New Molecular Pathomechanisms and Novel Therapeutic Approaches in Heart Failure

Scientific Committee

Heinz-Peter Schultheiss
Carsten Tschoepe
Wolfgang Poller

Dept. of Cardiology and Pneumology, Charité – Universitätsmedizin Berlin

Under the auspices of: German Society of Cardiology, International Society of Cardiomyopathy and Heart Failure, ESC Working Group: »Myocardial and Pericardial Diseases«, Berlin-Brandenburg Center for Regenerative Therapy, Deutsche Forschungsgemeinschaft, German-Russian Cooperation on Treatment of Myocardial Disease and Cardiomyopathies
Dear colleagues,

it is a distinct pleasure for us to welcome you in Berlin to an international symposium entitled "New molecular pathomechanisms and novel therapeutic approaches in heart failure". The challenge of heart failure diagnosis and therapy is increasing worldwide as a consequence of both increasing prevalence and severity of this clinical syndrome. The necessity to develop and evaluate novel treatment strategies arises from the rather limited efficacy of current therapeutic approaches. Drug-based and surgical approaches including heart transplantation and cardiac assist devices have improved the quality of life and prognosis of heart failure patients.

However, LVAD and HTX are available only for a very small fraction of patients worldwide, and current drug therapy has limited efficacy in advanced stages. During the symposium we will discuss the status and prospects of cell transfer-based and recombinant protein-based approaches, but also strategies based on regulatory RNA molecules or gene transfer to the heart. These approaches have already entered or are currently entering the stage of clinical translation, thus generating a truly exciting and exceptional period in the development of heart failure research. The recent evolution of such novel therapeutic tools ready for preclinical and clinical evaluation has enabled us to address new therapeutic targets that were beyond the reach of traditional pharmaceutical strategies.

The symposium covers a spectrum of current scientific and clinical work ranging from the identification of new targets and molecular pathomechanisms, refined diagnostic procedures, to the evaluation of the therapeutic tools by rigorously designed preclinical and clinical studies.

The faculty of the symposium reflects the thoroughly interdisciplinary character of current heart failure research worldwide, and we are indeed certain that the get together of colleagues from diverse field of science is of paramount importance to achieve the ultimate and very demanding goal of translating basic research findings from well defined systems to the far more complex situation encountered when treating individual patients.

We look forward with great pleasure to this “translational” meeting within the center of the exciting city of Berlin.

With our best regards

Heinz-Peter Schultheiss
Carsten Tschoepe
Wolfgang Poller
Thursday, January 21

10:00
Registration & Get Together

12:00
Welcome
Heinz-Peter Schultheiss (Charité – Universitaetsmedizin Berlin, GERMANY)

Welcome Address
Rudolf Tauber (Vice Dean for Research, Charité – Universitaetsmedizin Berlin, GERMANY)

Introduction
Carsten Tschoepe (Charité – Universitaetsmedizin Berlin, GERMANY)

Session I

Differences in Heart Failure with Preserved versus Reduced Ejection Fraction
Chairpersons:
Javier Díez (University of Navarra; Pamplona, SPAIN)
Gerd Heusch (University of Essen, GERMANY)

12:15 – 12:35
Incidence and Development of Heart Failure with Preserved vs. Reduced Ejection Fraction
Burkert M. Pieske (Medical University of Graz, AUSTRIA)

12:35 – 12:45
Discussion

12:45 – 13:05
Genetic Variants and Cardiac Structure in Heart Failure with Preserved vs. Reduced Ejection Fraction
Stefan Blankenberg (University of Mainz, GERMANY)

13:05 – 13:15
Discussion

13:15 – 13:35
Myofilament Dysfunction in Heart Failure with Preserved vs. Reduced Ejection Fraction
Wolfgang Linke (Ruhr University Bochum, GERMANY)

13:35 – 13:45
Discussion

13:45 – 14:05
Ejection Fraction-Independent Cardiac Death
Walter J. Paulus (Free University Amsterdam, THE NETHERLANDS)

