

Liste der wissenschaftlichen Veröffentlichungen von Prof. Dr. med. Wilhelm Röhl

Originalarbeiten

1. Roell,W., Klein,A.M., Breitbach,M., Becker,T., Parikh, Lee,J., Zimmermann,K., Reining,S., Gabris,B., Ottersbach,A., Doran,R., Engelbrecht,B., Schiffer,M., Kimura,K., Freitag,P., Carls,E., Geisen,C., Duer,G.D., Sasse,P., Welz,A., Pfeifer,A., Salama,G., Kotlikoff,M., Fleischmann,B.K. (2018). Overexpression of Cx43 in cells of the myocardial scar: Correction of post-infarct arrhythmias through heterotypic cell-cell coupling. *Scientific Reports*. 8, 7145.
2. Ottersbach A, Mykhaylyk O, Heidsieck A, Eberbeck D, Rieck S, Zimmermann K, Breitbach M, Engelbrecht B, Brüggemann T, Hesse M, Welz A, Sasse P, Wenzel D, Plank C, Gleich B, Hölzel M, Bloch W, Pfeifer A, Fleischmann BK, **Roell W**. (2018) Improved heart repair upon myocardial infarction: Combination of magnetic nanoparticles and tailored magnets strongly increases engraftment of myocytes. *Biomaterials*. 155, 176-190.
3. Beiert T, Knappe V, Tiyerili V, Stöckigt F, Effelsberg V, Linhart M, Steinmetz M, Klein S, Schierwagen R, Trebicka J, **Roell W**, Nickenig G, Schrickel JW, Andrié RP. (2018) Chronic lower-dose relaxin administration protects from arrhythmia in experimental myocardial infarction due to anti-inflammatory and anti-fibrotic properties. *Int J Cardiol*. 250, 21-28.
4. Nazari-Shafti TZ, Kempfert J, Falk V, **Röhl W**, Stamm C. (2018). Regenerative Medicine/Cardiac Cell Therapy: Adult/Somatic Progenitor Cells. *Thorac Cardiovasc Surg*. 66, 42-52.
5. Duran AG, Reidell O, Stachelscheid H, Klose K, Gossen M, Falk V, **Röhl W**, Stamm C. (2018). Regenerative Medicine/Cardiac Cell Therapy: Pluripotent Stem Cells. *Thorac Cardiovasc Surg*. 66, 53-62.
6. **Roell,W.**, Sinning,J.M., Werner,N., Mellert,F. (2015). How to re-shape a transcatheter heart valve. *Eur Heart J*. 36, 1287. (Impact factor: 15,06)
7. Vogt,C.C., Brueggemann,T., Malan,D., Ottersbach,A., **Roell,W.**, Fleischmann,B.K., Sasse,P. (2015). Systemic gene transfer enables optogenetic pacing of mouse hearts. *Cardiovasc Res*. 106, 338-43. (Impact factor: 5,46)
8. Fuchs,F., Tiyerili,V., **Roell,W.**, Grube,E., Werner,N., Nickenig,G., Sinning, JM. (2015). Successful post-dilation of a Lotus transcatheter aortic valve in a case of prosthesis frame underexpansion due to leaflet calcification. *JACC Cardiovasc Interv*. 8, 866-8. (Impact factor: 7,34)
9. Raulf,A., Horder,H., Tarnawski,L., Geisen,C., Ottersbach,A., **Röhl,W.**, Jovinge,S., Fleischmann,B.K., Hesse,M.. (2015). Transgenic systems for unequivocal identification of cardiac myocyte nuclei and analysis of cardiomyocyte cell cycle status. *Basic Res Cardiol*. 110, 33. (Impact factor: 6,01)
10. Gestrich,C., Duerr,G.D., Heinemann,J.C., Meertz,A., Probst,C., **Roell,W.**, Schiller,W., Zimmer,A., Bindila,L., Lutz,B., Welz,A., Dewald,O. (2015). Activation

of Endocannabinoid System Is Associated with Persistent Inflammation in Human Aortic Aneurysm. *Biomed Res Int.* 2015, 456582. (Impact factor: 2,13)

