

# The 10<sup>th</sup> CARDIOVASCULAR BIOENGINEERING SYMPOSIUM 2026

## CVBE

June 18<sup>th</sup> - June 20<sup>th</sup> 2026  
Göttingen, Germany

## DRAFT - PROGRAM

# Thursday, June 18, 2026

10:00 AM

Registration & Coffee

12:00 – 12:30 AM

## Opening Remarks



**Wolfram-Hubertus Zimmermann, MD**  
Chair, Institute of Pharmacology and Toxicology  
University Medical Center Göttingen  
Göttingen, Germany



**Jianyi (Jay) Zhang, MD, PhD**  
Chair, Department of Biomedical Engineering  
T. Michael and Gillian Goodrich Endowed Chair of Engineering Leadership  
Professor of Medicine, of Engineering  
School of Medicine, School of Engineering  
UAB | The University of Alabama at Birmingham  
USA



**Rabea Hinkel, DVM, PhD**  
Speaker, DZHK Partner Site Lower Saxony  
Head, Laboratory Animal Science and Pathology  
German Primate Center (DPZ)  
Göttingen, Germany



**Constanze Schmidt, MD**  
Director, Clinic for Cardiology and Pneumology  
University Medical Center Göttingen  
Germany



**Ke Chang, PhD**  
Chair, AHA CVBE Council  
Alan L. Kaganov Professor of Biomedical Engineering  
Columbia University  
New York, USA

12:30 – 14:40

Session I – The Foundation : Developmental Biology

**MODERATORS: Alessandra Moretti, Malte Tiburcy**

12:30 – 12:50



*Protein Aggregation in the Heart*

**Thomas Braun, MD, PhD**

Director, Max-Planck-Institute of Heart and Lung Research, Bad Nauheim,  
Department of Cardiac Development and Remodeling  
Full Professor, Univ. of Gießen, Medical Faculty, Dept. of Internal Medicine

12:50 – 13:10



*Core mechanisms that regulate cardiac regeneration across vertebrate species*

**Paul Riley, PhD**

BHF Professor of Regenerative Medicine  
Chair of Development and Cell Biology  
Institute of Developmental & Regenerative Medicine

13:10 – 13:30 AM



*Cell Competition in Heart Development - A story of winners and losers*

**Miguel Torres, PhD**

Professor, Cardiovascular Development Program,  
Centro Nacional de Investigaciones Cardiovasculares (CNIC)  
Madrid, Spain

14:00 – 14:20



*Regulation of Cardiac Maturation*

**Nicole Dubois, PhD**

Associate Professor Cell, Developmental and Regenerative Biology  
Department of Cell, Developmental and Regenerative Biology,  
Icahn School of Medicine at Mount Sinai  
New York, USA

14:20 – 14:40



*Maturing ventricular cardiomyocytes in vitro and in vivo*

**Lei Ye, PhD**

Associate Professor, Department of Biomedical Engineering  
School of Engineering | Heersink School of Medicine  
UAB | The University of Alabama at Birmingham  
USA

---

**14:40 – 15:00 PM**

**Coffee Break**

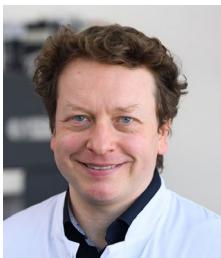
---

15:00 – 16:40 PM

## Session II – Bioengineered Heart Modelling

**MODERATORS:** Miguel Torres, Nicole Dubois

15:00 – 15:20



*Heart – Skeletal Muscle Cross-Talk*  
**Malte Tiburcy, MD**  
Group Leader  
Institute of Pharmacology and Toxicology  
University Medical Center Göttingen  
Göttingen, Germany

15:20 – 15:40



*Modelling Repair by Cell Supplementation in Cardiac Organoids*  
**Alessandra Moretti, PhD**  
Professor, Regenerative Medicine of Cardiovascular Diseases  
TU München  
Germany

15:40 – 16:00



*Modelling Cardiac Hypertrophy in Cardiac Organoids*  
**Sakthivel Sadayappan, PhD, MBA**  
Professor and Department Head, Cellular and Molecular Medicine  
Associate Director, Sarver Heart Center  
Czarina M. & Humberto S. Lopez Endowed Chair

16:00 – 16:20



*ESCAPE Bioengineering*  
**Christopher Chen, MD, PhD**  
Founding Director, Biological Design Center  
William F. Warren Distinguished Professor of Boston University  
The Wyss Institute for Biologically Inspired Engineering at Harvard University  
Boston, USA

