF model**
 L. Etschmann, J. Hüttemeister, F. Hohendanner, P. Sander, F. R. Heinzel (Berlin, Dresden)
- BS148 (5) **Targeting PDE9 Oxidation to Improve Diastolic Dysfunction in HFpEF: Insights into Inflammatory and Oxidative Stress Mechanisms**
 S. Zhazykbayeva, I. Sultana, M. Herwig, S. Delalat, S. Van Linthout, C. Tschöpe, A. Mügge, Z. Bagi, I. El-Battrawy, L. van Heerebeek, N. Hamdani (Bochum, Berlin; Augusta, US; Amsterdam, NL)
- BS149 (6) **Effects of Empagliflozin on diuresis in heart failure: Results from the CINNAMON- study and in-vivo experiments**
 F. Sinha, S. Klatt, A. Rietmann, A. Schoepperl, S. Born, L. S. Maier, F. Schweda, S. Wagner, für die Studiengruppe: CINNAMON (Regensburg)
- BS150 (7) **Investigating the role of PITX2 in atrial metabolic function**
 E. Thiemann, C. Schulz, T. Christ, M. Heine, J. Heeren, L. Fabritz, T. Eschenhagen, P. Kirchhof, F. Cuello, für die Studiengruppe: DZHK (Hamburg)
- BS151 (8) **Targeting the Hypothalamic Complement C3a Receptor: JR14a as a Novel Pharmacotherapeutic Approach to Combatting Cardio-Metabolic Syndrome**
 C. Gragoll, E. Rawish, T. Rusack, M. Schneider, K. Kurz, T. Stiermaier, H. Langer, W. Raasch, J. Köhl, Z. Aherrahrou, I. Eitel (Lübeck, Mannheim)

Thursday, 26/09/2024

Poster Area 12

10:15 – 11:45

From Bedside-to-Bench and from Bench-to-Bedside

- Chair** Felix Engel (Erlangen), Michael Schwarzer (Jena)
- BS152 (1) **Anti-Meg3 therapy supports reverse remodeling in a mouse model resembling aortic stenosis and TAVI**
A. Bührke, A.-K. Pralas, K. Zimmer, J. Bode, G. Büchler, J. Blume, A. Glasenapp, C. Bär, T. Thum (Hannover)
- BS153 (2) **Adrenergic signaling regulates post-infarct immune cell response in the pericardial adipose tissue**
A. Kaltenbach, S. Steffens, für die Studiengruppen: DZHK, IRTG (München)
- BS154 (3) **Vitamin K promotes VKORC1L1-dependent endothelial cell regeneration by limiting oxidative stress and ferroptosis**
E. Repges, A. Aksoy, K. Czogalla, A. Zietzer, C. F. H. Müller, J. Oldenburg, S. Zimmer, G. Nickenig, V. Tiyerili, M. Al Zaidi (Bonn, Waldbrohl)
- BS155 (4) **Real-world effectiveness and safety of bempedoic acid in Europe: final 2-year results from the MILOS German cohort**
I. Gouni-Berthold, J. Wouter Jukema, K. Koskinas, K. Ray, M. Averna, T. Stulnig, T. Vanassche, M. de Munategui Climente, M. Lamparter, J. Soronen, K. Wenz-Poeschl, X. Pintó, K. G. Parhofer, für die Studiengruppe: MILOS (Cologne, Munich; 2333, NL; Bern, CH; London, UK; Palermo, IT; Vienna, AT; Leuven, BE; Barcelona, ES)
- BS156 (5) **The influence of acute coronary syndrome on the enteral microbiome and downstream microbiome-dependent metabolites - Microbiome in acute myocardial infarction – MIAMI-Trial**
D. Messiha, A. Tratnik, A. Westendorf, E. Lange, J. Kehrmann, T. Rassaf, C. Rammos (Essen)
- BS157 (6) **Targeting sphingolipid mediated lipotoxicity in calcific aortic valve disease: From multi-omics analyses to a pharmacotherapeutic approach**
T. Rusack, J. Inderhees, C. Gragoll, T. Gemoll, T. Sauer, H. Busch, C. Knosalla, T. Stiermaier, T. Schmidt, M. Schneider, K. Kurz, Z. Aherrahrou, I. Eitel, C. Frerker, E. Rawish (Lübeck, Berlin)
- BS158 (7) **Pharmacological Reprogramming Reverses Endothelial Cell Senescence and Restores Vascular Regenerative Function**
K. Kalies, K. Knöpp, L. Wurmbrand, J. Dutzmann, D. G. Sedding (Halle (Saale))
- BS159 (8) **The role of Apolipoprotein E derived from CD11c+ cells for atheroprotection**
M. Sauter, R. J. Sauter, H. Nording, C. Lin, M. Olbrich, S. Autenrieth, C. A. Gleißner, M. Thunemann, N. Otero, E. Lutgens, Z. Aherrahrou, D. Wolf, L. Zender, S. Meuth, R. Feil, H. Langer (Mannheim, Lübeck, Tübingen, Heidelberg, Eggenfelden, Marburg, München, Freiburg im Breisgau, Düsseldorf)

Thursday, 26/09/2024

Poster Area 13

10:15 – 11:45

New Technologies

- Chair** Olaf Bergmann (Göttingen), Mona Malek Mohammadi (Bonn)
- BS160 (1) **Modelling of a RYR2-associated left ventricular non-compaction and sudden cardiac death overlap syndrome in hiPSC-EHTs**
I. My, J. Schlobohm, C. Behrens, S. Singh, S. Serio, L. Carrier, T. Christ, G. Condorelli, E. Di Pasquale, T. Eschenhagen (Hamburg; Rozzano (Milan), IT)
- BS161 (2) **Effects of Testosterone on Brugada Syndrome Phenotype in Human Induced Pluripotent Stem Cell Derived Cardiomyocytes**
Y. Li, X. Lei, X. Fan, Z. Meng, C. Yan, L. Cyganek, X. Zhou, I. El-Batrawy, I. Akin, für die Studiengruppe: DZHK (Mannheim, Göttingen, Bochum)
- BS162 (3) **Engineering adeno-associated viral vectors with improved in vivo targeting of cardiomyocytes**
L. Trumann, S. Biß, S. Groß, L. Rode, C. Bär, H. Büning, T. Thum (Hannover)
- BS163 (4) **Identification of serum factors to enhance viral transduction of human cardiomyocytes**
T. Afting, B. Berecic, M. Rinn, E. Schoger, M. Tiburcy, T. Brüggemann (Göttingen)
- BS164 (5) **Modelling the impact of the patient-specific TRPC3 mutation using induced pluripotent stem cell-derived cardiomyocytes**
C. Hanisch, K. Guan, M. Schubert (Dresden)
- BS165 (6) **Interaction between stem-cell-derived sympathetic neurons and cardiomyocytes in a patient-specific Takotsubo syndrome model**
A. A. Seedorf, B. Wenner, D. Hübscher, G. Hasenfuß, M. P. Zafeiriou, K. Streckfuß-Bömeke (Göttingen, Würzburg)
- BS167 (7) **Heterocellular electrotonic coupling between myocytes and non-myocytes in cardiac remodeling**
C. F. Marbely del Carmen, E. M. Wülfers, J. Madl, C. Zgierski-Johnston, P. Kohl, F. Schneider-Warme, für die Studiengruppe: IEKM (Freiburg im Breisgau)
- BS166 (8) **Free-standing and support-bath-based direct 3D-bioprinting of hiPSC- cardiomyocytes**
K. Roshanbinfar, T. Esser, F. Engel, für die Studiengruppe: AG31 (Erlangen)



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