DGK.
Basic Science
Cluster

25. – 27.09.2025
Congress Center Hamburg

Basic Science Meeting

Organisation
Prof. Dr. Harald Langer (Mannheim)
Prof. Dr. Rabea Hinkel (Göttingen)

Preise des Basic Science Meeting 2025

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

Abstractpreis der Segnitz-Ackermann-Stiftung
Dotierung: 3.000,00 €
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 15. 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 elften Mal der Abstractpreis der „Segnitz-Ackermann-Stiftung“ vergeben.

Wir freuen uns auf Ihre Teilnahme!

Prof. Dr. Harald Langer
Sprecher des Basic Science Cluster,
Organisator des BSM

Prof. Dr. Rabea Hinkel
Stellvertreterin,
Organisator des BSM

Prof. Dr. Philip Wenzel
Sprecher der AG 4

Prof. Dr. Kristina Lorenz
Sprecherin der AG 8

Prof. Dr. Sabine Klaassen
Sprecherin der AG 12

Prof. Dr. Sophie Van Linthout
Sprecherin der AG 13

Prof. Dr. Dr. Dominik Linz
Sprecher der AG 18

Prof. Dr. Felix Engel
Sprecher der AG 31

Sitzungen der Arbeitsgruppen (AG)

Sessions of the Working Groups

Donnerstag, 25.09.2025

Thursday, 25/09/2025

The Interconnectedness of Cardiometabolic Health and Cardiovascular Diseases in Clinical and Preclinical Settings 04
AG 13 „Myokardiale Funktion und Energetik“

Good old friends, good targets for repair 05
AG 31 „Kardiovaskuläre Regeneration “

Molecular causes of diastolic dysfunction in HFpEF and HCM
AG 8 „Genetik und Molekularbiologie kardiovaskulärer Erkrankungen“ 06

Freitag, 26.09.2025

Friday, 26/09/2025

Atrial fibrillation ablation – zooming in to the underlying mechanisms 07
AG 18 „Zelluläre Elektrophysiologie“

Myocarditis and Inflammatory Cardiomyopathy 08
AG 12 „Kardiomyopathien“

Endothelium at the center of cardiometabolic disease 09
AG 4 „Vaskuläre Biologie“

Basic Science Cluster

Donnerstag, 25.09.2025
Thursday, 25/09/2025

Medical Scientist Stipendium 10

Basic Science Poster: Poster Sitzungen
Basic Science Poster: Poster Sessions

Donnerstag, 25.09.2025
Thursday, 25/09/2025

Mechanisms and promising therapeutical approaches in heart failure 11

Genetic basis of cardiovascular diseases – signalling, mutations and functional implications 12

Vascular wall under stress 13

Myocardial micromilieu and cell-cell interactions 14

Dysregulated metabolism in cardiovascular disease – from bench to bedside 15

Arrhythmia meets basic science 16

Optogenetics and other novel techniques in cardiovascular research 17

Measurable characteristics from cardiomyopathy to TAVR 18

Cardioimmunology – from cells to patients 19

Lectures held in English.

Thursday, 25/09/2025 **Hall X9**
08:30 – 10:00

The Interconnectedness of Cardiometabolic Health and Cardiovascular Diseases in Clinical and Preclinical Settings

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

Chair	Nazha Hamdani (Bochum), Sophie Van Linthout (Berlin)
08:30	**Introduction** Nazha Hamdani (Bochum)
08:35	**Cardiometabolic Insights into Pulmonary Hypertension and Heart Failure** Stephan Rosenkranz (Köln)
08:50	Discussion
08:55	**Cardiometabolic organ interactions:** **Focus on Heart-Adipose Tissue interactions** Anna Foryst-Ludwig (Berlin)
09:10	Discussion
09:15	**From Lipid Particles to Plaque Prevention:** **HDL's Role in Cardiometabolic Disease** Benjamin Sasko (Herne)
09:30	Discussion
09:35	**Role of gut microbiota in cardiometabolic disease** Arash Haghikia (Bochum)
09:50	Discussion
09:55	**Helmut-Drexler Award** N. N. (N.N.)
09:57	**Summary** Sophie Van Linthout (Berlin)

Thursday, 25/09/2025 **Hall X9**
14:30 – 16:00

Good old friends, good targets for repair

Session of the Working Group 31 „Kardiovaskuläre Regeneration“

Chair	Felix Engel (Erlangen), Laura Zelarayán (Göttingen)
14:30	**Introduction** Laura Zelarayán (Göttingen)
14:35	**S100A9: From proinflammatory marker to mediator of vascular repair** Jes-Niels Boeckel (Leipzig)
14:50	Discussion
14:55	**Tracking antigen-specific T cell responses in patients with myocardial infarction** Anna Rizakou (Würzburg)
15:10	Discussion
15:15	**RNA splicing and tissue regeneration** Leo Kurian (Frankfurt am Main)
15:30	Discussion
15:35	**Reprogramming circadian rhythms in heart failure** Carolina Greco (Mailand, IT)
15:50	Discussion
15:55	**Summary** Felix Engel (Erlangen)

Lectures held in English.