11. Duerr,G.D., Heinemann,J.C., Gestrich,C., Heuft,T., Klaas,T., Keppel,K., **Roell,W.**, Klein,A., Zimmer,A., Velten,M., Kilic,A., Bindila,L., Lutz,B., Dewald,O. (2015). Impaired border zone formation and adverse remodeling after reperfused myocardial infarction in cannabinoid CB2 receptor deficient mice. *Life Sci.* 138, 8-17. (Impact factor: 2,68)
12. Paulis,L.E., Klein,A.M., Ghanem,A., Geelen,T., Coolen,B.F., Breitbach,M., Zimmermann,K., Nicolay,K., Fleischmann,B.K., **Roell,W.***, Strijkers,G.J*. (2013). Embryonic cardiomyocyte, but not autologous stem cell transplantation, restricts infarct expansion, enhances ventricular function, and improves long-term survival. *PLoS One.* 8, e61510. (***geteilte Letztautorenschaft**, Impact factor: 3,06)
13. Duerr,G.D., Heinemann,J.C., Dunkel,S., Zimmer,A., Lutz,B., Lerner,R., **Roell,W.**, Mellert,F., Probst,C., Esmailzadeh,B., Welz,A., Dewald,O. (2013). Myocardial hypertrophy is associated with inflammation and activation of endocannabinoid system in patients with aortic valve stenosis. *Life Sci.* 92, 976-83. (Impact factor: 2,68)
14. Hesse,M., Raulf,A., Pilz,G.A., Haberlandt,C., Klein,A.M., Jabs,R., Zaehres,H., Fügemann,C.J., Zimmermann,K., Trebicka,J., Welz,A., Pfeifer,A., **Röll,W.**, Kotlikoff,M.I., Steinhäuser,C., Götz,M., Schöler,H.R., Fleischmann,B.K. (2012). Direct visualization of cell division using high-resolution imaging of M-phase of the cell cycle. *Nat Commun.* 3, 1076. (Impact factor: 11,33)
15. Kilgus,C., Heidsieck,A., Ottersbach,A., **Roell,W.**, Trueck,C., Fleischmann,B.K., Gleich,B., Sasse,P. (2012). Local gene targeting and cell positioning using magnetic nanoparticles and magnetic tips: comparison of mathematical simulations with experiments. *Pharm Res.* 29, 1380-91. (Impact factor: 2,68)
16. Herz,K., Heinemann,J.C., Hesse,M., Ottersbach,A., Geisen,C., Fügemann,C.J., **Röll,W.**, Fleischmann,B.K., Wenzel,D. (2012). Live monitoring of small vessels during development and disease using the flt-1 promoter element. *Basic Res Cardiol.* 107, 257-271. (Impact factor: 6,01)
17. Ghanem,A.*, **Röll,W.***, Bostani,T., Dewald,O., Fleischmann,B.K., Stypmann,J., Nickenig,G., Tiemann,K. (2011). Cardiomyoplasty improves contractile reserve after myocardial injury in mice - functional and morphological investigations with reconstructive 3-dimensional echocardiography. *Cell Transplant.* 20, 1621-1628. (Impact factor: 3,19, ***geteilte Erstautorenschaft**)
18. Lohse,F., Lang,N., Schiller,W., **Roell,W.**, Dewald,O., Preusse,C.J., Welz,A., Schmitz,C. (2009). Quality of life after replacement of the ascending aorta in patients with true aneurysms. *Tex Heart Inst J.* 36, 104-10. (Impact factor: 0,79)
19. Hofmann,A., Wenzel,D., Becher,U.M., Freitag,D.F., Klein,A.M., Eberbeck,D., Schulte,M., Zimmermann,K., Bergemann,C., Gleich,B., **Roell,W.**, Weyh,T., Trahms,L., Nickenig,G., Fleischmann,B.K., and Pfeifer,A. (2009). Combined targeting of lentiviral vectors and positioning of transduced cells by magnetic nanoparticles. *Proc. Natl. Acad. Sci. U. S. A* 106, 44-49. (Impact factor: 9,42)
20. Malan,D., Reppel,M., Dobrowolski,R., **Roell,W.**, Smyth,N., Hescheler,J., Paulsson,M., Bloch,W., and Fleischmann,B.K. (2009). Lack of laminin gamma1 in embryonic stem cell-derived cardiomyocytes causes inhomogeneous electrical

