

## Personal Details

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France  
e-mail: kwagner@unice.fr  
DATE OF BIRTH: February 7th, 1971  
PLACE OF BIRTH: Spremberg, Germany  
SEX: Male  
MARITAL STATUS: Married, 1 daughter  
NATIONALITY: German

## Current position

2015 - present Principal Investigator iBV  
2009 – present: Research Director INSERM (DR2), permanent position

## Past employments

2007 – 2011 Group leader, INSERM AVENIR Excellence Program,  
INSERM U907, Nice, France  
2005-2008: INSERM Young Investigator, Nice, France  
2003 – 2005: EMBO Long-term fellow  
INSERM U636, Centre de Biochimie, Nice, France  
1998 - 2003: Post-doctoral research associate, Institute of Physiology  
Humboldt-University zu Berlin (Charité)

## Education/Qualifications

02/2004: Postdoctoral lecturer qualification in Physiology (Habilitation)  
Humboldt-University zu Berlin (Charité)  
1998 thesis: „Effects of hypoxia and reoxygenation on contractile function of  
human atrial trabeculae and rat papillary muscles –  
cardioprotective mechanisms“ (summa cum laude)  
1996-1998 Resident, MD, Clinic for Cardiology, Angiology, and  
Pulmonology  
Humboldt-University zu Berlin (Charité)  
1995-1996 Junior Resident in Cardiology, Cardiac Surgery, Paediatrics,  
Gynaecology  
Humboldt-University zu Berlin (Charité)  
1990-1996 Study of Medicine at the Humboldt-University zu Berlin  
(Charité)

## Scientific prizes

2018 Equipe FRM  
2015 Grand Prix de Cancerologie, Académie des Sciences  
2007 Du Bois-Reymond-Prize, German Physiological Society  
1998 Robert-Koch-Prize, Charité

### Areas of Research

Developmental Regulation of angiogenesis  
Transcriptional control of neovascularisation  
RNA-mediated epigenetic modifications  
Antiangiogenic therapies and cancer

### University teaching responsibilities

1998 - 2003 Practical courses and seminars in Physiology for Medical Students, 245 hours and Introduction in Clinical Medicine for Medical Students, 30 hours, at the Charité, Berlin, Germany, Supervision of 3 PhD students, 2 technicians

### Memberships

Member of the German Physiological Society and the European Society for Cardiology.

### Editorial work

Work as reviewer for Cardiovascular Research, Circulation Research, Journal of Clinical Investigation, American Journal of Physiology, European Journal of Physiology, Kidney International, Physiological Genomics. Grant reviewer for Kidney Research UK, Cancer Research UK, INSERM, Wellcome Trust, AERES, NIH.

### Publications

65 peer reviewed publications; approx. 150 abstracts and congress contributions; Chapters in Books "Mechanosensitivity in Cells and Tissues" ed. Kamkin & Kiseleva, Academia, Moscow, 2005.