Thursday, 25/09/2025 **Hall X9**
17:00 – 18:30

Molecular causes of diastolic dysfunction in HFpEF and HCM

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

Chair	Rabea Hinkel (Göttingen), Kristina Lorenz (Würzburg)
17:00	**Introduction** Rabea Hinkel (Göttingen)
17:05	**Clinical insights into diastolic dysfunction and pharmacological approaches** Frank R. Heinzel (Dresden)
17:16	Discussion
17:21	**The interface of tubulin tyrosination and cytoskeletal organization in HCM** Niels Pietsch (Hamburg)
17:32	Discussion
17:37	**Mitochondrial metabolism in HFpEF** Anna Klinke (Bad Oeynhausen)
17:48	Discussion
17:53	**The impact of the modulation of cardiac splicing events on cardiac stiffness** Michael Gotthardt (Berlin)
18:04	Discussion
18:09	**Young Investigation Award Winner DGJM 2025: Targeted cleavage of cardiac titin impairs diastolic function and triggers myocardial fibrosis** Paulina Hartmann (Münster)
18:20	Discussion
18:25	**Summary** Kristina Lorenz (Würzburg)

Friday, 26/09/2025 **Hall X9**
08:00 – 09:30

Atrial fibrillation ablation – zooming in to the underlying mechanisms

Session of the Working Group 18 „Zelluläre Elektrophysiologie“

Chair	Dominik Linz (Maastricht, NL), Constanze Schmidt (Heidelberg)
08:00	**Introduction** Constanze Schmidt (Heidelberg)
08:05	**Energy sources and modalities for cardiac ablation strategies** Reza Wakili (Frankfurt am Main)
08:20	Discussion
08:25	**What can we learn from translational MR and non-invasive mapping for our ablation strategies in 2025?** Till Althoff (Berlin)
08:40	Discussion
08:45	**The cellular mechanisms of ablation treatment – ion channel and scar regeneration** Soeren Brandenburg (Göttingen)
09:00	Discussion
09:05	**What do we need to know about tissue selectivity and myocardial conductivity in the context of ablation treatment?** Moritz Nies (Hamburg)
09:20	Discussion
09:25	**Summary** Dominik Linz (Maastricht, NL)

Friday, 26/09/2025 **Hall X9**
09:45 – 11:15

Myocarditis and Inflammatory Cardiomyopathy

Session of the Working Group 12 „Kardiomyopathien“

Chair	Steffen Just (Ulm), Sabine Klaassen (Berlin)
09:45	**Introduction** Sabine Klaassen (Berlin)
09:50	**Treatment of inflammatory cardiomyopathies – current evidence and strategies** Marcus Dörr (Pasewalk)
10:05	Discussion
10:10	**MCMV infection induces inflammatory cardiomyopathy in genetically predisposed hearts** Brenda Gerull (Würzburg)
10:25	Discussion
10:30	**Inflammatory Cardiomyopathy – How to Diagnose It Before it´s too Late** Bettina Heidecker (Berlin)
10:45	Discussion
10:50	**GPR15-mediated T cell recruitment during acute viral myocarditis** Diana Lindner (Freiburg im Breisgau)
11:05	Discussion
11:10	**Summary** Steffen Just (Ulm)

Friday, 26/09/2025 **Hall X9**
15:30 – 17:00

Endothelium at the center of cardiometabolic disease

Session of the Working Group 4 „Vaskuläre Biologie“

Chair	Sabine Steffens (München), Philip Wenzel (Darmstadt)
15:30	**Introduction** Sabine Steffens (München)
15:35	**Endothelial cell signaling: redox and metabolic switches** Sofia Iris Bibli (Mannheim)
15:50	Discussion
15:55	**Endothelial aging** Katrin Schäfer (Mainz)
16:10	Discussion
16:15	**Endothelial barrier and immuno-bleeding** Leo Nicolai (München)
16:30	Discussion
16:35	**S1P in abdominal aortic aneurysm formation** Nathalie Hannelore Schröder (Düsseldorf)
16:50	Discussion
16:55	**Summary** Philip Wenzel (Darmstadt)