- spreading despite intact differentiation and function. *Stem Cells* 27, 88-99. (Impact factor: 5,90)
21. Wenzel,D., Knies,R., Matthey,M., Klein,A.M., Welschoff,J., Stolle,V., Sasse,P., **Röll,W.**, Breuer,J., and Fleischmann,B.K. (2009). beta(2)-adrenoceptor antagonist ICI 118,551 decreases pulmonary vascular tone in mice via a G(i/o) protein/nitric oxide-coupled pathway. *Hypertension* 54, 157-163. (Impact factor: 6,29)
 22. Lohse,F., Lang,N., Schiller,W., **Roell,W.**, Dewald,O., Preusse,C.J., Welz,A., and Schmitz,C. (2009). Quality of life after replacement of the ascending aorta in patients with true aneurysms. *Tex. Heart Inst. J.* 36, 104-110. (Impact factor: 0,79)
 23. Nygren,J.M., Liuba,K., Breitbach,M., Stott,S., Thoren,L., **Roell,W.**, Geisen,C., Sasse,P., Kirik,D., Bjorklund,A., Nerlov,C., Fleischmann,B.K., Jovinge,S., and Jacobsen,S.E. (2008). Myeloid and lymphoid contribution to non-haematopoietic lineages through irradiation-induced heterotypic cell fusion. *Nat. Cell Biol.* 10, 584-592. (Impact factor: 18,70)
 24. Sasse,P., Malan,D., Fleischmann,M., **Roell,W.**, Gustafsson,E., Bostani,T., Fan,Y., Kolbe,T., Breitbach,M., Addicks,K., Welz,A., Brem,G., Hescheler,J., Aszodi,A., Costell,M., Bloch,W., and Fleischmann,B.K. (2008). Perlecan is critical for heart stability. *Cardiovasc. Res.* 80, 435-444. (Impact factor: 5,46)
 25. **Roell,W.***, Lewalter,T.*, Sasse,P.*, Tallini,Y.N., Choi,B.R., Breitbach,M., Doran,R., Becher,U.M., Hwang,S.M., Bostani,T., von,M.J., Hofmann,A., Reining,S., Eiberger,B., Gabris,B., Pfeifer,A., Welz,A., Willecke,K., Salama,G., Schrickel,J.W., Kotlikoff,M.I., and Fleischmann,B.K. (2007). Engraftment of connexin 43-expressing cells prevents post-infarct arrhythmia. *Nature* 450, 819-824. (Impact factor: 38,14, ***geteilte Erstautorenschaft**)
 26. Breitbach,M.*, Bostani,T.*, **Roell,W.***, Xia,Y., Dewald,O., Nygren,J.M., Fries,J.W., Tiemann,K., Bohlen,H., Hescheler,J., Welz,A., Bloch,W., Jacobsen,S.E., and Fleischmann,B.K. (2007). Potential risks of bone marrow cell transplantation into infarcted hearts. *Blood* 110, 1362-1369. (Impact factor: 11,84, ***geteilte Erstautorenschaft**)
 27. Kolossov,E.*, Bostani,T.*, **Roell,W.***, Breitbach,M., Pillekamp,F., Nygren,J.M., Sasse,P., Rubenchik,O., Fries,J.W., Wenzel,D., Geisen,C., Xia,Y., Lu,Z., Duan,Y., Kettenhofen,R., Jovinge,S., Bloch,W., Bohlen,H., Welz,A., Hescheler,J., Jacobsen,S.E., and Fleischmann,B.K. (2006). Engraftment of engineered ES cell-derived cardiomyocytes but not BM cells restores contractile function to the infarcted myocardium. *J. Exp. Med.* 203, 2315-2327. (Impact factor: 11,24, ***geteilte Erstautorenschaft**)
 28. Ghanem,A.*, **Röll,W.***, Hashemi,T., Dewald,O., Djoufack,P.C., Fink,K.B., Schrickel,J., Lewalter,T., Luderitz,B., and Tiemann,K. (2006). Echocardiographic assessment of left ventricular mass in neonatal and adult mice: accuracy of different echocardiographic methods. *Echocardiography.* 23, 900-907. (Impact factor: 1,43, ***geteilte Erstautorenschaft**)
 29. Dewald,O., Schmitz,C., Diem,H., Goehring,P., Vetter,H.O., **Roell,W.**, Goedje,O., Tschoepe,D., and Reichart,B. (2005). Platelet activation markers in patients with heart assist device. *Artif. Organs* 29, 292-299. (Impact factor: 1,99)
 30. Kustermann,E.*, **Roell,W.***, Breitbach,M., Wecker,S., Wiedermann,D., Buehrle,C., Welz,A., Hescheler,J., Fleischmann,B.K., and Hoehn,M. (2005). Stem cell

implantation in ischemic mouse heart: a high-resolution magnetic resonance imaging investigation. *NMR Biomed.* 18, 362-370. (Impact factor: 2,98, *geteilte Erstautorenschaft)

