BIOGRAPHICAL SKETCH

ESCHENHAGEN, Thomas, born 09/19/1960	Professor of Pharmacology Director, Department of Experimental Pharmacology and Toxicology, University Medical Center Hamburg Eppendorf

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Medical School Hannover, Germany	Physician	1986	Medicine
Medical School Hannover, Germany	MD (PhD equivalent)	1988	Medicine
University of Hamburg, Germany	Diploma Mol Biol	1992	Natural Sciences
University of Hamburg, Germany	Habilitation	1994	Pharmacology
Physician´s Board Hamburg	Approval as specialist	1995	Experimental Pharmacology and Toxicology
Physician´s Board Hamburg	Approval as specialist	1997	Clinical Pharmacology
Washington University, St. Louis; Stanford Research Center, Menlo Park; Gerontology Research Center, NIA, NIH, Baltimore; Universite Paris 11, Chatenay Malabry	Heisenberg grant DFG	1995-1998	Cell biology, cardiac molecular biology, signaling, cardiac electrophysiology, NO, cGMP system

A. Positions and Honors (selection)

1994 Heisenberg Stipend, German Research Foundation (DFG)
1998 Director, Department of Clinical Pharmacology, University of Erlangen
2002 Director, Department of Experimental and Clinical Pharmacology, University of Hamburg

2004 Member of the Academy of Science, Göttingen (2004)
2011 Member of the National Academy of Science Leopoldina
2010-12 President ISHR European Section
2011 Chairman of the German Centre for Cardiovascular Research (DZHK, current)
2016 President-elect of ISHR International (2019-2022)
2016 Associate Editor of Circulation

Awards (selection): Sandoz Award (1995), Fraenkel Award DGK (1997), Ursula Händel Animal Replacement Award DFG (2011), Outstanding Investigator Award ISHR (2012), President´s Award Lecture ISHR (2016)

B. Scientific publications: 281 PubMed-listed publications, >11,800 citations, h-index 60 (ISI Web of Science)

- **Eschenhagen T** …. Elson EL (1997) Three dimensional reconstitution of embryonic cardiomyocytes in a collagen matrix: a new heart muscle model system. FASEB J 11:683-694
- Zimmermann WH .... **Eschenhagen T** (2002) Tissue engineering of a differentiated cardiac muscle construct. Circ Res 90:223-230
- Zimmermann WH … **Eschenhagen T** (2006) Engineered Heart Tissue Grafts Improve Systolic Function and Prevent Deterioration of Diastolic Function in Infarcted Rat Hearts. Nat Med 12:452-8
- **Eschenhagen T** (2008) Beta-adrenergic signaling in heart failure-adapt or die. Nat Med 14: 485-7 (editorial)
- Vignier N ... **Eschenhagen T**, Carrier L (2009) Nonsense-mediated mRNA decay and ubiquitin-proteasome system regulate cardiac myosin-binding protein C mutant levels in cardiomyopathic mice. Circ Res 105: 239-248
- Wittköpper K .... **Eschenhagen T***, El-Armouche A* (2010) Constitutively active phosphatase inhibitor-1 improves cardiac contractility in young mice but is deleterious after catecholaminergic stress and with aging. J Clin Invest 120:617-26 (split last author)
- Hansen A .... **Eschenhagen T** (2010) Development of a drug screening platform based on engineered heart tissue. Circ Res 107:35-44
- **Eschenhagen T** (2010) Is ryanodine receptor phosphorylation key to the fight or flight response and heart failure? J Clin Invest 120:4197-203

- **Eschenhagen** T (2011) The beat goes on – human heart muscle from embryonic stem cells. Circ Res 109: 2-4
- da Costa Martins PA ... **Eschenhagen T**, De Windt LJ (2011) MicroRNA-199b targets the nuclear kinase Dyrk1a in an auto-amplification loop promoting calcineurin/NFAT signalling. Nat Cell Biol 12:1220-7
- Tiburcy M ... **Eschenhagen T** ... Zimmermann WH (2011) Terminal Differentiation, Advanced Organotypic Maturation, and Modeling of Hypertrophic Growth in Engineered Heart Tissue. Circ Res 109:1105-14
- Hirt MN ... **Eschenhagen T** (2012) Increased afterload induces pathological cardiac hypertrophy: a new in vitro model. Bas Res Cardiol 107: 307-315
- Hirt MN ... **Eschenhagen T** (2014) Functional improvement and maturation of rat and human engineered heart tissue by chronic electrical stimulation. J Mol Cell Cardiol 74: 151-161
- Hirt MN, Hansen A, **Eschenhagen T** (2014) Cardiac tissue engineering – state of the art. Circ Res 114:354-67
- Mearini G ... **Eschenhagen T**, Carrier L (2014) Mybpc3 gene therapy for neonatal cardiomyopathy enables long-term disease prevention in mice. Nat Commun 5:5515
- Weinberger F … **Eschenhagen T** (2016) Cardiac repair in guinea pigs with human engineered heart tissue from induced pluripotent stem cells. Sci Transl Med 8: 363ra148
- Breckwoldt K .... **Eschenhagen T**, Hansen A (2017) Generation of human Engineered Heart Tissue. Nat Protocols 12:1177-1197
- **Eschenhagen T**, Bolli R .... Hill JA (2017) Cardiomyocyte Regeneration: A Consensus Statement. Circulation 136: 680-686
- Weinberger F, Mannhardt I, **Eschenhagen T** (2017) Engineering cardiac muscle tissue – a maturating field of research. Circ Res 120:1487-1500