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Donnerstag, 25.09.2025 **Saal X9**

11:30 – 12:30

Medical Scientist Stipendium

Vorsitz	Harald Langer (Mannheim), Malte Tiburcy (Göttingen)
11:30	**Einleitung** Malte Tiburcy (Göttingen)
11:32	**Exploring STrategies for OPtogenetic Termination of Ventricular Tachyarrhythmia (STOP-VT)** Franziska Schneider-Warme (Freiburg im Breisgau)
11:40	Diskussion
11:46	**Inhibition des späten Natriumstroms als Therapieoption bei alkoholinduzierter Kardiomyopathie** Maria Baier (Regensburg)
11:54	Diskussion
12:00	**Exploring T-type channels as potential molecular targets for cardiac hypertrophy and heart failure** Anja Bühler (Ulm)
12:08	Diskussion
12:14	**CORDIS: CRISPR-optimierte Reifung differenzierter iPSC-Kardiomyozyten durch Screening** Florian Kleefeldt (Würzburg)
12:22	Diskussion
12:28	**Zusammenfassung** Harald Langer (Mannheim)

Thursday, 25/09/2025 **Poster Area 4**

10:15 – 11:45

Mechanisms and promising therapeutical approaches in heart failure

Chair Mona Malek Mohammadi (Bonn), Mirko Völkers (Heidelberg)

BS78 (1) **Direct stimulation of PDE2 with 5,6-DM-cBIMP reduces arrhythmogenic triggers in isolated cardiomyocytes from mice with heart failure**
N. Kaiser, M. Gröner, A. El-Armouche, S. Kämmerer (Dresden)

BS79 (2) **Increased cardiac fibrosis and reduced vascular function after myocardial infarction in murine psoriasis**
A. Lehmann, M. Aluia, M. Aßmann, S. Khraisat, Q. Luo, F. Moreira, F. Reusswig, J. Ringen, V. S. Garlapati, S. Finger, M. Molitor, C. Deppermann, P. Lurz, A. Waisman, P. Wenzel, S. Karbach (Mainz, Darmstadt)

BS80 (3) **CX3CR1-positive neutrophils promote a pro-fibrotic shift after myocardial infarction**
M. C. Sutor, E. Cachorro, P. Diaba-Nuhoho, M. Gökalp, A. F. Rachmah, J. Marks, L. Köhler, A. El-Armouche, E. Klapproth (Dresden)

BS81 (4) **Age-associated neutrophil dynamics in patients with myocardial infarction**
H. Kleitke, L. Barth, J.-E. Schreier, C. Lenz, A. Haghikia, P. Attanasio, U. Landmesser, Y. Abdelwahed, C. Skurk, D. Meteva, N. Kränkel, J. Grune (Berlin, Göttingen, Bochum)

BS82 (5) **Cardiac macrophages support myocardial function in human heart failure**
L. Stengel, L. Schattenfroh, S.-M. Decking, H. Siegmund, K. Evert, K. Streckfuß-Bömeke, M. Nahrendorf, L. S. Maier, S. T. Sossalla, K. Renner, S. Pabel (Bad Nauheim, Regensburg, Würzburg, Gießen; Boston, US)

BS83 (6) **Neutrophil-Driven Inflammation in Takotsubo Syndrome: Human Immune Signatures and Translational Therapeutic Modulation**
K. Kurz, E. Rawish, U. Flögel, C. Gragoll, T. Rusack, T. Pühler, T. Kurz, I. Eitel, T. Stiermaier (Lübeck, Düsseldorf, Kiel)

BS84 (7) **Temporal and Tissue-Specific Dynamics of CX3CR1-positive Immune Cells After Myocardial Infarction and Their Regulation by ADAM10**
A. F. Rachmah, J. Marks, E. Cachorro, A. Gompf, K. Bernhardt, U. A. Friedrich, A. El-Armouche, E. Klapproth (Dresden)

BS85 (8) **Oxidative Stress and Inflammation-Induced Protein Quality Control Impairment in Atrial Fibrillation: A Novel Mechanism Underlying Left Ventricular Dysfunction and Reversible Stiffness**
M. Herwig, M. Tangos, M. Sieme, I. Sultana, M. Kacmaz, J. Wintrich, B. Sasko, P. Haldenwang, A. Mügge, I. El-Battrawy, S. T. Sossalla, N. Hamdani (Bochum, Herne, Gießen)

