

Prof. Dr. med. Gustav Steinhoff



Director, Department of Cardiac Surgery, Medical Faculty
Head, Reference and Translation Center Cardiac Stem Cell Therapy (RTC)
University of Rostock, Schillingallee 35, 18057 Rostock, Germany
Phone: +49 381 494 6100, Fax: +49 381 494 6101
E-mail: gustav.steinhoff@med.uni-rostock.de
www.cardiac-surgery-rostock.com
www.cardiac-stemcell-therapy.com

Date of birth: September 15th, 1958, Kleve, Germany

Education, Research and Academic Path

1977-1984	Medical study, Erasmus University Rotterdam, NL and Baylor College Houston, Texas, USA
1984-1985	Military service as flight physician
1985-1987	M. D. thesis and research fellow in transplantation immunology, Hannover, Germany
1987-1993	General Surgery Specialization, Medical School, Hannover, Germany
1993	Habilitation in General Surgery, Medical School Hannover, Germany
1993-1996	Staff Surgeon Cardiothoracic and Vascular Surgery, University of Kiel, Germany
1996-2000	Staff Surgeon, Associate Professor of Cardiothoracic Surgery, Medical School Hannover, Germany
Since 2000	Full Professor and Director of Department of Cardiac Surgery, Medical Faculty, University of Rostock, Germany
2003	Foundation of the Institute of Regenerative Medicine and Stem Cell Therapy (IRMED) in the Biomedical Research Center Rostock
2008	Head of the German "Reference and Translation Center of Cardiac Stem Cell Therapy (RTC)"

Main Research Fields and Accomplishments

- Regenerative Medicine, Tissue Engineering, Stem Cell Therapy
- Basic research in stem cell therapy for myocardial regeneration
- Basic research in non-viral gene therapy with magnetic nanoparticles
- Basic research in heart valve tissue engineering
- Clinical research in bone marrow stem cell therapy for myocardial regeneration
- Clinical research in new extracorporeal oxygenator systems and minimized heart lung machines
- Animal models for cardiac dysfunction, ischemia-reperfusion, extracorporeal circulation, heart valve surgery, intravital microscopy of microcirculation

Research Awards

1988	Rudolf Schoen Preis, Medical School Hannover
1994	German Transplantation Research Prize (DTG – Rudolf Pichlmayr Preis)

Major Grants (since 2003)

- DFG “Mitral valve tissue engineering on biodegradable polymer-protein scaffolds” 2000-2004; DFG “Ischemic lung protection – endothelial NO-synthetase” 2004-2006
- BMBF NBL-3 Genome-oriented-research; Junior research group “Cardiovascular gene expression” 2001-2004
- BMBF BioChance Plus “Further development of cardiac stem cell therapy with AC133+ bone marrow stem cells” with Miltenyi-Biotec GmbH 2005-2007
- State of Mecklenburg-Vorpommern, HGF-Junior Research Group (Landesforschungsschwerpunkt Regenerative Medizin): “Regulation of stem cell migration by SDF-1) 2006-2011
- DFG SFB TR37; Project A4, B5 (2007-2011)
- Reference- and Translation Center Cardiac Stem Cell Therapy (BMBF, State M-V) 2008-2011

Patents

Bioartifizielles Verbundmaterial (PCT/DE01/03625, EP/1305059 B1) Steinhoff G, Freier T

Selected Publications (5); publications pubmed 167

- Steinhoff G, Behrend M, Schrader B, Pichlmayr R. Intercellular immune adhesion molecules in human liver transplants - Overview on expression patterns of leukocyte receptor and ligand molecules. *Hepatology*. 1993;18:440-53.
- Martin U, Kiessig V, Blusch JH, Haverich A, von der Helm K, Herden T, Steinhoff G. Expression of pig endogenous retrovirus by primary porcine endothelial cells and infection of human cells. *Lancet* 1998;352:692-4.
- Steinhoff G, Stock U, Karim N, Mertsching H, Timke A, Meliss RR, Pethig K, Haverich A, Bader A. Tissue engineering of pulmonary heart valves on allogenic acellular matrix conduits: In vivo restoration of valve tissue. *Circulation*. 2000 Nov 7;102(19 Suppl 3):III50-5.
- Stamm C, Westphal B, Kleine HD, Petzsch M, Kittner C, Schümichen C, Nienaber CA, Freund M, Steinhoff G. Autologous bone marrow stem cell transplantation for myocardial regeneration after myocardial infarction. *The Lancet* 2003;361:45-6
- Li W, Ma N, Ong LL, Nesselmann C, Klopsch C, Ladilov Y, Fulani D, Piechaczek C, Moebius JM, Lutzo K, Lendlein A, Stamm C, Li RK, Steinhoff G. Bcl-2 engineered MSCs inhibited apoptosis and improved heart function. *Stem cells* 2007;25(8):2118-27. (IF 8.5)

Other Important Issues

- Speaker BMBF project “Genome oriented research” 2001-2004
- Foundation “Institute of Regenerative Medicine and Stem Cell Therapy”, Biomedical Research Center Rostock, 2004
- German research foundation (DFG) central reviewer cardiovascular research, since 2005
- Member of German Central Ethical Commission (ZES) for stem cell research, since 2005