## Publications

1. Da Silva F, Massa F, Motamedi FJ, Vidal V, Rocha AS, Gregoire EP, Cai CL, **Wagner KD**, Schedl A. Myocardial-specific R-spondin3 drives proliferation of the coronary stems primarily through the Leucine Rich Repeat G Protein coupled receptor LGR4. *Dev Biol*. 2018 Sep 1;441(1):42-51. doi: 10.1016/j.ydbio.2018.05.024. Epub 2018 May 31.
2. Simkin D, Robin G, Giuliano S, Vukolic A, Mocerri P, Guy N, **Wagner KD**, Lacampagne A, Allard B, Bendahhou S. Andersen's syndrome mutants produce a knockdown of inwardly rectifying K<sup>+</sup> channel in mouse skeletal muscle in vivo. *Cell Tissue Res*. 2018 Feb;371(2):309-323. doi: 10.1007/s00441-017-2696-7. Epub 2017 Oct 10.
3. Baudouy D, Michiels JF, Vukolic A, **Wagner KD**, Wagner N. Echocardiographic and histological examination of cardiac morphology in the mouse. *J Vis Exp*. 2017 Oct 26;(128). doi: 10.3791/55843..
4. Da Silva F, Rocha AS, Morrison H, **Wagner KD**, Schedl A. Coronary artery formation is driven by localized expression of R-spondin3. *Cell Rep*. 2017 Aug 22;20(8):1745-1754.
5. **Wagner KD**, Ying Y, Leong W, Jiang J, Hu X, Chen Y, Michiels JF, Lu Y, Gilson E, Wagner N, Ye J. The differential spatiotemporal expression pattern of shelterin genes throughout lifespan. *Aging (Albany NY)*. 2017 Apr;9(4):1219-1232. doi: 10.18632/aging.101223.
6. Tarhriz V, **Wagner KD**, Masoumi Z, Molavi O, Hejazi MS, Ghanbarian H. CDK9 Regulates Apoptosis of Myoblast Cells by Modulation of microRNA-1 Expression. *J Cell Biochem*. 2018 Jan;119(1):547-554. doi: 10.1002/jcb.26213. Epub 2017 Jul 11.
7. Ghanbarian H, Wagner N, Michiels JF, Cuzin F, Wagner KD, Rassoulzadegan M. Small RNA-directed epigenetic programming of embryonic stem cell cardiac differentiation. *Sci Rep*. 2017 Feb 6;7:41799. doi: 10.1038/srep41799.
8. Ghanbarian H, Wagner N, Polo B, Baudouy D, Kiani J, Michiels JF, Cuzin F, Rassoulzadegan M, **Wagner KD**. Dnmt2/Trdmt1 as Mediator of RNA Polymerase II Transcriptional Activity in Cardiac Growth. *PLoS One*. Jun 6;11(6):e0156953. doi: 10.1371/journal.pone.0156953, 2016.
9. Lopez P, **Wagner KD**, Hofman P, Van Obberghen E. RNA activation of the VEGF promoter by dsRNA and hypoxia: Role of non-coding VEGF promoter transcripts. *Mol Cell Biol*. pii: MCB.01096-15, 2016.
10. **Wagner KD**, Vukolić A, Baudouy D, Michiels JF, Wagner N. Inducible Conditional Vascular-Specific Overexpression of Peroxisome Proliferator- Activated Receptor beta/delta (PPARbeta/delta) Leads to Rapid Cardiac Hypertrophy. *PPAR research Volume 2016, Article ID 7631085*, 2016.
11. Cano E, Carmona R, Ruiz-Villalba A, Rojas A, Chau YY, **Wagner KD**, Wagner N, Hastie ND, Muñoz-Chápuli R, Pérez-Pomares JM. Extracardiac septum transversum/proepicardial endothelial cells pattern embryonic coronary arterio-venous connections. *Proc Natl Acad Sci U S A*. 113:656-61, 2016.
12. EL Mai M, **Wagner KD**, Michiels JF, Gilson E, Wagner N. The telomeric-repeat binding factor 2 (TRF2) acts as a transcriptional regulator in tumor angiogenesis. *Molecular & Cellular Oncology*. e988508, 2014.
13. **Wagner KD**, Cherfils-Vicini J, Hosen N, Hohenstein P, Gilson E, Hastie ND, Michiels JF, Wagner N. The Wilms' tumour suppressor Wt1 is a major regulator of tumour angiogenesis and progression. *Nat Commun*. 5:5852. 2014.