14:05 – 14:15
Discussion

14:15 – 15:00
Poster Session I and Coffee Break
Moderators:
William J. McKenna (The Heart Hospital, London, UK),
Reinhard Kandolf (University of Tuebingen, GERMANY)
Thursday, January 21

Session II

**New Molecular and Cellular Pathomechanisms in Heart Failure**

Chairpersons:
- Vinzenz Hombach (University of Ulm, GERMANY)
- Paolo Camici (Imperial College London, UK)

15:00 – 15:20

**Inflammation and Cardiac Remodeling**

Carsten Tschoepe (Charité – Universitaetsmedizin Berlin, GERMANY)

15:20 – 15:30

Discussion

15:30 – 15:50

**Toll-like Receptors in Heart Failure**

Peter P. Liu (University of Toronto, CANADA)

15:50 – 16:00

Discussion

16:00 – 16:20

**The Cardiac Ankyrin Repeat Protein (CARP) in Heart Failure**

Jeffrey A. Towbin (University of Cincinnati, Ohio, USA)

16:20 – 16:30

Discussion

16:30 – 16:50

**Novel Therapies Targeting Cardiac Matrix and Myocardial Remodeling**

Stephane Heymans (University of Maastricht, THE NETHERLANDS)

16:50 – 17:00

Discussion

17:00 – 17:30

Coffee Break

**Evening Lecture**

Chairpersons:
- Hans-Dieter Volk (Berlin-Brandenburg Center for Regenerative Therapy (BCRT), Berlin, GERMANY)
- Heinz-Peter Schultheiss (Charité – Universitaetsmedizin Berlin, GERMANY)

17:30 – 18:00

**Predictors of Autoimmune Disease – Looking to the Future**

Noel R. Rose (Bloomberg School of Public Health, Baltimore, USA)

20:00

Get together
Session III

Virus-Induced Cardiac Injury in Inflammatory Cardiomyopathy
Chairpersons:
Reinhard Kandolf (University of Tuebingen, GERMANY)
Andrea Frustaci (Catholic University of the Sacred Heart, Rome, ITALY)

08:30 – 08:50
Coxsackievirus-Induced Myocardial Injury
Kirk Knowlton (UCSD Medical Center, San Diego, USA)

08:50 – 09:00
Discussion

09:00 – 09:20
Coxsackievirus-Adenovirus-Receptor (CAR) in Heart Failure
Michael Gotthardt (Max Delbrueck Center for Molecular Medicine Berlin-Buch, GERMANY)

09:20 – 09:30
Discussion

09:30 – 09:50
Parvovirus-Induced Myocardial Injury
Thomas Bock (Robert-Koch-Institut, Berlin, GERMANY)

09:50 – 10:00
Discussion

10:00 – 10:30
Poster Session II and Coffee Break
Moderators:
Meinrad P. Gawaz (University of Tuebingen, GERMANY)
Walter J. Paulus (Free University Amsterdam, THE NETHERLANDS)
Session IV

Disturbances of Vascular Endothelium Repair in Heart Failure
Chairpersons:
Stephane Heymans (University of Maastricht, THE NETHERLANDS)
Petar M. Seferović (University of Belgrade, SERBIA)

10:30 – 10:50
Microcirculation in Heart Failure with Preserved and Reduced Ejection Fraction
Paolo Camici (Imperial College London, UK)

10:50 – 11:00
Discussion

11:00 – 11:20
Notch-Signaling for Endothelial Repair
Florian P. Limbourg (Hannover Medical School (MHH), GERMANY)

11:20 – 11:30
Discussion

11:30 – 11:50
Endothelial Mitochondrial Dysfunction
Sean M. Davidson (University College Hospital, London, UK)

11:50 – 12:00
Discussion

12:00 – 12:20
Regulatory RNA Molecules and Angiogenesis
Stefanie Dimmeler (University of Frankfurt/Main, GERMANY)

12:20 – 12:30
Discussion

12:30 – 13:45
Lunch
Session V

Potential Role of Regenerative Medicine in Heart Failure

Chairpersons:
Stefanie Dimmeler (University of Frankfurt/Main, GERMANY)
Noel R. Rose (Bloomberg School of Public Health, Baltimore, USA)