**16:20 – 16:30**



*Behind the Scene at Nature Medicine*  
**Michael Basson, PhD**  
Senior Editor  
Nature Medicine

---

**16:30 – 19:00      Poster Viewing (Posters will be at display on June 18<sup>th</sup> to June 20<sup>th</sup>)**

---

---

**19:00              BBQ at German Primate Center**

---

**Friday, June 19, 2026**

## **NOBEL-LAUREAT LECTURE**

**Moderator: Wolfram Zimmermann**

**9:00 – 9:40 AM**



*Breaking Optical Barriers*  
**Stefan Hell, PhD**  
Director, Department NanoBiophotonics  
Max Planck Institute for Multidisciplinary Sciences  
Göttingen, Germany

---

**9:40 – 10:00 AM**      **Coffee Break**

---

**10:00 – 11:40 AM**      **Session III – Modelling and Simulations**

**MODERATORS: Ke Chang, Milica Radisic**

**10:00 – 10:20 AM**



*Modelling Cardiac Repair*  
**David Nordsletten, DPhil**  
Professor, Biomedical Engineering and Cardiac Surgery  
University of Michigan  
Ann Arbor, USA

**10:20 – 10:40 AM**



*Virtual Drug Screens*  
**Jeff Saucerman, PhD**  
Professor, Biomedical Engineering  
Department of Biomedical Engineering, University of Virginia  
Charlottesville, VA, USA

10:40 – 11:00 AM



*Physics-Informed Neural Networks to Predict Outcome of Cardiac Interventions*

**Eberhard Bodenschatz, PhD**

Director, Max Planck Institute for Dynamics and Self-Organization (MPIDS),  
Göttingen

11:00 – 11:20 AM



*Modelling of Electrical Heterogeneity in Cardiac Remuscularization*

**Blanca Rodriguez, PhD**

Professor in Computational Medicine

Department of Computer Science, British Heart Foundation Centre of Research Excellence, University of Oxford, Oxford, UK

11:20 – 11:40 AM



*Cardiac Atlas Project*

**Andrew McCulloch, PhD**

Distinguished Professor of Bioengineering and Medicine

Shu Chien Chancellor's Endowed Chair in Engineering and Medicine

Director, Institute for Engineering in Medicine

University of California San Diego

La Jolla, USA

---

11:40 – 13:00 PM

Lunch Break

---

13:00 – 14:40 PM

Session IV – Gene/Nucleotide Therapies

**MODERATORS:** Ricardo Sanz, Yajing Wang

13:00 – 13:20 PM



*LNP delivered gene therapies for heart repair*

**Mauro Giacca, MD, PhD**

Professor, School of Cardiovascular Medicine  
King's College London

13:20 – 13:40 PM



*miR-therapeutics in heart failure*

**Thomas Thum, MD, PhD**

Director, Institute of Molecular and  
Translational Therapeutic Strategies  
Medizinische Hochschule Hannover (MHH)  
Hannover, Germany

13:40 – 14:00 PM



*PKP2 restauration in arrhythmic cardiomyopathy*

**Eva van Rooij, PhD**

Professor, Molecular Cardiology at the University Medical Center Utrecht  
And Hubrecht Institute  
Utrecht, the Netherlands

14:00 – 14:20 PM



*Non-coding RNA in the regulation of smooth muscle proliferation*

**Andy Baker, MD, PhD**

Professor, Centre for Cardiovascular Science, The Queen's Medical Research Institute, University of Edinburgh, EH16 4TJ Edinburgh, UK; CARIM School for Cardiovascular Sciences, Department of Pathology, Maastricht University Medical Center (MUMC), 6229HX Maastricht, the Netherlands

14:20 – 14:40 PM



*Switching on cardiomyocyte renewal by YAP activation*

**James Martin, MD, PhD**

Vice Chairman/Professor Molecular Physiology and Biophysics and Vivian L. Smith Chair in Regenerative Medicine, Baylor College of Medicine, Houston, USA  
Cardiomyocyte Renewal Laboratory, Texas Heart Institute, Houston, USA

14:40 – 15:00

Lunch Break

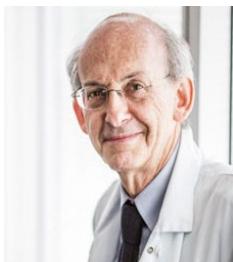
---

15:00 – 16:20 PM

Session V – Heart Repair in Clinical Trials

**MODERATORS:** Massimiliano Gnechi, Rabea Hinkel

15:00 – 15:20 PM



*Clinical Observations from ESCORT to SECRET-HF*

**Philippe Menasché, MD, PhD**

Professor Philippe Menasché

Service as Department of Cardiovascular Surgery

Hôpital Européen Georges Pompidou

15:20 – 15:40 PM



*HEAL-CHF: Clinical Trial*

**Eugene J Wang, MD, PhD**

Founder & CEO, Help Therapeutics Co., Ltd.

