

# Curriculum vitae

## Prof. Dr. W.H. Zimmermann

Name Prof. Dr. med. Wolfram-Hubertus Zimmermann  
Position/Title Professor and Director, Institute of Pharmacology and Toxicology,  
University Medical Center Göttingen, Germany

### Education

1998 Medical School: University Medical Center Hamburg-Eppendorf  
Duke University Medical Center, Durham (Cardiology)  
Beth Israel Deaconess Medical Center, Boston (Cardiology and Pneumology)  
Groote Schuur Hospital, Cape Town (Cardio-Thoracic-Surgery)  
Doctoral Thesis (1995-1997) – Institute of Pharmacology and Toxicology, University  
Medical Center Hamburg-Eppendorf  
2000 Diploma in Molecular Biology; Center for Molecular Neurobiology, Hamburg  
1999-2003 Resident; Institute of Clinical Pharmacology, University Medical Center Erlangen-  
Nuremberg  
2003-2004 Lecturer; Institute of Experimental Pharmacology, University Medical Center  
Hamburg-Eppendorf  
2004-2008 Junior Professor; Pharmacology/Tissue Engineering; Institute of Experimental  
Pharmacology, University Medical Center Hamburg-Eppendorf  
2006 Board Certification (Facharzt), Pharmacology and Toxicology  
2006 Habilitation and Venia Legendi; Pharmacology and Toxicology

### A. Personal Statement

since 2008 Professor and Director of the Institute of Pharmacology and Toxicology at the  
University Medical Center Göttingen.

Research interests:

- Tissue engineered heart repair
- Therapeutic genome editing
- Patient-in-the-Dish - drug development and validation studies
- Translation of ATMPs into clinical use

## **B. Positions and Honors (selected)**

2001	Oskar-Lapp-Award - German Society of Cardiology
2004	Young Investigator Award, International Society for Heart Research, European Section
2005	Fraenkel-Award - German Society of Cardiology
2007	Hengstberger-Stipend, German Society of Cardiology and Dr. Martini Award
2007-2010	Chair, Working Group "Molecular Cardiology/Genetics" of the German Society of Cardiology
2007-2011	Member & Chair (2009-2011), Committee for Experimental Cardiology – German Society of Cardiology
Since 2008	Professor and Director, Department of Pharmacology, University Medical Center Göttingen
2009-2011	Member, Executive Board of the German Society of Cardiology
2010	Founding Member, Heart Research Center Göttingen and International Graduate School with King's College London
2011-2020	Initiator and Organizer of the Basic Science Meeting of the German Society of Cardiology
Since 2011	Speaker, Göttingen partner site of the German Center for Cardiovascular Research (DZHK)
2012-2016	European Liaison, Leadership Committee of the Basic Cardiovascular Research Council, American Heart Association
Since 2019-	2015 International Engagement Award, Basic Cardiovascular Science Council, American Heart Association
2018	President, 3rd German Pharm Tox Summit / 84th Annual Meeting of the German Society of Pharmacology and Toxicology

## **C. Contribution to Science (selection from >200 papers, book chapters, patents; Scopus h-index: 49; ORCID ID: 0000-0003-1190-4040):**

Zimmermann WH, Melnychenko I, Wasmeier G, Didie M, Naito H, Nixdorff U, Hess A, Budinsky L, Brune K, Michaelis B, Dhein S, Schwoerer A, Ehmke H, Eschenhagen T (2006) Engineered heart tissue grafts improve systolic and diastolic function in infarcted rat hearts. *Nat Med* 12:452-458.

Didié M, Christalla P, Rubart M, Muppala V, Döker S, Unsöld B, El-Armouche A, Rau T, Eschenhagen T, Schwoerer AP, Ehmke H, Schumacher U, Fuchs S, Lange C, Becker A, Tao W, Scherschel JA, Soonpaa MH, Yang T, Lin Q, Zenke M, Han DW, Schöler HR, Rudolph C, Steinemann D, Schlegelberger B, Kattman S, Witty A, Keller G, Field LJ, Zimmermann WH (2013) Parthenogenetic Stem Cells for Tissue Engineered Heart Repair. *J Clin Invest* 123:1285-1298.

Liao MLC, de Boer TP, Mutoh H, Raad N, Richter C, Wagner E, Downie BR, Unsöld B, Arooj I, Streckfuss-Bömeke K, Döker S, Luther S, Guan K, Wagner S, Lehnart SE, Maier LS, Stühmer W, Wettwer E, van Veen T, Morlock MM, Knöpfel T, Zimmermann WH (2015) Sensing Cardiac Electrical Activity with a Cardiomyocyte Targeted Optogenetic Voltage Indicator. *Circ Res* 117:401-412.