13:45 – 14:05
Mechanisms of Stem Cell Therapy: The Role of Paracrine Effects
Kai Wollert (Hannover Medical School, GERMANY)

14:05 – 14:15
Discussion

14:15 – 14:35
Cardiac Remodeling after Treatment with Mesenchymal Stem Cells
Douwe E. Atsma (Leiden University Medical Center, THE NETHERLANDS)

14:35 – 14:45
Discussion

14:45 – 15:05
Endothelial Progenitor Cells and Virus-induced Endothelial Damage
Caroline Schmidt-Lucke (Charité – Universitätsmedizin Berlin, GERMANY)

15:05 – 15:15
Discussion

15:15 – 15:35
Thrombocytes and Progenitor Cells in Inflammatory Cardiomyopathy
Meinrad P. Gawaz (University of Tuebingen, GERMANY)

15:35 – 15:45
Discussion

15:45 – 16:10
Coffee Break
Session VI

Novel Diagnostic and Prognostic Approaches Towards Heart Failure

Chairpersons:
Hugo A. Katus (University of Heidelberg, GERMANY)
Konstantin Borisov (Medical Center of the Executive Office of the President of Russian Federation, RUSSIA)

16:10 – 16:30
Familial DCM: Early Recognition of ‘At Risk’ Individuals
William J. McKenna (The Heart Hospital, London, UK)

16:30 – 16:40
Discussion

16:40 – 17:00
Molecular Genetics for Diagnostic and Prognostic Assessment
Eloisa Arbustini (IRCCS Policlinico San Matteo, Pavia, ITALY)

17:00 – 17:10
Discussion

17:10 – 17:30
Heart Failure Pathogenesis: Is it all genetics?
Wolfgang Rottbauer (University of Heidelberg, GERMANY)

17:30 – 17:40
Discussion

17:40 – 18:00
Endomyocardial Biopsies in the Evaluation of Diagnosis and Prognosis
Bernhard Maisch (University of Marburg, GERMANY)

18:00 – 18:10
Discussion

Evening Lecture

Chairpersons:
Jeffrey A. Towbin (University of Cincinnati, Ohio, USA)
Peter-Michael Kloetzel (Charité – Universitätsmedizin Berlin, GERMANY)

18:10 – 18:40
Molecular Biology and Pathogenesis of Viral Myocarditis
Bruce McManus (University of British Columbia, Vancouver, CANADA)

21:00
Faculty Dinner
Keynote Lecture
Chairpersons:
Georg Ertl (University of Wuerzburg, GERMANY)
Martin Paul (University of Maastricht, THE NETHERLANDS)

08:30 – 09:00
Therapeutic Targeting of Calcium Handling in Heart Failure State-of-the-Art in Clinical Translation
Roger Hajjar (Mount Sinai School of Medicine, New York, USA)

Session VII

New Treatments for Heart Failure with Preserved or Reduced Ejection Fraction
Chairpersons:
Heribert Schunkert (University of Luebeck, GERMANY)
Stefan Anker (Charité – Universitaetsmedizin Berlin, GERMANY)

09:00 – 09:20
Personalized Medicine in Heart Failure Therapy
Heyo K. Kroemer (University of Greifswald, GERMANY)

09:20 – 09:30
Discussion

09:30 – 09:50
Adiponectin in Inflammatory Cardiomyopathy
Carsten Skurk (Charité – Universitaetsmedizin Berlin, GERMANY)

09:50 – 10:00
Discussion

10:00 – 10:20
Therapeutic Modulation of Inflammatory Cell Infiltration in Cardiomyopathies
Urs Eriksson (University of Zuercich, SWITZERLAND)

10:20 – 10:30
Discussion

10:30 – 10:50
Regulatory RNA Molecules and Gene Transfer for the Treatment of Heart Failure
Wolfgang Poller (Charité – Universitaetsmedizin Berlin, GERMANY)

