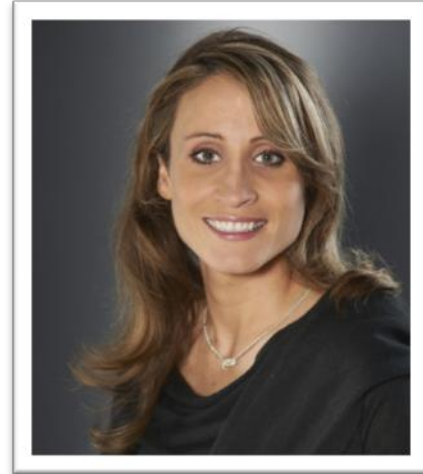


## CURRICULUM VITAE

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**Prof. Dr. med. Sonja Schrepfer**

Heisenbergprofessor (W3) and  
Visiting Professor at Stanford University (CT Surgery)  
University Heart Center Hamburg  
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### Personal Details

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Date of birth: December 26<sup>th</sup>, 1974

Place of birth: Wuerzburg

Nationality: German

married

## Education

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2009-present	Heisenberg Professor (W3) for Transplant Immunology and Stem Cell Immunobiology, Cardiac Surgery
2007	Venia legendi for Immunology and Experimental Cardiac Surgery (06/13/2007) (Habilitation)
2007	PhD (Immunology), Cardiovascular Surgery/ Institute of Immunology, University Hamburg, Germany (02/13/2007)
2003	Doctoral Thesis (Medicine), Julius-Maximilian-University Wuerzburg, Germany Dissertation: Estrogens delay the development of transplant vasculopathy after heterotopic heart transplantation in rats.
2003-2005	Resident Physician, Department of Cardiovascular Surgery, University Hospital Hamburg (Germany)
2001-2002	Resident Physician, Department of Cardiac Surgery, University Hospital Munich (Germany)
2001	Graduation, MD Degree (3. Staatsexamen: 1,0)
1995-2001	Medical School (University of Wuerzburg and University of Munich, Germany), MD

## Research Experience

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2010/2011	Visiting Professor at the University Alberta, Edmonton, Canada (Department of Cardiology and Pulmonary Hypertension) for 5 weeks
2009-present	Heisenberg Professor (W3) and Lab Director at the University Heart Center Hamburg, Transplant and Stem Cell Immunobiology Lab (TSI), Germany
since 2009	Visiting Professor at Stanford University School of Medicine, Department of Cardiothoracic Surgery, Transplant Immunology

- 2007-2009 Instructor, Stanford University School of Medicine, Department of Cardiothoracic Surgery, Transplant Immunology Lab, Stanford, CA
- 2006-2007 Postdoctoral Fellow, Stanford University School of Medicine, Department of Cardiothoracic Surgery, Stanford, CA; Lab Director: Robert C. Robbins, MD
- 2002-2006 Investigator/Instructor for Basic Science at University Hospital Hamburg (Cardiovascular Surgery/ Institute of Immunology), Germany
- 2001-2002 Postdoctoral Fellow, Cardiothoracic Surgery, University Munich, Germany
- 1999-2001 Doctoral Research, Thoracic- and Cardiovascular Surgery, University Wuerzburg, Germany
- 1998-1999 Pre-doctoral Fellow, Thoracic- and Cardiovascular Surgery, University Wuerzburg, Germany

## Honors and Awards

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- 2014 **Innovation Award of the German Academia**
- 2013 **Leducq Transatlantic Exchange Award** (for 2 years) from the "LeDucq Fondation", France
- 2012 **TTS International Basic Science Award** of the Transplantation Society
- 2010 **Norman E. Shumway Career Development Award** of the ISHLT (International Society for Heart and Lung Transplantation)
- 2009 **W3-Heisenberg-Professor (DFG)** in Transplant Immunology and Stem Cell Immunobiology, Cardiac Surgery
- 2009 **Best Abstract Basic Science** from the German Transplant Society (DTG)
- 2008 Finalist in the **Vivien Thomas Award Session** of the American Heart Association (AHA)
- 2008 **Best Scientific Abstract** (11<sup>th</sup> Annual NewEra Cardiac Care: Innovation&Technology)