C. Non scientific publications (selection):

Translational Medicine 2016: https://www.youtube.com/watch?v=J1waIIDHZ9o, renal interactions: http://www.pharmazeutische-zeitung.de/index.php?id=22744, drug interactions: http://gesund.co.at/grapefruit-beeinflusst-medikamentenwirkung-11889/, new drugs: http://www.tagesspiegel.de/wissen/medizin-hilfe-bei-herzschwaeche/10644830.html, http://www.herzstiftung.de/Betablocker.html

D. Textbook contributions (selection):

Arzneiverordnungsreport Springer (drug statistics in Germany): Chapters on antiarrhythmics, calcium channel blockers and cardioactive drugs since 2001 (yearly editions)
Aktories, Förstermann, Hofmann, Starke Textbook of Pharmacology, Urban&Fischer/Elsevier: Chapter on antiarrhythmics, heart failure and antiischemic drugs since 2007
Goodman & Gilman Pharmacological Basis of Therapy, McGraw Hill: Chapters on hypertension, ischemic heart disease and heart failure (2017).

E. Research Support and activities in research consortia (selection)

- Coordinator and speaker of **DFG Graduate School** 750 at the University of Erlangen: "Vascular damage in kidney and heart" (2000-2002)
- Coordinator and speaker of the **DFG Research Group** "Signaling Pathways in the Healthy and Diseased Heart" at the University of Hamburg (2005 – 2011)
- Core Member in the **Fondation Leducq Transatlantic Networks of Excellence** "Cardiac Progenitors Transatlantic Alliance" (coordinators K. Schwartz, K. Chien, 2004-2009)
- German Ministry of Research, **DZHK** (German Centre for Cardiovascular Research), Partner Site Hamburg/Kiel/Lübeck, PI T. Eschenhagen, 2015-2019 (second phase)
- **British Heart Foundation** (coordinator S. Harding, ICL, UK) Regenerative Medicine Center, PI T. Eschenhagen, 2013-2017
- **DFG** Single Project Grant "iPS-mediated disease-modeling", PI T. Eschenhagen; Es 88/12-1, 2011-2014
- **ERC Advanced Grant** "IndivuHeart - Early risk assessment with hiPSC-derived engineered heart tissue", 2014-2018
- British National Centre for the Reduction of Animal Experiments (NCR) **CRACK-IT** Challenges "Engineered 2D & 3D hiPSC-CM platforms to detect cardiovascular safety liabilities" (coordinator C. Denning, Nottingham), PI T. Eschenhagen, 2014-2017
- **EU Horizon 2020 ITN** "Atrial Fibrillation" (coordinator T. Jespersen, Kopenhagen), PI T. Christ and T. Eschenhagen, 2016-2018
- **ERA-CVD** "Variation" (coordinator Y. Pinto, Amsterdam), PI T. Eschenhagen, 2017-2020.

F. Activities on knowledge management

- Board member of German Heart Association (since 2003), German Association for Chronic Heart Disease (since 2005), Galenus-von-Pergamon Award Committee (since 2012), German Physician´s Drug Commission (since 2008)
- Editorial board member of J Mol Cell Cardiol, Bas Res Cardiol, Clin Res Cardiol, Cardiovasc Res (Associate Editor from 2014-2016)
- Associate Editor of Circulation (since 2016)
- Regular reviewer for Circ Res, JMCC, Cardiovasc Res, PNAS, Nat Med, Nature, Science, Science Translat Med and others
- 2004-12 Member of the DFG Section Panel for Cardiovascular Research
- 2012-17 Member of the DFG Panel for Collaborative Research Centers (SFB)
- Reviewer for the British Heart Foundation (e.g. selection of Excellence Centres in 2010 an 2014), the Netherlands Academy of Science (ICIN Evaluation), the Austrian Science Board (leader of a 3-day on-site evaluation of cardiovascular centres in 2015), INSERM (evaluation of a unit in Montpellier in 2010), Imperial College London (2018)
- Organizer of a EU Commission workshop on “The Future of Young Scientists in Cardiovascular Research” (2004)
- Member of roadmap procedures for the NIH (stem cells in 2006), the German Ministry of Research and Education (BMBF in 2006) and the EU.
- 2008-2012 Speaker of the Scientific Advisory Board of the Leibniz Institute of Arteriosclerosis Research (LIFA) Münster
- Speaker of the DZHK (since 2011) with focus on Translational Research in Cardiology and public outreach
- Co-organizer of the Annual Meeting of the ISHR-European Section, Hamburg (2017)
- President of the Annual Meeting of the German Society of Cardiology (DGK, Mannheim 2018)
- Elected chair of the Gordon Research Conference on Cardiac Regulatory Mechanisms (2016, 2018)