10:50 – 11:00
Discussion

11:00 – 11:30
Poster Session III and Coffee Break
Moderators:
Javier Diez (University of Navarra, Pamplona, SPAIN)
Heyo K. Kroemer (University of Greifswald, GERMANY)
Saturday, January 23

Session VIII

Specific Therapeutic Options in Inflammatory Cardiomyopathy

Chairpersons:
Kirk Knowlton (UCSD Medical Center, San Diego, USA)
Matthias Pauschinger (Klinikum Nuernberg Sued, Nuernberg, GERMANY)

11:30 – 11:50
Viral Receptors as Therapeutic Targets
Henry Fechner (Charité – Universitaetsmedizin Berlin, GERMANY)

11:50 – 12:00
Discussion

12:00 – 12:20
Immunomodulation in Viral Inflammatory Cardiomyopathy
Uwe Kuehl (Charité – Universitaetsmedizin Berlin, GERMANY)

12:20 – 12:30
Discussion

12:30 – 12:50
Immunosuppression in Inflammatory Cardiomyopathy
Andrea Frustaci (Catholic University of the Sacred Heart, Rome, ITALY)

12:50 – 13:00
Discussion

13:00 – 13:20
Immunoadsorption Therapy in Inflammatory Cardiomyopathy
Stephan Felix (University of Greifswald, GERMANY)

13:20 – 13:30
Discussion

13:30 – 13:50
Specific Inhibition of Cardiac Autoantibodies
Roland Jahns (University of Wuerzburg, GERMANY)

13:50 – 14:00
Discussion

14:00
Concluding Remarks
Carsten Tschoepe (Charité – Universitaetsmedizin Berlin, GERMANY)
Speakes and Chairpersons