- 2007 **Rudolf Pichlmayr Prize 2007** (from the German Transplant Society (DTG), “named after the pioneer of German Transplant Medicine, the prize is awarded for outstanding achievement in the transplant field”)
- 2007 **Novartis Global Travel Award** (Basic Science Symposium of the Transplantation Society 2007)
- 2007 **ATC Young Investigator Award** (American Transplant Congress 2007)
- 2006 **Lilly-Research-Award** for the best publication in preventive medicine (Schrepfer at al., Menopause 2006)
- 2005 **Christian-Lauritzen-Award** of Germany
- 2005 German Society for Thoracic- and Cardiovascular Surgery **Best Oral Presentation Award**
- 2005 **"Dr. Martini-Award"** of Hamburg (for investigations of malononitrilamides and their relevance for organ transplantation)
- 2004 German Transplantation Society **Young Investigator Award**
- 2003 **Doctoral Thesis Diploma of Excellency**, Julius-Maximilian-University, Wuerzburg, Germany
- 2002 German Society for Thoracic- and Cardiovascular Surgery (DGTHG): **Young Investigator Award for the Doctoral Thesis**

## **Honors and Awards (Senior Author)**

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- 2014 International Society for Heart and Lung Transplantation (ISHLT) Travelling Scholarship (Neofytou E)
- 2014 Vivien Thomas Award Finalist at the Scientific Sessions of the American Heart Association (AHA) (Wang D)
- 2014 International Society for Heart and Lung Transplantation (ISHLT) Travelling Scholarship (Wang D)
- 2013 Volker-Bay-Award for the Doctoral Thesis in Surgery (Hua X)

- 2013 Basic Science Mentee/Mentor Award of the TTS (The Transplantation Society) (Mentee: Guihaire J; Mentor: Schrepfer S)
- 2013 Else Kröner Fresenius Exzellenzstipendium (Deuse T)
- 2012 Basic Science Mentee/Mentor Award of the TTS (The Transplantation Society) (Mentee: Hua X; Mentor: Schrepfer S)
- 2012 Travel Grant of the University Hamburg to present at the ISHLT (International Society for Heart and Lung Transplantation) meeting in Prague (Stubbendorff M)
- 2012 Philip K. Caves Award Finalist at the ISHLT (International Society for Heart and Lung Transplantation) (Hua X)
- 2012 German Society for Thoracic- and Cardiovascular Surgery (DGTHG): President's Top Choice Award (Deuse T)
- 2011 Werner-Otto-Stipend for the Doctoral Thesis (Boeddinghaus J)
- 2011 Kaltenbach-Doktorandenstipend of the "Deutsche Herzstiftung" for the Doctoral Thesis (Ricklefs F)
- 2011 Bionnale Speed Lecture Award, 2<sup>nd</sup> prize (Gossler T)
- 2010 Poster Award of the German Society for Thoracic- and Cardiovascular Surgery (DGTHG) (Grabosch A)
- 2010 Travel Grant of the University Hamburg to present at the joined AST/ESOT meeting in Nice (Gossler T)
- 2010 Poster Award of the University Hamburg (Stubbendorff M)
- 2010 Philip K. Caves Award at the ISHLT (International Society for Heart and Lung Transplantation) (Deuse T)
- 2009 Top ranked abstract in Basic Science at the Scientific Sessions of the American Heart Association (AHA) (Deuse T)
- 2009 Basic Science Award ISHLT (International Society for Heart and Lung Transplantation) (\$ 40,000.-; Deuse T)
- 2009 ESOT Short Stay Award (Student Tang-Quan KR)
- 2009 INTEL Semi-finalist (Student Ransohoff JD)
- [http://www.smdailyjournal.com/article\\_preview.php?id=104149](http://www.smdailyjournal.com/article_preview.php?id=104149)
- 2008 SIMR Jessica Saal Award Stanford University (Student Ransohoff JD)