15:40 – 16:00 PM



*LAPiS: Clinical Trial*

**Keiichi Fukuda, MD, PhD**

Professor, Department of Regenerative Medicine and Advanced Cardiac Therapeutics, Graduate School of Medicine, Keio University

16:00 – 16:20 PM



*BioVAT-HF: Clinical Trial*

**Wolfram-Hubertus Zimmermann, MD**

Chair, Institute of Pharmacology and Toxicology

University Medical Center Göttingen

Göttingen, Germany

16:20 – 16:40 PM



*Evolution of Stem Cell Clinical Trials*

**Ricardo Sanz Ruiz, MD, PhD**

University Hospital Gregorio Maranon, Madrid (Spain)



**16:40 – 16:50 PM**

*Behind the Scene at Science*

**Joana Osório, PhD**

Senior Editor

Science

---

**16:50 – 18:00 PM Poster Viewing (Posters will be at display on June 18<sup>th</sup> - 20<sup>th</sup>)**

---

## **Session VI - Early Career Researcher Presentations – selected from submitted abstracts**

### **Moderators:**



**Chloe Wilson, MD**  
Senior Editor  
Lancet



**Michael Basson, PhD**  
Senior Editor  
Nature Medicine



**Joana Osório, PhD**  
Senior Editor  
Science

### **Rapid Fire Presentation (5 min presentation + 2 min discussion)**

18:00 - 18:07	TBD
18:07 - 18:14	TBD
18:14 - 18:21	TBD
18:21 - 18:28	TBD
18:28 - 18:35	TBD
18:35 - 18:42	TBD
18:42 - 19:00	<b>Panel Discussion:</b> Michael Basson, Patrick Ching-Ho Hsieh, Joana Osório, Ricardo Sanz, Chloe Wilson, Jay Zhang, Wolfram Zimmermann

---

19:00 -	<b>Conference Dinner</b>
---------	--------------------------

---

**Saturday, June 20, 2026**

## **NOBEL-LAUREAT LECTURE**

**Moderator: Constanze Schmidt**

**9:00 – 9:40 AM**



*Discovery and Targeting of Ion Currents*

**Erwin Neher, PhD**

Director, Department Membrane Biophysics

Max Planck Institute for Multidisciplinary Sciences  
Göttingen, Germany

**9:40 – 10:00 PM**

**Coffee Break**

**10:00 – 11:40 PM**

**Session VII – Nanopharmacology**

**MODERATORS: Patrick Ching-Ho Hsieh, Pilar Alcaide**

**10:00 – 10:20**



*Nanoparticle Delivery of Cardiac Therapeutics*

**Ke Chang, PhD**

Chair, AHA CVBE Council

Alan L. Kaganov Professor of Biomedical Engineering  
Columbia University  
New York, USA

**10:20 – 10:40**



*Stem cell-derived small extracellular vesicles in heart repair*

**Xinyang Hu, MD, PhD**

Professor, Cardiovascular Key Laboratory of Zhejiang Province and Department of Cardiology, Second Affiliated Hospital, College of Medicine, Zhejiang University, Hangzhou 310009, PR China

10:40 – 11:00



*Atrial tattoos lines: a new method to terminate atrial fibrillation*

**Constanze Schmidt, MD**

Director, Clinic for Cardiology and Pneumology, University Medical Center Göttingen

11:00 – 11:20



*Mesenchymal Stem Cell derived Extracellular Vesicles for Heart Repair*

**Massimiliano Gnechi, MD, PhD**

Director of the Research and Clinical Laboratories of the Department of Cardiology in Pavia

11:20 – 11:40



*Delivery of CRISPR/Cas by Extracellular Vesicles*

**Joost Sluijter, PhD**

Professor, Circulatory Health Laboratory, Regenerative Medicine Center, University Medical Center Utrecht, University Utrecht, Utrecht, The Netherlands