Stefan Anker (Dept. of Cardiology, Charité – Universitaetsmedizin Berlin, GERMANY)
Eloisa Arbustini (Center of Inherited Cardiovascular Diseases, IRCCS Policlinico San Matteo, Pavia, ITALY)
Douwe E. Altsma (Dept. of Cardiology, Leiden University Medical Center, THE NETHERLANDS)
Stefan Blankenberg (Dept. of Cardiology, University of Mainz, GERMANY)
Thomas Bock (Robert-Koch-Institut, Berlin, GERMANY)
Konstantin Borisov (Medical Center of the Executive Office of the President of Russian Federation, RUSSIA)
Paolo Camici (Division of Clinical Sciences, Imperial College London, UK)
Sean M. Davidson (Dept. of Medicine, University College Hospital, London, UK)
Javier Diez (Division of Cardiovascular Sciences, University of Navarra, Pamplona, SPAIN)
Stefanie Dimmel (Cardiovascular Regeneration, University of Frankfurt/Main, GERMANY)
Urs Erikkson (Dept. of Cardiology, University Hospital, University of Zuerich, SWITZERLAND)
Georg Ertl (Dept. of Cardiology, University of Wuerzburg, GERMANY)
Henry Fechner (Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin, GERMANY)
Stephan Felix (Dept. of Cardiology, University of Greifswald, GERMANY)
Andrea Frustacli (Institute of Cardiology, Catholic University of the Sacred Heart, Rome, ITALY)
Meinrad P. Gawaz (Dept. of Cardiology, University of Tuebingen, GERMANY)
Michael Gotthardt (Max Delbrueck Center for Molecular Medicine, Berlin, GERMANY)
Roger Hajjar (Cardiovascular Research Center, Mount Sinai School of Medicine, New York, USA)
Gerd Heusch (Institute of Pathophysiology, University of Essen, GERMANY)
Stephanie Heymans (Center for Heart Failure Research, University of Maastricht, THE NETHERLANDS)
Vinzenz Hombach (Dept. of Cardiology, University of Ulm, GERMANY)
Roland Jahns (Dept. of Cardiology, University of Wuerzburg, GERMANY)
Reinhard Kandolf (Dept. of Molecular Pathology, University of Tuebingen, GERMANY)
Hugo A. Katus (Dept. of Cardiology, University of Heidelberg, GERMANY)
Peter-Michael Kloetzel (Institute for Biochemistry, Charité – Universitaetsmedizin Berlin, GERMANY)
Kirk Knowlton (Dept. of Cardiology, UCSF Medical Center, San Diego, USA)
Heyo K. Kroemer (Research Center of Pharmacology, University of Greifswald, GERMANY)
Uwe Kuehl (Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin, GERMANY)
Florian P. Limbourg (Dept. of Cardiology, Hannover Medical School, GERMANY)
Wolfgang Linke (Dept. of Cardiovascular Physiology, Ruhr University Bochum, GERMANY)
Peter P. Liu (Division of Cardiology/Cardiovascular Research, University of Toronto, CANADA)
Bernhard Maisch (Dept. of Internal Medicine and Cardiology, University of Marburg, GERMANY)
William J. McKenna (Centre for Cardiology in the Young, The Heart Hospital, London, UK)
Bruce McManus (Dept. of Pathology and Laboratory Medicine, University of British Columbia, Vancouver, CANADA)
Martin Paul (Dean of the Faculty of Health, University of Maastricht, THE NETHERLANDS)
Walter J. Paulus (Institute for Cardiovascular Research, FRe University Amsterdam, THE NETHERLANDS)
Matthias Pauschinger (Dept. of Cardiology, Klinikum Nuernberg Sued, Nuernberg, GERMANY)
Burkert M. Pieske (Dept. of Clinical Cardiology, Medical University of Graz, AUSTRIA)
Wolfgang Poller (Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin, GERMANY)
Noel R. Rose (Johns Hopkins Center of Autoimmune Disease Research, Bloomberg School of Public Health, Baltimore, USA)
Wolfgang Rottbauer (Dept. of Cardiology, University of Heidelberg , GERMANY)
Caroline Schmidt-Lucke (Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin, GERMANY)
Heinz-Peter Schultheiss (Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin, GERMANY)
Heribert Schunkert (Dept. of Cardiology, University of Luebeck, GERMANY)
Petar M. Seferovic (Dept. of Cardiology, University Institute for Cardiovascular Diseases, Belgrade, SERBIA)
Carsten Skurk (Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin, GERMANY)
Jeffrey A. Towbin (Pediatric Cardiology, The Heart Institute, University of Cincinnati, Ohio, USA)
Carsten Tschope (Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin, GERMANY)
Hans-Dieter Volk (Berlin-Brandenburg Center for Regenerative Therapy (BCRT), Berlin, GERMANY)
Kai Wollert (Dept. of Cardiology and Angiology, Hannover Medical School, GERMANY)
Scientific Committee / Organization

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Prof. Heinz-Peter Schultheiss
Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin
heinz-peter.schultheiss@charite.de

Prof. Carsten Tschoepe
Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin
carsten.tschoepe@charite.de

Prof. Wolfgang Poller
Dept. of Cardiology and Pneumology, Charité – Universitaetsmedizin Berlin
wolfgang.poller@charite.de

Organizer/Veranstalter

C. T. I. GmbH
Danijela Soulis
dsoulis@cti-kongresse.com
Phone +49 (0)211 - 75 20 12

Congress Secretariat for SFB-Delegates

Heiderose Kuhn
heiderose.kuhn@charite.de
Phone +49 (0)30 - 46 06 09-0

Congress Venue

Hotel de Rome
Behrenstr. 37, Berlin, GERMANY
Phone +49 (0)30 – 55 77 97-0

Hotel

Seminaris Campus Hotel
Takustr. 39, Berlin, GERMANY
Phone +49 (0)30 –55 77 97-0

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Deutsche Forschungsgemeinschaft
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The Hotel de Rome is situated directly on Bebelsplatz and therefore neighbouring the German State Opera, the Humboldt University and the Faculty of Law, which used to be the Royal Library.

By Air

Tegel is Berlin’s international airport, located twelve kilometers from Hotel de Rome and approximately 25 minutes by car. Schönefeld is Berlin’s second airport, located about 20 kilometers and forty minutes away.

By Train

The city is well served by the national rail system. The main train station, Hauptbahnhof, is located two kilometers away from Hotel de Rome.