Thursday, 25/09/2025 **Poster Area 5**

10:15 – 11:45

Genetic basis of cardiovascular diseases – signalling, mutations and functional implications

Chair Heiko Methe (Friedberg), Dennis Mehrkens (Köln)

BS86 (1) **Therapeutic Single-AAV Adenine Base Editing in Noonan syndrome-associated Hypertrophic Cardiomyopathy**
C. Knauer, G. Kensah, S. Elsässer, N. Bamidele, E. Sontheimer, B. Wollnik, L. Cyganek (Göttingen; Massachusetts, US)

BS87 (2) **SHOX2-Dependent Genetic Crosstalk in Human hiPSC-derived Cardiac and Thalamic Pacemaker Tissues**
S. Sepahvand, A. Löwen, M. Neu, R. Walder, R. Roeth, S. Schmitteckert, T. Seeger, S. Hoffmann (Heidelberg)

BS88 (3) **Novel Secretome-Driven Arrhythmogenic Mechanisms in Atrial Cardiomyopathy**
M. Bögner, G. Ramesh, P. Fahjen, M. Kirk, E. Heil, J. Hüttemeister, M. Bock, J.-H. Gerds-Li, K. Zhang, V. Falk, P. Mertins, G. Hindricks, F. Hohendanner (Berlin)

BS89 (4) **TRAF7 regulates the proliferation of zebrafish and rat cardiomyocytes**
L. K. Griesinger, B. Gahr, W. Rottbauer, S. Just, für die Studiengruppe: AG Just (Ulm)

BS90 (5) **Gain of function of nonsense mediated mRNA decay in the pathogenesis of HCM with MYBPC3 PTC mutation.**
A. Alameldeen, M. Naghizadeh, S. Haydar, R. Gilsbach, M. Völkers, G. Stoecklin, N. Frey, T. Seeger (Heidelberg, Mannheim)

BS91 (6) **Pro-arrhythmic Ca2+-signals in heart failure can be reduced via cGMP-mediated PDE2 activation by C-type natriuretic peptide and its modified analog Cenderitide**
C. Weisner, M. Gröner, K. Kocas, A. El-Armouche, S. Kämmerer (Dresden)

BS92 (7) **Distinct titin mutations drive proarrhythmogenic electrophysiological remodelling in atrial iPSC cardiomyocytes**
L. Weirauch, P. J. Siedler, L. Cyganek, F. Wiedmann, P. Hartmann, W. A. Linke, N. Voigt, C. Schmidt (Heidelberg, Göttingen, Münster)

BS93 (8) **A systematic evaluation of cardiac gene transfer protocol in a large animal model**
M. T. Vo, V. Horchemer, D. Kehr, E. Meinhardt, M. Pott, P. Raake, N. Frey, P. Schlegel (Heidelberg, Augsburg)

Thursday, 25/09/2025 **Poster Area 6**

10:15 – 11:45

Vascular wall under stress

Chair Oliver J. Müller (Kiel), Ilka Ott (Pforzheim)

BS94 (1) **Olfactory receptor 2 promotes recruitment of monocytes in abdominal aortic aneurysm**
P. Schelemei, F. S. R. Picard, D. Mehrkens, J. Wrobel, H. Nemade, Y. Park, E. Wagner, P. Arkenberg, A. Hof, W. Ibing, H. Schelzig, M. Wagenhäuser, J. Roy, M. L. Liljeqvist, M. Orrechioni, B. Levkau, N. Gerdes, R. T. Megens, C. Weber, S. Baldus, M. Mollenhauer, H. Winkels (Köln, Düsseldorf, München; Solna, SE; Augusta, US)

BS95 (2) **CD11c⁺ Antigen-Presenting Cells as a Source of ApoE and Modulators of Atherosclerosis**
M. Sauter, R. J. Sauter, H. Nording, C. Lin, M. Olbrich, S. Autenrieth, C. A. Gleißner, D. Wolf, D. Dürschmied, H. Langer (Mannheim, Lübeck, Tübingen, Eggenfelden, Freiburg im Breisgau)

BS96 (3) **CD11c⁺ Cell Depletion Induces Inflammation-Driven Atherosclerosis in a Lipid-Independent Murine Model**
M. Sauter, N. Anto Michel, K. Händler, M. Olbrich, H. Nording, R. J. Sauter, C. A. Gleißner, D. Wolf, K. Stellos, D. Dürschmied, H. Langer (Mannheim, Freiburg im Breisgau, Lübeck, Tübingen, Eggenfelden)