[http://ctsurgery.stanford.edu/about/news/schrepfer\\_ransohoff.html](http://ctsurgery.stanford.edu/about/news/schrepfer_ransohoff.html)

- 2008 Young Investigator Award ATC (American Transplant Congress, Postdoctoral Fellow Velotta J)
- 2008 Basic Science Award ISHLT(International Society for Heart and Lung Transplantation) (\$ 40,000.-; Postdoctoral Fellow Itoh S)
- 2008 NewEra Cardiac Care Scholarship (Postdoctoral Fellow Itoh S)
- 2008 ZonMW Scholarship, Netherlands (Eur 60,000.-; Postdoctoral Fellow Lijkwan M)
- 2007 Research Grant Med Scholars Program Stanford University (Med-student Bartos J)

## **Professional Activities**

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American Heart Association (AHA), Council on Cardiovascular Surgery and Anesthesia

American Society of Transplantation (AST)

Cardiothoracic Surgery Network (CTSnet)

German Society for Thoracic- and Cardiovascular Surgery (DGTHG)

German Transplantation Society (DTG)

European Society for Organ Transplantation (ESOT)

The International Society for Heart and Lung Transplantation (ISHLT)

## **Reviewer for International Journals**

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Ann Thorac Surg

J Vasc Res

Stem Cell Dev

Transpl Immunol

Microsurgery

Int J Cardiol

Transplantation

Circulation

European Journal of Pharmacology

PLoS ONE

Drugs

European Journal of Internal Medicine

Stem Cells Translational Medicine

JoVe

Circ Res

Stem Cells Translational Medicine

## **Boards and Committees**

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since 2014 Editorial Board of "Transplantation"

since 2013 Editorial Board of "World Journal of Cardiology (WJC)"

Since 2012 Vice Chair, Scientific Council on Basic Science and Translational research,  
ISHLT (International Society for Heart and Lung Transplantation)

since 2011 Guest Editor for Journal of Transplantation, Special Issue "Lung  
Transplantation"

2010 Program Committee for Basic Science (ISHLT; International Society for Heart  
and Lung Transplantation)

since 2009 Editorial Board of "World Journal of Stem Cells (WJSC)"

## **Invited Talks**

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2014 ISHLT 34<sup>th</sup> Scientific Sessions. "Debate with Sharon Hunt: CON: Stem Cells are  
the Future of Advanced Heart Failure Therapy and Always Will Be" during the

- session "The Sexiest Controversies in End Stage Heart Failure and Transplantation".
- 2014 ISHLT 34th Scientific Sessions. "Update on Stem Cells in Transplant: The Good and Bad" during the session "Lung Transplant Immunology: Recent Advances".
- 2012 German Cardiac Society (DGK), Basic Science Meeting. "Immunobiology of engineered tissue – a translational approach" during the Session "Engineered heart tissue from stem cells – ready for transplantation?".
- 2012 23.European Students' Conference in Berlin. "Development of new immunosuppressive agents and new targets".
- 2012 BSRT International Summer School on Innovative Approaches in Regenerative Medicine in Berlin. "Transplant and Stem Cell Immunobiology".
- 2012 Wilsede Workshop: Experimental and Clinical Transplantation. "Successful grant writing and publishing".
- 2012 Stem Cell Institute, Cedars-Sinai, LA (Prof. Marban). "Experimental Stem Cell Research".
- 2012 American Transplant Congress (ATC). "Kinase Inhibitors of Cardiac Allograft Rejection" during the Session "Kinases in Transplantation-From Outside to Cellside".
- 2012 Plenary Session at the ISHLT 32nd Annual Meeting & Scientific Sessions. "Stem Cells - Are We There Yet?" during the Plenary session entitled "New Horizons".
- 2011 American Heart Association (AHA). "Mitochondrial biology – Similarities of Transplant Vasculopathy and Tumorigenicity" during the session "CVS.714; Advances in the Biology and Treatment of Transplant Vasculopathy".
- 2011 BRST PhD Symposium. "Role of mesenchymal stem cells as biological drug delivery systems and immunomodulators in regenerative medicine" during the session "Healing Processes – Crossroads of Inflammation and regeneration".
- 2011 Stanford University, Cardiovascular Institute (CVI): Frontiers in Cardiovascular Science. "Pluripotent stem cells and their immunobiology".