Tiburcy M, Hudson JE, Balfanz P, Schlick S, Meyer T, Chang Liao ML, Levent E, Raad F, Zeidler S, Wingender E, Riegler J, Wang M, Gold JD, Kehat I, Wettwer E, Ravens U, Dierickx P, van Laake LW, Goumans MJ, Khadjeh S, Toischer K, Hasenfuss G, Couture LA, Unger A, Linke WA, Araki T, Neel B, Keller G, Gepstein L, Wu JC, Zimmermann WH (2017) Defined Engineered Human Myocardium with Advanced Maturation for Applications in Heart Failure Modelling and Repair. *Circulation* 135:1832-1847.

Levent E, Noack C, Zelarayán LC, Katschinski DM, Zimmermann WH, Tiburcy M (2020) Inhibition of Prolyl-Hydroxylase Domain Enzymes Protects From Reoxygenation Injury in Engineered Human Myocardium. *Circulation*. 142:1694-1696.

#### **D. Research Support (selection)**

2021 - 2025 Fondation Leducq “Editing the Failing Heart”

2020 - 2023 BMBF „Lab-Grown Organ Replacement“-Challenge: “IndiHeart” - Individualized Heart Muscle for the Remuscularization of the Failing Heart

Since 2019 Cluster of Excellence: Multiscale Bioimaging: from molecular machines to networks of excitable cells

Since 2011 German Center for Cardiovascular Research (DZHK)

2013 - 2021 DFG IRTG 1816 RP12 “Redox control of fibroblast-derived extracellular matrix and its implications for cardiomyocyte maturation and homeostasis”

2012 - 2024 DFG SFB 1002 (Modulatory Units in Heart Failure), C04 “Control of the Myocardial Stroma by Fibroblasts” and S “Service project – Mouse and Stem Cell Models”

#### **E. Clinical Trials / Drug Evaluation**

1999 – 2001 Study Physician: Influence of CYP2D6 gene polymorphisms on the safety of betablocker administration” (PI: T. Eschenhagen)

2016 - 2020 Member of the DSMB: “A Prospective, randomized, single blind, multicenter Phase III study of organ perfusion with Custodiol-N solution compared with Custodiol solution in Heart transplantation” EudraCT: 2012-001112-29

Since 2017 Study physician: “A multicenter, randomized, open label, parallel group study comparing pre-discharge and post-discharge treatment initiation with LCZ696 in heart failure patients with reduced ejection-fraction hospitalized for an acute decompensation event (ADHF)”; EudraCT: 2015-003266-87

Since 2020 Study physician: “Intravenous Iron in Patients With Systolic Heart Failure and Iron Deficiency to Improve Morbidity & Mortality (FAIR-HF2)”; EudraCT: 2016-000068-40

Since 2020 Study physician: “SPIRonolactone In the Treatment of Heart Failure - A double-blind, randomized, placebo-controlled, parallel group, interventional phase III study to evaluate the efficacy and safety of spironolactone compared to placebo on the composite endpoint of recurrent heart failure hospitalizations and cardiovascular

death in patients with heart failure with mid- range or preserved ejection fraction (SPRIT-HF)”; EudraCT: 2017-000697-11

Since 2021 Scientific coordinator and study physician: “Safety and Efficacy of Induced Pluripotent Stem Cell-derived Engineered Human Myocardium as Biological Ventricular Assist Tissue in Terminal Heart Failure (BioVAT-HF)”; EudraCT: 2019-000885-39

#### **Drug Evaluations on Behalf of the German Society of Cardiology according to §35a SGB V**

06.03.2016	Alirocumab (Praluent™) – indication: hypercholesterinemia
01.02.2017	Macitentan (Opsumit™) – indication: pulmonary hypertension
05.07.2018	Evolocumab (Repatha™) – indication: hypercholesterinemia
15.07.2018	Patiromir (Veltassa™) – indication: hyperkaliemia
21.10.2019	Dapagliflozin (Forxiga™) and Dapagliflozin/Metformin (Xigduo™) – indication: type 2 diabetes mellitus
18.12.2019	Andexanet Alfa (Ondexxya™) – indication: inhibition of bleeding complications
20.06.2020	Tafamidis (Vyndaqel™) – indication: ATTR-amyloidosis
01.02.2021	Bempedoic acid (Nilemdo™) and Bempedoic acid/Ezetimibe (Nustendi™) – indication: hypercholesterinemia