BS97 (4) **The RNA-binding protein HuR controls mRNA stability of disease-related genes in atherosclerosis**
M. Sachse, G. Georgiopoulos, K. Sopova, M. Polycarpou-Schwarz, G. Ciliberti, A. Turchinovich, G. Mavraganis, S. Tual-Chalot, K. Stamatelopoulos, K. Stellos (Mannheim; Athens, GR; Newcastle Upon Tyne, UK)

BS98 (5) **Oxidiertes HDL ist mit vaskulärer Dysfunktion bei koronarer Herzkrankheit und akutem Koronarsyndrom assoziiert**
B. Sasko, F. Alturki, I. Sultana, S. Delalat, D. Bismpos, I. El-Battrawy, M. Christ, C. Ukena, N. Pagonas, N. Hamdani (Herne, Bochum, Bottrop, Neuruppin)

BS99 (6) **Intronic Alu editing regulates Cathepsin K expression in atherosclerotic cardiovascular disease**
M. Sachse, G. Georgiopoulos, K. Sopova, M. Polycarpou-Schwarz, G. Mavraganis, S. Tual-Chalot, K. Stamatelopoulos, K. Stellos (Mannheim; Athens, GR; Newcastle Upon Tyne, UK)

BS100 (7) **Sex-specific expression of C5aR1 as the underlying mechanism of enhanced revascularization in male mice**
L. Baron, H. Nording, J. Marquardt, H. Langer (Lübeck, Mannheim)

BS101 (8) **The dual role of red blood cells in cardioprotection: NO-independent reduction of myocardial infarct size and coronary no-reflow**
M. Alff, H. R. Lieder, H. K. Seifert, P. Kleinbongard (Essen)

Thursday, 25/09/2025 **Poster Area 7**

10:15 – 11:45

Myocardial micromilieu and cell-cell interactions

Chair Martin Mollenhauer (Köln), Ann-Kathrin Rahm (Heidelberg)

BS102 (1) **Functional Heterogeneity in Isolated Ventricular Cardiomyocytes with β-Adrenergic Stimulation**
A.-C. Hansen, F. R. Heinzel (Berlin, Dresden)

BS103 (2) **Unraveling cardiac mechanical anisotropy: Sarcomeric stiffness in the transverse and longitudinal directions.**
F. A. Wagner, C. Loescher, A. Unger, M. Kühn, A. Klotz, I. Liashkovich, D. Ciechanska, H. Schillers, F. Koser, J. K. Freundt, A. Hessel, W. A. Linke (Münster)

BS104 (3) **Structure and dynamics of human cardiac fibroblast membrane nanotubes**
S. Schmid-Herbstritt, P. Morais Costa, G. Stief, V. Zeidler, J. Greiner, J. Madl, J. Dienert, T. Brox, T. Kohl, S. Brandenburg, S. Lehnart, P. Kohl, E. Rog-Zielinska (Freiburg im Breisgau, Freiburg, Göttingen)

BS105 (4) **Distinct effects of PDE5 inhibition on cGMP and calcium signaling in human atrial myocytes from patients in sinus rhythm versus atrial fibrillation**
D. Revuelta, A. Brunetti, L. Hove-Madsen, B. Reiter, H. Reichenspurner, C. Espinosa Molina (Hamburg; Barcelona, ES)

BS106 (5) **Modeling Hypoxia-Reoxygenation Injury in Metabolically Matured Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes**
M. Schubert, O. Gamm, Y. Dzekhtsiarova, K. Fischer, K. Guan (Dresden)

BS107 (6) **Intracellular calcium signaling shapes SERCA2a regulation in human atrial myocytes**
A. Brunetti, D. Revuelta, N. Pavlidou, B. Kloth, F. Reinhardt, C. Molina (Hamburg)

BS108 (7) **Stressed cardiomyocytes affect the cardiac remodeling process during reperfused Acute Myocardial Infarction**
T. Zeumer, A. Roth, U. Hendgen-Cotta, T. Rassaf (Essen)

BS109 (8) **Modulating AMPK and DLK1 activity to protect from hypoxia-reoxygenation injury in in engineered human myocardium**
B. Berecic, M. Tiburcy, N. Bader, E. Schoger, L. Zelarayán, W.-H. Zimmermann (Göttingen)

Thursday, 25/09/2025 **Poster Area 8**

10:15 – 11:45

Dysregulated metabolism in cardiovascular disease – from bench to bedside

Chair Norbert Gerdes (Düsseldorf), Jörg Heineke (Mannheim)