14. El Maï M, **Wagner KD**, Michiels JF, Ambrosetti D, Borderie A, Destree S, Renault V, Djerbi N, Giraud-Panis MJ, Gilson E, Wagner N. The Telomeric Protein TRF2 Regulates Angiogenesis by Binding and Activating the PDGFR $\beta$  Promoter. *Cell Rep.* 9:1047-60, 2014.
15. Keber R, Motaln H, **Wagner KD**, Debeljak N, Rassoulzadegan M, Ačimovič J, Rozman D, Horvat S. Mouse knockout of the cholesterologenic P450 lanosterol 14 $\alpha$ -Demethylase (CYP51) resembles Antley-Bixler syndrome. *J Biol Chem* 286:29086-97, 2011.
16. **Wagner KD**, Benchetrit M, Bianchini L, Michiels JF, Wagner N. Peroxisome proliferator-activated receptor  $\beta/\delta$  (PPAR $\beta/\delta$ ) is highly expressed in liposarcoma and promotes migration and proliferation. *J Pathol.* 224:575-88, 2011.
17. Wagner N, Morrison H, Pagnotta S, Michiels JF, Schwab Y, Tryggvason K, Schedl A, **Wagner KD**. The podocyte protein nephrin is required for cardiac vessel formation. *Hum Mol Genet.* 20:2182-94, 2011.
18. Kamkin A, Kiseleva I, Theres H, Euler-Grehn JJ, **Wagner KD**, Scholz H, Vetter R. Enhanced L-type calcium currents in cardiomyocytes from transgenic rats overexpressing SERCA2a. *Exp Clin Cardiol.* 15:e109-15, 2010.
19. **Wagner KD**, Wagner N. Peroxisome proliferator-activated receptor beta/delta (PPARbeta/delta) acts as regulator of metabolism linked to multiple cellular functions. *Pharmacol Ther.* 125:423-435, 2010.
20. Grandjean V, Gounon P, Wagner N, Martin L, **Wagner KD**, Bernex F, Cuzin F, Rassoulzadegan M. The miR-124-Sox9 paramutation: RNA-mediated epigenetic control of embryonic and adult growth. *Development.* 136:3647-55, 2009.
21. Wagner N, Jehl-Piétri C, Lopez P, Murdaca J, Giordano C, Schwartz C, Gounon P, Hatem SN, Grimaldi P, **Wagner KD**. Peroxisome proliferator-activated receptor beta stimulation induces rapid cardiac growth and angiogenesis via direct activation of calcineurin. *Cardiovasc Res.* 83:61-71, 2009.
22. Scholz H, **Wagner KD**, Wagner N. Role of the Wilms' tumour transcription factor, Wt1, in blood vessel formation. *Pflugers Arch.* 458:315-23, 2009.
23. **Wagner KD\***, Wagner N\*, Ghanbarian H, Grandjean V, Gounon P, Cuzin F, Rassoulzadegan M. RNA induction and inheritance of epigenetic cardiac hypertrophy in the mouse. *Dev Cell.* 14:962-9, 2008.
24. Wagner N, **Wagner KD**, Afanetti M, Nevo F, Antignac C, Michiels JF, Schedl A, Berard E. A novel Wilms' tumor 1 gene mutation in a child with severe renal dysfunction and persistent renal blastema. *Pediatr Nephrol.* 23:1445-53, 2008.
25. Wagner N, Michiels JF, Schedl A, **Wagner KD**. The Wilms' tumour suppressor WT1 is involved in endothelial cell proliferation and migration: expression in tumour vessels in vivo. *Oncogene* 27:3662-72, 2008.
26. Wagner N, Panelos J, Massi D, **Wagner KD**. The Wilms' tumor suppressor WT1 is associated with melanoma proliferation. *Pflugers Arch.* 455:839-47, 2008.
27. Kirschner KM, Wagner N, **Wagner KD**, Wellmann S, Scholz H. The Wilms' tumor suppressor WT1 promotes cell adhesion through transcriptional activation of the alpha 4 integrin gene. *J Biol Chem.* 281:31930-9, 2006.
28. **Wagner KD\***, Wagner N\*, Guo JK, Elger M, Dallman MJ, Bugeon L, Schedl A. An inducible mouse model for PAX2-dependent glomerular disease: molecular insights into a complex pathogenesis. *Curr Biol.* 16:793-800, 2006.
29. Wagner N\*, **Wagner KD\***, Scholz H, Kirschner KM, Schedl A. The intermediate filament protein nestin is expressed in the developing kidney and heart and might be regulated by the Wilms' tumor suppressor Wt1. *Am J Physiol Regul Integr Comp Physiol.* 291:R779-87, 2006.