- 2011 ISHLT 31<sup>st</sup> Annual Meeting & Scientific Sessions. “Heterotopic and orthotopic tracheal transplantation” during the sunrise symposium “Experimental Models of Lung Transplantation”.
- 2010 German Cardiac Society, Annual Meeting, Mannheim. Stem Cell Immunology – Rejection versus Teratoma Formation.
- 2010 International Society for Heart and Lung Transplantation (ISHLT), 31<sup>st</sup> Annual Meeting, San Diego. “What`s hot, what`s new – in stem cell transplantation”.

## Activities

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Support of **Generation D** ([www.gemeinsam-anpacken.de](http://www.gemeinsam-anpacken.de)), **Immunological Forum Hamburg** ([www.immunologie-hamburg.de](http://www.immunologie-hamburg.de)), **Cardiovascular Research Center Hamburg** ([www.uke.de/forschungsverbuende/cvrc](http://www.uke.de/forschungsverbuende/cvrc)), **Academics** ([www.academics.de/blog/index.php/schrepfer](http://www.academics.de/blog/index.php/schrepfer)), **Transplant Immunology at Stanford University** ([http://med.stanford.edu/labs/robert\\_robbs/tisci\\_group.html](http://med.stanford.edu/labs/robert_robbs/tisci_group.html)), **Academia Net** ([www.academia-net.de/alias/Profil/Prof-Dr-Sonja-Schrepfer/1033360](http://www.academia-net.de/alias/Profil/Prof-Dr-Sonja-Schrepfer/1033360)), **Jugend forscht** ([www.jugend-forscht.de](http://www.jugend-forscht.de)).

## Patents

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Title: "Method for Suppressing Graft Rejection following Lung Transplantation".

Filing Date: September 25, 2007.

U.S. Application Number: 60/970, 128 (patent filed in the U.S. Patent and Trademark office).

Titel: “Overcoming the immunological barrier of allogeneic stem cell transplantation by gene therapy”. In progress (2008) (Stanford Docket 07-309).

Titel: "Regulatory Macrophages as a Cell-based Immunomodulatory Therapy in Pulmonary Hypertension and Right Ventricular Dysfunction". Patent filed in the U.S. Patent and Trademark office (13-294).

Title: "Inhibiting the development of intimal hyperplasia/re-stenosis by targeting mitochondrial activity using dichloroacetate (DCA)-different application forms". Patent filed in the U.S. Patent and Trademark office (S12-187).

## **Publications: Original Articles**

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1. Deuse T, Wang D, Stubbendorff M, Itagaki R, Grabosch A, Greaves LC, Alawi M, Gruenewald A, Hu X, Hua X, Velden J, Reichenspurner H, Robbins RC, Jaenisch R, Weissman IL, **Schrepfer S**. SCNT-derived ESCs with mismatched mitochondria trigger an immune response in allogeneic hosts. **Cell Stem Cell** **2014**. DOI10.1016/j.stem.2014.11.003.
2. Maegdefessel L, Spin JM, Raaz U, Eken SM, Toh R, Azuma J, Adam M, Nagakami F, Heymann HM, Chernugobova E, Jin H, Roy J, Hultgren R, Caidahl K, **Schrepfer S**, Hamsten A, Eriksson P, McConnell MV, Dalman RL, Tsao PS. miR-24 limits aortic vascular inflammation and murine abdominal aneurysm development. **Nat Commun.** **2014**;5:5214. doi: 10.1038/ncomms6214.
3. Deuse T, Hua X, Wang D, Maegdefessel L, Heeren J, Scheja L, Bolanos JP, Rakovic A, Spin J, Stubbendorff M, Ikeno F, Länger F, Zeller T, Schulte-Uentrop L, Stoehr A, Itagaki R, Haddad F, Eschenhagen T, Blankenberg S, Kiefmann R, Reichenspurner H, Velden J, Klein C, Yeung A, Robbins RC, Tsao PS, **Schrepfer S**. DCA prevents restenosis in preclinical animal models of vessel injury. **Nature** **2014**;509(7502):641-4. **Paper of the Month May 2014 of the "DZHK" (Deutsches Zentrum für Herz-Kreislauf-Forschung e.V.)**.