11:40 – 13:00 PM

**Lunch Break**

---

13:00 – 15:20 PM

**Session VII – Proliferation in the Heart**

**MODERATORS: Thomas Braun, Eva can Rooij**

13:00 – 13:20



*Protein Signature in proliferative cardiomyocytes*

**Jianyi (Jay) Zhang, MD, PhD**

Chair, Department of Biomedical Engineering

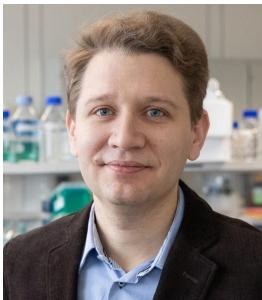
T. Michael and Gillian Goodrich Endowed Chair of Engineering Leadership

Professor of Medicine, of Engineering

School of Medicine, School of Engineering

UAB | The University of Alabama at Birmingham, USA

13:20 – 13:40



*Latent Cardiomyocyte Regeneration Potential in Human Heart Disease*  
**Olaf Bergmann, MD, PhD**

Group Leader, Institute of Pharmacology and Toxicology, University Medical Center Göttingen

**13:40 – 14:00**



*Inducing Cytokinesis in Cardiomyocytes*  
**Hesham Sadek, MD, PhD**

Division of Cardiology, University of Arizona College of Medicine, Tucson, AZ, USA;  
Centro Nacional de Investigaciones Cardiovasculares (CNIC), Madrid, Spain;  
University of Arizona Sarver Heart Center, Tucson, AZ, USA

**14:00 – 14:20**



*The immunopeptidome landscape of the heart in health and injury*

**Eldad Tzahor, PhD**

Professor, Faculty of Biology, Department of Molecular Cell Biology  
Faculty of Biology, The Helen and Martin Kimmel Institute for Stem Cell Research,  
Weizmann Institute, Israel

**14:20 – 14:40**



*Nanoparticle Delivery to Modulate Heart Repair*

**Patrick Ching-Ho Hsieh, MD, PhD**

Professor, Institute of Biomedical Sciences and  
Institute of Medical Genomics and Proteomics and Institute of Clinical Medicine,  
National Taiwan University College of Medicine, Taipei, Taiwan

**14:40 – 15:00 PM**

**Coffee Break**

---

**15:00 – 17:00 PM**

**Session VII – Intercellular/organ Cross-Talk**

**MODERATORS: Pilar Alcaide, Eldad Tzahor**

**15:00 – 15:20**



*Mechanisms driving microvascular inflammation*

**Rabea Hinkel, DVM, PhD**

Head, Laboratory Animal Science and Pathology  
German Primate Center (DPZ)  
Göttingen, Germany

**15:20 – 15:40**



*Nanoparticle-Directed Delivery of Programming Factors*

**Johnny Kim, PhD**

Director, Cardiovascular Therapeutics  
TRON gGmbH, The Center for Cardiovascular Immunology and Regeneration,  
Mainz, Germany

**15:40 – 16:00**



*Crosstalk between Heart and Immune System*

**Pilar Alcaide, MD, PhD**

Professor and Vice Chair, Microbiology and Immunology  
Miller School of Medicine  
University of Miami, USA

**16:00 – 16:20 PM**



*Adipocyte-derived small extracellular vesicles promote cardiomyocyte apoptosis*

**Yajing Wang, PhD**

Professor  
Director of Basic and Translational Research  
Department of Biomedical Engineering  
University of Alabama at Birmingham, USA

**16:20 – 16:30**



*Behind the Scene at Lancet*

**Chloe Wilson, MD**

Senior Editor  
Lancet

## Concluding Remarks



**Jay Zhang, MD, PhD**

Chair, Department of Biomedical Engineering  
T. Michael and Gillian Goodrich Endowed Chair of Engineering Leadership  
Professor of Medicine, of Engineering  
School of Medicine, School of Engineering  
UAB | The University of Alabama at Birmingham



**Wolfram-Hubertus Zimmermann, MD**

Chair, Institute of Pharmacology and Toxicology  
University Medical Center Göttingen  
Göttingen, Germany

## **CVBE 2027**

### Welcome to Taipei, Taiwan



**Patrick Ching-Ho Hsieh, MD, PhD**

Professor, Institute of Biomedical Sciences and  
Institute of Medical Genomics and Proteomics and Institute of Clinical Medicine,  
National Taiwan University College of Medicine, Taipei, Taiwan

# **CVBE 2026**

## **REGISTRATION**

**QR**

<https://www.xxxxx.de/cvbe2026/>

June 18<sup>th</sup> – June 20<sup>th</sup>, 2026

While there is no fee for academic participant, registration is necessary.

Please complete the form before April 1, 2026. Thank you.

**Location and direction**

With support by

Gold Supporters

Silver Supporters

Bronze Supporters