31. Reppel,M., Sasse,P., Piekorz,R., Tang,M., **Roell,W.**, Duan,Y., Kletke,A., Hescheler,J., Nurnberg,B., and Fleischmann,B.K. (2005). S100A1 enhances the L-type Ca²⁺ current in embryonic mouse and neonatal rat ventricular cardiomyocytes. *J. Biol. Chem.* 280, 36019-36028. (Impact factor: 4,26)
32. Nygren,J.M., Jovinge,S., Breitbach,M., Sawen,P., **Röll,W.**, Hescheler,J., Taneera,J., Fleischmann,B.K., and Jacobsen,S.E. (2004). Bone marrow-derived hematopoietic cells generate cardiomyocytes at a low frequency through cell fusion, but not transdifferentiation. *Nat. Med.* 10, 494-501. (Impact factor: 30,36)
33. Brede,M., **Roell,W.**, Ritter,O., Wiesmann,F., Jahns,R., Haase,A., Fleischmann,B.K., and Hein,L. (2003). Cardiac hypertrophy is associated with decreased eNOS expression in angiotensin AT₂ receptor-deficient mice. *Hypertension* 42, 1177-1182. (Impact factor: 6,29)
34. Siedner,S., Kruger,M., Schroeter,M., Metzler,D., **Roell,W.**, Fleischmann,B.K., Hescheler,J., Pfitzer,G., and Stehle,R. (2003). Developmental changes in contractility and sarcomeric proteins from the early embryonic to the adult stage in the mouse heart. *J. Physiol* 548, 493-505. (Impact factor: 4,73)
35. **Roell,W.**, Lu,Z.J., Bloch,W., Siedner,S., Tiemann,K., Xia,Y., Stoecker,E., Fleischmann,M., Bohlen,H., Stehle,R., Kolossov,E., Brem,G., Addicks,K., Pfitzer,G., Welz,A., Hescheler,J., and Fleischmann,B.K. (2002). Cellular cardiomyoplasty improves survival after myocardial injury. *Circulation* 105, 2435-2441. (Impact factor: 17,05)
36. **Roell,W.**, Fan,Y., Xia,Y., Stoecker,E., Sasse,P., Kolossov,E., Bloch,W., Metzner,H., Schmitz,C., Addicks,K., Hescheler,J., Welz,A., and Fleischmann,B.K. (2002). Cellular cardiomyoplasty in a transgenic mouse model. *Transplantation* 73, 462-465. (Impact factor: 3,69)
37. Schmitz,C., **Roell,W.**, Dewald,O., Goetz,A.E., Kilger,E., Roth,M., Reichenspurner,H., and Reichart,B. (2000). Replacement of the valves of a Novacor LVAS without cardiopulmonary bypass. *Thorac. Cardiovasc. Surg.* 48, 380-381. (Impact factor: 0,96)
38. Vogeser,M., Felbinger,T.W., **Röll,W.**, and Jacob,K. (1999). Cortisol metabolism in the postoperative period after cardiac surgery. *Exp. Clin. Endocrinol. Diabetes* 107, 539-546. (Impact factor: 1,66)
39. Vogeser,M., Felbinger,T.W., Kilger,E., **Röll,W.**, Fraunberger,P., and Jacob,K. (1999). Corticosteroid-binding globulin and free cortisol in the early postoperative period after cardiac surgery. *Clin. Biochem.* 32, 213-216. (Impact factor: 2,38)
40. **Roell,W.**, Goedje,O., Vetter,H.O., Schmitz,C., Dewald,O., and Reichart,B. (1997). Improvement of heart-, lung-, and liver-performance during mechanical circulatory support by the Novacor-system. *Eur. J. Cardiothorac. Surg.* 11, 1045-1051. (Impact factor: 2,80)
41. Vetter,H.O., Schmitz,C., Fischlein,T., **Röll,W.**, Gulbins,H., Uhlig,A., and Reichart,B. (1997). [Transplantation of aortic and mitral valves: permanent valve replacement without anticoagulation?]. *Herz* 22, 120-121. (Impact factor: 0,75)

42. Kaulbach,H.G., Vetter,H.O., Reichenspurner,H., Peiffer,M., Schindler,G., **Röll,W.**, and Reichart,B. (1993). [Initial experience with the NOVACOR left heart assist system in transition for heart transplantation at the Grosshadern Clinic]. Zentralbl. Chir 118, 687-690. (Impact factor: 0,64)