4. Stubbendorff M, Hua X, Deuse T, Ali Z, Reichenspurner H, Maegdefessel L, Robbins RC, **Schrepfer S**. Inducing Myointimal Hyperplasia Versus Atherosclerosis in Mice: An Introduction of Two Valid Models. **J Vis Exp.** **2014**;14(87).
5. Chen YJ, Lam J, Gregory CR, **Schrepfer S**, Wulff H. The Ca(2+)-Activated K(+) Channel KCa3.1 as a Potential New Target for the Prevention of Allograft Vasculopathy. **PLoS One.** **2013**;8(11):e81006.
6. Vrtovec B, Haddad F, Pham M, Deuse T, Fearon WF, **Schrepfer S**, Leon S, Vu T, Valentine H, Hunt SA. Granulocyte colony-stimulating factor therapy is associated with a reduced incidence of acute rejection episodes or allograft vasculopathy in heart transplant recipients. **Transplant Proc.** **2013**;45(6):2406-9.
7. Stubbendorff M, Deuse T, Hua X, Phan TT, Bieback K, Atkinson K, Eiermann TH, Velden J, Schroeder C, Reichenspurner H, Robbins RC, Volk HD, **Schrepfer S**. Immunological properties of extraembryonic human Mesenchymal Stromal Cells derived from gestational tissue. **Stem Cells Dev.** **2013**;22(19):2619-29. (**\*Journal Cover**)
8. Jungraithmayr W, Jang JH, **Schrepfer S**, Inci I, Weder W. Small Animal Models of Experimental Obliterative Bronchiolitis. **Am J Respir Cell Mol Biol.** **2013**;48(6):675-84.
9. Hua X, Deuse T, Chen YJ, Wulff H, Stubbendorff M, Köhler R, Miura H, Länger F, Reichenspurner H, Robbins RC, **Schrepfer S**. The potassium channel KCa3.1 as new therapeutic target for preventing obliterative airway disease after lung transplant. **Transplantation** **2013**;95(2):285-292.
10. Vrtovec B, Poglajen G, Lezaic L, Sever M, Domanovic D, Cernelc P, Socan A, **Schrepfer S**, Torre-Amione G, Haddad F, Wu JC. Effects of Intracoronary CD34+ Stem Cell Transplantation in Nonischemic Dilated Cardiomyopathy Patients: 5-Year Follow-Up. **Circ Res.** **2013**; 112(1):165-73. (**\*Journal Cover and Accompanied Editorial**)
11. Deuse T, Hua X, Taylor V, Stubbendorff M, Baluom M, Chen Y, Park G, Velden J, Streichert T, Reichenspurner H, Robbins RC, **Schrepfer S**. Significant reduction of acute

cardiac allograft rejection by selective JAK1/3-inhibition using R507 and R545.