BS110 (1) **Effectiveness and safety of bempedoic acid in women and men: 2-year results from the German cohort of the prospective, non-interventional, real-world MILOS study**
I. Gouni-Berthold, J. W. Jukema, J. E. Roeters van Lennep, K. K. Ray, K. Koskinas, M. Averna, T. Stulnig, T. Vanassche, M. de Muniategui Climente, K. Wenz-Pöschl, R. Chhabra, M. Lamparter, X. Pintó, K. G. Parhofer, für die Studiengruppe: MILOS (Cologne, Munich, München; Leiden, Rotterdam, NL; London, UK; Bern, CH; Palermo, IT; Vienna, AT; Leuven, BE; Barcelona, ES)

BS111 (2) **More mitochondrial fission mediator Drp1 in endothelial cells – increased microvascular damage after ischemia/reperfusion injury**
C. Eickelmann, A. J. LeBlanc, A. M. Beyer, P. Kleinbongard (Essen, Kentucky; Milwaukee, US)

BS112 (3) **NaV1.5 gain-of-function cardiomyopathy impairs cardiac energy and mitochondrial redox metabolism and excitation contraction coupling (ECC), corrected by Junctophilin2 overexpression**
M. Mushtaq, S. Brandenburg, S. Lehnart, D. Katschinski, M. Shattock, Y. Chung, S. Kasarla, P. Phapale, C. Lenz, S. Marx (Göttingen, Dortmund; London, UK; New York, US)

BS113 (4) **Complement C3aR Activation in Hypothalamic Neurons Controls Central Leptin Sensitivity and Fuels Obesity**
E. Rawish, C. Gragoll, M. Schneider, T. Rusack, K. Kurz, T. Stiermaier, Z. Aherrahrou, T. Zeller, H. Langer, J. Köhl, I. Eitel (Lübeck, Mannheim)

BS114 (5) **Cell Type-Specific Secretome Profiling Reveals Novel Candidates of Liver-Heart Crosstalk in HFpEF**
J. P. Schütte, N. Markus, S. Grein, V. Kamuf-Schenk, C. Stroh, M. Rettel, F. Stein, J. Fischer, Z. Löwenthal, J. Leiner, B. Wang, D. Kaye, M. M. Zylla, N. Frey, M. Völkers, für die Studiengruppe: DZHK (Heidelberg, Leipzig; Melbourne, AU)

BS115 (6) **Abstract-Preis der Segnitz-Ackermann-Stiftung: Nr4a1 protects the heart in diabetic cardiomyopathy**
A. R. Saadatmand, S. Nazir, Z. Chen, G. Gong, P. Laurette, M. Heikenwälder, R. Gilsbach, J. Backs, für die Studiengruppe: DZHK (Heidelberg)

BS116 (7) **Metabolic alterations in microglia as a potential mediator of neuroinflammation after experimental myocardial infarction**
N. Hofmann, G. Rizzo, U. Hofmann, K. Sinning, A. Frey, C. Cochain, M. Vaeth, J. Traub (Würzburg)

BS117 (8) **Towards treatment of Dilated Cardiomyopathy: Serine Biosynthesis as a Potential Target**
R. Walder, R. Kistler, E. Schoger, I. Karakikes, N. Frey, T. Seeger (Heidelberg; California, US)

Thursday, 25/09/2025 **Poster Area 9**

10:15 – 11:45

Arrhythmia meets basic science

Chair Ibrahim Akin (Mannheim), Felix Wiedmann (Göttingen)

BS118 (1) **BMP10 Secretion and Function as a Novel Atrial Fibrillation Biomarker in Engineered Human Heart Tissue**
L. Sommerfeld, J. Schrapers, L. von Hacht, K.-F. Müller, J. Ridder, P. Bangfen, C. O'Shea, W. Chua, M. Hirt, P. Kirchhof, J. Stenzig, L. Fabritz (Hamburg; Coventry, Birmingham, UK)

BS119 (2) **Antiarrhytmisches Wirkprofil von Ibutilid – neue Implikationen für die Behandlung der atrialen Arrythmopathie?**
A. Yoncaova, M. Kraft, M. Prüser, N. Frey, F. Wiedmann, C. Schmidt (Heidelberg)

BS120 (3) **Sulcardine – a novel inhibitor of atrial ion channels to suppress atrial fibrillation**
M.-L. Prüser, M. Prüser, M. Kraft, M. Zaradzki, M. Karck, N. Frey, F. Wiedmann, C. Schmidt (Heidelberg)