**Transplantation 2012**;94(7):695-702. (\***Journal Cover**)

12. Hua X, Deuse T, Michelakis ED, Haromy A, Tsao PS, Maegdefessel L, Erben RG, Bergow C, Behnisch BB, Reichenspurner H, Robbins RC, **Schrepfer S**. Human Internal Mammary Artery (IMA) Transplantation and Stenting: A Human Model to Study the Development of In-Stent Restenosis. **J Vis Exp. 2012**;(63):e3663.
13. Weinberger F, Mehrkens D, Friedrich FW, Stubbendorff M, Hua X, Müller JC, **Schrepfer S**, Evans SM, Carrier L, Eschenhagen T. Localization of islet-1-positive cells in the healthy and infarcted adult murine heart. **Circ Res. 2012**;110(10):1303-10.
14. Deuse T, Seifert M, Phillips N, Fire A, Tyan D, Kay M, Tsao PS, Hua X, Velden J, Eiermann T, Volk HD, Reichenspurner H, Robbins RC, **Schrepfer S**. HLA I knockdown human embryonic stem cells induce host ignorance and achieve prolonged xenogeneic survival. **Circulation 2011**;124(11 Suppl):S3-9.
15. Duske H, Sputtek A, Binder T, Kröger N, **Schrepfer S**, Eiermann T. Assessment of physiologic natural killer cell cytotoxicity in vitro. **Hum Immunol. 2011**;72(11):1007-12.
16. Deuse T, Seifert M, Tyan D, Tsao PS, Hua X, Velden J, Eiermann T, Volk HD, Reichenspurner H, Robbins RC, **Schrepfer S**. Immunobiology of naïve and gene-tically-modified HLA I knockdown human embryonic stem cells. **J Cell Science 2011**;124:1-9.  
(\***Accompanied Editorial**)
17. Michelfelder S, Varadi K, Raupp C, Hunger A, Körbelin J, Pahrman C, **Schrepfer S**, Müller OJ, Kleinschmidt JA, Trepel M. Peptide ligands incorporated into the threefold spike capsid domain to re-direct gene transduction of AAV8 and AAV9 in vivo. **PLoS One. 2011**;6(8):e23101.
18. Conradi L, Pahrman C, Schmidt S, Deuse T, Hansen A, Eder A, Reichenspurner H, Robbins R C, Eschenhagen T, **Schrepfer S**. Bioluminescence Imaging for Assessment of Immune Responses Following Implantation of Engineered Heart Tissue (EHT). **J Vis Exp. 2011**;(52).

19. Stein W, **Schrepfer S**, Itoh S, Kimura N, Velotta J, Palmer O, Bartos J, Wang X, Robbins RC, Fischbein MP. Prevention of transplant coronary artery disease by prenylation inhibitors. **J Heart Lung Transplant.** **2011**;30(7):761-9.
20. Deuse T, Stubbendorff M, Tang-Quan K, Phillips N, Kay MA, Eiermann T, Phan TT, Volk HD, Reichenspurner H, Robbins RC, **Schrepfer S**. Immunogenicity and immunomodulatory properties of umbilical cord lining mesenchymal stem cells. **Cell Transplant.** **2011**;20(5):655-67.
21. Stubbendorff M, Deuse T, Hammel A, Robbins RC, Reichenspurner H, **Schrepfer S**. Orthotopic aortic transplantation: a rat model to study the development of chronic vasculopathy. **J Vis Exp.** **2010**;(46).
22. Deuse T, Koyanagi T, Erben RG, Hua X, Velden J, Ikeno F, Reichenspurner H, Robbins RC, Mochly-Rosen D, **Schrepfer S**. Sustained inhibition of epsilon protein kinase C inhibits vascular restenosis after balloon injury and stenting. **Circulation.** **2010**;122(11 Suppl):S170-8.
23. Tang-Quan KR, Bartos J, Deuse T, Churchill E, Schäfer H, Reichenspurner H, Mochly-Rosen D, Robbins RC, **Schrepfer S**. Non-volume-loaded heart provides a more relevant heterotopic transplantation model. **Transpl Immunol.** **2010**;23(1-2):65-70.
24. Hoffmann J, Glassford AJ, Doyle TC, Robbins RC, **Schrepfer S**, Pelletier MP. Angiogenic effects despite limited cell survival of bone marrow-derived mesenchymal stem cells under ischemia. **Thorac Cardiovasc Surg.** **2010**;58(3):136-42.
25. Hua X, Deuse T, Tang-Quan KR, Robbins RC, Reichenspurner H, **Schrepfer S**. Heterotopic and orthotopic tracheal transplantation in mice used as models to study the development of obliterative airway disease. **J Vis Exp.** **2010**;(35).
26. Kolk MV, Meyberg D, Deuse T, Tang-Quan KR, Robbins RC, Reichenspurner H, **Schrepfer S**. LAD-ligation: a murine model of myocardial infarction. **J Vis Exp.** **2009**;(32).

27. Deuse T, Blankenberg F, Haddad M, Reichenspurner H, Phillips N, Robbins RC, **Schrepfer S**. Mechanisms behind Local Immunosuppression Using Inhaled Tacrolimus in Preclinical Models of Lung Transplantation. **Am J Respir Cell Mol Biol.** **2010**;43(4):403-12.
28. Govaert JA, Swijnenburg RJ, **Schrepfer S**, Xie X, van der Bogt KE, Hoyt G, Stein W, Ransohoff KJ, Robbins RC, Wu JC. Poor Functional Recovery After Transplantation of Diabetic Bone Marrow Stem Cells in Ischemic Myocardium. **J Heart Lung Transplant.** **2009**;28(11):1158-1165.e1.
29. Deuse T, Peter C, Fedak PW, Doyle T, Reichenspurner H, Zimmermann WH, Eschenhagen T, Stein W, Wu JC, Robbins RC, **Schrepfer S**. Hepatocyte growth factor or vascular endothelial growth factor gene transfer maximizes mesenchymal stem cell-based myocardial salvage after acute myocardial infarction. **Circulation.** **2009**;120(11 Suppl):S247-54.
30. Deuse T, Ikeno F, Robbins RC, **Schrepfer S**. Imaging in-stent restenosis: an inexpensive, reliable, and rapid preclinical model. **J Vis Exp.** **2009**;(31).
31. Velotta JB, Deuse T, Haddad M, Masuda E, Park G, Carroll D, Taylor V, Robbins RC, **Schrepfer S**. A novel JAK3 inhibitor, R348, attenuates chronic airway allograft rejection. **Transplantation.** **2009**;87(5):653-9.
32. van der Bogt KE, **Schrepfer S**, Yu J, Sheikh AY, Hoyt G, Govaert JA, Velotta JB, Contag CH, Robbins RC, Wu JC. Comparison of transplantation of adipose tissue- and bone marrow-derived mesenchymal stem cells in the infarcted heart. **Transplantation.** **2009**;87(5):642-52.
33. van der Bogt KE, Sheikh AY, **Schrepfer S**, Hoyt G, Cao F, Ransohoff KJ, Swijnenburg RJ, Pearl J, Lee A, Fischbein M, Contag CH, Robbins RC, Wu JC. Comparison of different adult

- stem cell types for treatment of myocardial ischemia. **Circulation. 2008**;118(14 Suppl):S121-9.
34. **Schrepfer S**, Swijnenburg RJ, Govaert J, Cao F, Ransohoff K, Sheikh A, Haddad M, Connolly A, Davis M, Robbins RC, Wu J. Immunosuppressive therapy mitigates immunological rejection of human embryonic stem cell xenographs. **Proc Natl Acad Sci U S A. 2008**;105(35):12991-6.
35. Swijnenburg RJ, **Schrepfer S**, Cao F, Pearl JI, Xie X, Connolly AJ, Robbins RC, Wu J. In Vivo Imaging of Embryonic Stem Cells Reveals Patterns of Survival and Rejection Following Transplantation. **Stem Cells Dev. 2008**;17(6):1023-9.
36. Deuse T, Velotta JB, Hoyt G, Govaert JA, Taylor V, Masuda E, Herlaar E, Park G, Carroll D, Pelletier MP, Robbins RC, **Schrepfer S**. Novel Immunosuppression: R348, a JAK3- and Syk-inhibitor, attenuates acute cardiac allograft rejection. **Transplantation. 2008**;85(6):885-92.
37. Deuse T, Hoyt G, Koyanagi T, Robbins RC, **Schrepfer S**. Prevention and Inhibition but not Reversion of Chronic Allograft Vasculopathy by FK778. **Transplantation. 2008**;85(6):870-7.
38. Deuse T, Erben RG, Ikeno F, Behnisch B, Boeger R, Connolly AJ, Bergow C, Pelletier MP, Robbins RC, **Schrepfer S**. Introducing the first polymer-free leflunomide eluting stent. **Atherosclerosis 2008**;200(1):126-34. (**\*Journal Cover** )
39. Rempf C, Ritter A, **Schrepfer S**, Freitag M, Standl T, Gottschalk A. Failed induction of heme oxygenase 1 in endothelial cells exposed to the hemoglobin based oxygen carrier oxyglobin(r). **Artif Cells Blood Substit Immobil Biotechnol. 2008**;36(1):34-44.
40. Huellner MW, **Schrepfer S**, Weyand M, Weiner H, Wimplinger I, Eschenhagen T, Rau T. Inhibition of aldehyde dehydrogenase type 2 attenuates vasodilatory action of nitroglycerin in human veins. **FASEB J. 2008**;22(7):2561-8.