BS121 (4) **Cardiac fibrosis affects electrical conduction and arrhythmogenesis in a pacing- rate-dependent manner**
F. Giardini, C. Olianti, G. Marchal, F. Campos, V. Romanelli, I. Perumal Vanaja, R. Piersanti, V. Biasci, E. Cerbai, J. Madl, S. Chelko, F. Regazzoni, M. Bishop, M. Mongillo, P. Kohl, T. Zaglia, C. Zgierski-Johnston, L. Sacconi (Freiburg, Freiburg im Breisgau; London, UK; Pisa, Firenze, Padova, Milano, 50019, IT; Tallahassee, Florida, US)

BS122 (5) **Time-dependent reversibility of structural and electrical atrial remodeling following cardioversion of atrial fibrillation: translational insights from a porcine model**
B. Yesilgoez, F. Wiedmann, A. Paasche, M. Kraft, N. Frey, C. Schmidt (Heidelberg)

BS123 (6) **Occurrence and Prevention of Ischaemia-Reperfusion Arrhythmias in a Pig Model**
R. Tony, E. Chleilat, T. Kok, C. Snitchler, P. Kohl, C. Zgierski-Johnston (Freiburg im Breisgau)

BS124 (7) **Organotypic Cardiac Slices from Human Hearts as a Platform for Antiarrhythmic Drug Testing**
A. Cote, J. Phillips, P. Kohl, U. Ravens, R. Peyronnet (Freiburg im Breisgau)

Thursday, 25/09/2025 **Poster Area 10**

10:15 – 11:45

Optogenetics and other novel techniques in cardiovascular research

Chair Antje Ebert (Göttingen), Hendrik Sager (München)

BS125 (1) **BiPOLES for Bidirectional Optogenetic Control of Cardiomyocytes and Non-Myocytes**
R. De Zio, N. Meyer, J. Vierock, F. Schneider-Warme (Freiburg im Breisgau, Berlin)

BS126 (2) **Utilizing Optoacoustic Tomography to Measure Transmembrane Voltage**
F. Flath, C. Baumgartner, P. Kohl, C. Zgierski-Johnston (Freiburg im Breisgau; Luzern, CH)

BS127 (3) **Optogenetic depolarization of non-myocytes in cardiac remodelling**
M. Calderón Fernández, E. M. Wülfers, S. Chang, J. Madl, P. Kohl, C. Zgierski- Johnston, F. Schneider-Warme, for the study group: IEKM (Freiburg im Breisgau)

BS128 (4) **In-Silico Assessment of Channelrhodopsin Ion Selectivity for Optogenetic Defibrillation**
S. Ohnemus, L. Tillert, P. M. Boyle, P. Kohl, V. Timmermann, J. Vierock, F. Schneider-Warme (Freiburg im Breisgau, Berlin; Seattle, US)

BS129 (5) **Using optogenetic mouse models for dissecting neuronal control of ventricular function**
J. Rebers, M. Calderón Fernández, J. Heer, P. Iaconniani, J. Madl, P. Kohl, C. Zgierski-Johnston, F. Schneider-Warme (Freiburg im Breisgau)

BS130 (6) **Artificial Intelligence-Enabled 3D Reconstructions of Cardiomyocytes**
J. Greiner, F. Sonak, J. Madl, T. Seidel, P. Kohl, E. Rog-Zielinska (Freiburg im Breisgau, Erlangen)

Thursday, 25/09/2025 **Poster Area 11**
10:15 – 11:45

Measurable characteristics from cardiomyopathy to TAVR

Chair Tanja Zeller (Lübeck), Friedrich Felix Hoyer (Köln)

BS131 (1) **Impact of empagliflozin and glucagon-like peptide-1 receptor agonists in metabolic, inflammatory and oxidative stress related signaling pathways in human heart failure with preserved ejection fraction**
I. Sultana, S. Delalat, H. Osman, S. Zhazykbayeva, E. Göztepe, B. Alahmad, N. Borgmann, I. El-Battrawy, L. van Heerebeek, N. Hamdani (Bochum; AC Amsterdam, NL)

BS132 (2) **Diabetes-Induced β-Adrenergic and Protein Quality Control Dysfunction Drives Cardiomyocyte Stiffness in HFpEF: Mechanistic Insights from Human Myocardial Biopsies**
H. Budde, S. Delalat, I. Sultana, H. Osman, M. Sieme, S. Zhazykbayeva, M. Herwig, Á. Kovács, M. Kacmaz, E. Göztepe, N. Borgmann, G. Shahriari, B. Sasko, J. Wintrich, P. Haldenwang, W. E. Schmidt, W. Fenske, M. Khan, K. Jaquet, A. Mügge, D. MÁTHÉ, V. E. Tóth, Z. V. Varga, P. Ferdinandy, I. El-Battrawy, L. van Heerebeek, N. Hamdani, für die Studiengruppe: AG13 (Bochum, Bochum, Herne, Budapest; Amsterdam, NL; Budapest, HU)