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42. **Schrepfer S**, Deuse T, Reichenspurner H, Hoffmann J, Haddad M, Fischbein MP, Robbins RC, Pelletier MP. Effect of inhaled tacrolimus on cellular and humoral rejection to prevent posttransplant obliterative airway disease. **Am J Transplant.** **2007**;7:1733–1742.
43. **Schrepfer S**, Deuse T, Reichenspurner H, Hoyt G, Fischbein MP, Robbins RC, Pelletier MP. Techniques for experimental heterotopic and orthotopic tracheal transplantations – When to use which model? **Transpl Immunol.** **2007**;17(4):255-261.
44. **Schrepfer S**, Deuse T, Reichenspurner H, Fischbein MP, Robbins RC, Pelletier MP. Stem cell transplantation: The lung barrier. **Transplant Proc.** **2007**;39(2):573-6.
45. **Schrepfer S**, Deuse T, Pelletier MP, Fischbein MP, Robbins RC, Reichenspurner H. Is the malononitrilamide FK778 better for the prevention of acute or chronic rejection? **Transplant Proc.** **2007**;39(2):569-72.
46. **Schrepfer S**, Deuse T, Lange C, Katzenberg R, Reichenspurner H, Robbins RC, Pelletier MP. Simplified protocol to isolate, purify, and culture expand mesenchymal stem cells. **Stem Cell Dev** **2007**;16(1):105-7.
47. **Schrepfer S**, Deuse T, Hoyt G, Sheikh AY, Hoffmann J, Reichenspurner H, Robbins RC, Pelletier MP. Experimental orthotopic tracheal transplantation: The Stanford technique. **Microsurgery.** **2007**;27(3):187-9.
48. Sydow K, **Schrepfer S**, Franzen O, Detter C, Willems S, Meinertz T, Reichenspurner H. Coincidence of aortic valve stenosis and regurgitation and multiple cardiac papillary fibroelastomas in a young male adult. **J Thorac Cardiovasc Surg.** **2007**;133(2):564-5.



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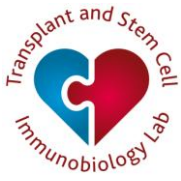
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## **Main Research Interests**

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**Transplant Immunology:** Mechanisms involved in allogeneic acute and chronic graft rejection; Development of new immunosuppressive agents for heart and lung transplantation; Inhaled immunosuppression after lung transplantation to prevent acute and



chronic graft rejection; Mechanisms of immune tolerance (immunotolerance windows and specific T cell modulation); Gene therapy for modulating immunogenicity of heart and lung transplants; Developing novel humanized models to study chronic rejection of thoracic transplants (transplant vasculopathy and bronchiolitis obliterans); The role of mtDNA in allograft rejection.

**Stem Cell Transplantation and Immunology:** Immunobiology of various adult stem cells from different sources (umbilical cord lining, bone marrow); pluripotent stem cells (embryonic stem cells, iPS cells) in cardiac repair; Immunogenicity pluripotent stem cells and their rejection in allogeneic, xenogeneic, and humanized models; Gene therapy for stem cell homing, and to prolong cell survival; Tissue engineering using pluripotent stem cells for cardiac repair; Gene therapy to avoid immune responses after allogeneic transplantation of stem cells and their derivatives.

**Vascular Biology:** Cell-based strategies as novel therapeutic options in vascular diseases; Revealing novel mechanisms in the development of intimal hyperplasia; Developing novel humanized models to study the development of intimal hyperplasia and in stent re-stenosis; microRNAs and vascular biology.