BS133 (3) **Modelling a mitochondrial cardiomyopathy using patient specific iPSC-derived cardiomyocytes**
N. Speri, K. Guan, M. Schubert, A. El-Armouche (Dresden)

BS134 (4) **Sex-differences In Endothelial Dysfunction After Ischemia/Reperfusion Injury: Effect of Postpartum Plasma Supplementation During Storage On Rat Arterial Vessels**
E. M. S. Reischl, B. Liu, M. J. Guzman-Ruvalcaba, J. K. Förster, A. A. Sayour, G. Szabó, M. Karck, S. Korkmaz-Icöz (Heidelberg, Halle (Saale); Budapest, HU)

BS135 (5) **Longitudinal plasma proteomics following TAVI using the Olink explore HT platform**
B. Burwinkel, B. Becker, H. Nording, P. S. Wild, D. Frank, J. C. Voran (Kiel, 24105, Mainz)

BS136 (6) **Generation and longitudinal functional assessment of multicellular bioengineered heart muscle from human induced pluripotent stem cells for cardiac development and regeneration**
A. Nedunchezhian, A. Sikandar, I. Ullah, L. Priesmeier, B. Berecic, W.-H. Zimmermann, O. Bergmann (Göttingen)

BS137 (7) **Transcriptomic Remodeling After TAVI Reveals Shifts in Metabolism and Proteostasis**
B. Becker, B. Burwinkel, H. Nording, N. Mishra, P. Rosenstiel, D. Frank, J. C. Voran (Kiel, 24105)

Thursday, 25/09/2025 **Poster Area 12**

10:15 – 11:45

Cardioimmunology – from cells to patients

Chair Florian Leuschner (Heidelberg), Katharina Scherschel (Düsseldorf)

BS138 (1) **Plasma GDF-15 concentration predicts 24-hours recurrence after atrial tachycardia ablation**
J. Tennigkeit, M. Wiegelmann, C. Massa, B. Seliger, J. Lübcke, W. Dammermann, K. Börner, F. Schröter, O. Ritter, M. Kleinert, G. Sachse (Brandenburg an der Havel, Bernau bei Berlin, Nuthetal)

BS139 (2) **Impact of high-fat diet as additional cardiovascular risk factor on vascular inflammation and dysfunction in autoimmune skin disease associated with cardiovascular comorbidity**
F. M. Ludwig, A. Lehmann, K. Kommoss, T. Bieler, S. Finger, A. Waisman, P. Wenzel, S. Karbach (Mainz, Heidelberg, Darmstadt)

BS140 (3) **Platelet C5aR1 Drives Cardiac Injury Through Platelet–Neutrophil Interactions and NET Formation**
N. Schommer, S. Zhang, H. Nording, N. Burkhard, N. Schanze, N. Gauchel, M. A. Hamad, D. Stallmann, K. Krauel, H. Langer, D. Dürschmied (Mannheim, Lübeck, Freiburg im Breisgau; Boston, US)

BS141 (4) **Biphasic control of monocyte trafficking by metabolic stress via Osteopontin/ αvβ3/CD44v6 signaling axis**
D. Semo, X. Liang, W. Wang, M. Leffers, S. Vieth, H. Reinecke, R. Godfrey (Münster)

BS142 (5) **Locoregional Immune Cell Infiltration in Aortic Aneurysm Formation**
N. Gilleßen, V. Niemann, Y. Ostendorf, M. Grandoch (Düsseldorf)

BS143 (6) **Piezo1-dependent cytokine release by human atrial fibroblasts contributes to immune cell migration and endothelial cell properties via paracrine communication**
H. Hemeling, M. Koch, P. Kohl, U. Ravens, R. Peyronnet, R. Emig, für die Studiengruppe: IEKM (Freiburg im Breisgau)

BS144 (7) **Analysis of differential targeting approaches of ERK1/2 on phagocytosis and efferocytosis of macrophages in vitro**
N. Grütz, J.-N. Herbel, K. Lorenz (Würzburg)

BS145 (8) **Heterocellular Communication in Atrial Fibrillation: Piezo1 as a Link Between Fibroblasts and Inflammation**
R. Emig, M. Koch, P. Iaconianni, K. Kollmar, C. Walz, T. Prinz, A. Lother, P. Kohl, U. Ravens, R. Peyronnet (Freiburg im Breisgau, Freiburg)

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