30. Wagner N\*, **Wagner KD\***, Theres H, Englert C, Schedl A, Scholz H. Coronary vessel development requires activation of the TrkB neurotrophin receptor by the Wilms' tumor transcription factor Wt1. *Genes Dev* 19: 2631-42, 2005.
31. Wagner N\*, **Wagner KD\***, Hammes A, Kirschner KM, Vidal VP, Schedl A, Scholz H. A splice variant of the Wilms' tumour suppressor Wt1 is required for normal development of the olfactory system. *Development* 132: 1327-36, 2005.
32. Kamkin A, Kiseleva I, Isenberg G, **Wagner KD**, Günther J, Theres H, Scholz H. Cardiac Fibroblasts and the Mechano-electric Feedback Mechanism in Healthy and Diseased Hearts. *Prog. Biophys. Mol. Biol.* 82:111-20, 2003.
33. **Wagner KD**, Wagner N, Schedl A. The complex life of WT1. *J Cell Sci* 116:1653-8, 2003.
34. **Wagner KD**, Scholz H. The long- lasting impact of postnatal neuropeptide Y. *Am J Physiol: Integr Regul Physiol.* 284:R1382-3, 2003.
35. Wagner N\*, **Wagner KD\***, Xing Y, Scholz H, Schedl A. The Major Podocyte Protein Nephin is Transcriptionally Activated by the Wilms' Tumor Suppressor WT1. *J Am Soc Nephrol.* 15: 3044-3051, 2004.
36. Wagner N\*, **Wagner KD\***, Schley G, Badiali L, Theres H, Scholz H. 1,25-dihydroxyvitamin D3-induced apoptosis of retinoblastoma cells is associated with reciprocal changes of Bcl-2 and Bax. *Exp Eye Res.* 77:1-9, 2003.
37. **Wagner KD\***, Wagner N\*, Wellmann S, Schley G, Bondke A, Theres H, Scholz, H. Oxygen-regulated expression of the Wilms' tumor suppressor Wt1 involves hypoxia-inducible factor-1 (HIF-1). *FASEB J.* 17:1364-6, 2003.
38. Kamkin A, Kiseleva I, **Wagner KD**, Lozinsky I, Günther J, Scholz H. Mechanically induced potentials in atrial fibroblasts from rat hearts are sensitive to hypoxia/reoxygenation. *Pflugers Arch.* 446:169-74, 2003.
39. **Wagner KD\***, Wagner N\*, Schley G, Theres H, Scholz H. The Wilms' tumor suppressor WT1 encodes a transcriptional activator of the class IV POU-domain factor Pou4f2 (Brn-3b). *Gene* 305:217-23, 2003.
40. Kamkin A, Kiseleva I, **Wagner KD**, Bohm J, Theres H, Günther J, Scholz H. Characterization of stretch-activated ion currents in isolated atrial myocytes from human hearts. *Pflugers Arch.* 446:339-46, 2003.
41. **Wagner KD**, Gmehling G, Günther J, Theres H, Mydlak K, Schimke I, Scholz H. Time-dependent changes of the susceptibility of cardiac contractile function to hypoxia-reoxygenation after myocardial infarction in rats. *Mol Cell Biochem* 241:125-133, 2002.
42. Wagner N\*, **Wagner KD\***, Schley G, Coupland S, Heimann H, Grantyn R, Scholz H. The Wilms' tumor suppressor Wt1 is associated with the differentiation of retinoblastoma cells. *Cell Growth Diff.* 13:297-305, 2002.
43. Vetter R, Rehfeld U, Reissfelder C, Weiß W, **Wagner KD**, Günther J, Hammes A, Tschöpe C, Dillmann W, Paul M. Transgenic overexpression of the sarcoplasmic reticulum Ca<sup>2+</sup>-ATPase improves reticular Ca<sup>2+</sup> handling in normal and diabetic rat hearts. *FASEB J.* 16:1657-9, 2002.
44. **Wagner KD\***, Wagner N\*, Bondke A, Nafz B, Flemming B, Theres H, Scholz H. The Wilms' tumor suppressor Wt1 is expressed in the coronary vasculature after myocardial infarction. *FASEB J.* 16:1117-9, 2002.
45. **Wagner KD\***, Wagner N\*, Vidal VPI, Schley G, Wilhelm D, Schedl A, Englert C, Scholz H. The Wilms' tumor gene Wt1 is required for normal development of the retina. *EMBO J* 21:1398-405, 2002.
46. **Wagner KD**, Essmann V, Mydlak K, Wirth M, Gmehling G, Bohlender J, Günther J, Schimke I, Scholz H. Decreased susceptibility of cardiac contractile function to

- hypoxia-reoxygenation in renin-angiotensinogen double-transgenic rats. *Am J Physiol: Integr Regul Physiol.* 283:R153-60, 2002.
47. Kamkin A, Kiseleva I, **Wagner KD**, Pylaev A, Leiterer KP, Theres H, Scholz H, Günther J, Isenberg G. A possible role for atrial fibroblasts in post-infarction bradycardia. *Am J Physiol Heart Circ Physiol.* 282:H842-H849, 2002.
  48. **Wagner KD**, Gmehling G, Günther J, Stauss HM, Theres H, Scholz H, Schimke I. Contractile function of rat myocardium is less susceptible to hypoxia/reoxygenation after acute infarction. *Mol Cell Biochem* 228:49-55, 2001.
  49. Bohlender J, Hildenbrand U, **Wagner KD**, Gunther J, Hempel P, Schlegel WP, Luft FC, Krause EG, Bartel S. Myocardial adrenergic dysfunction in rats with transgenic, human renin-dependent hypertension. *J Hypertens.* 19:1453-63, 2001.
  50. Kamkin A, Kiseleva I, **Wagner KD**, Scholz H, Theres H, Kazanski V, Lozinsky I, Gunther J, Isenberg G. Mechanically induced potentials in rat atrial fibroblasts depend on actin and tubulin polymerisation. *Pflugers Arch.* 442:487-97, 2001.
  51. **Wagner KD**, Wagner N, Sukhatme VP, Scholz H. Activation of vitamin D receptor by the Wilms' tumor gene product mediates apoptosis of renal cells. *J Am Soc Nephrol.* 12:1188-96, 2001.
  52. **Wagner KD**, Kamkin A, Kiseleva I, Theres H, Scholz H, Gunther J. Effects of metoprolol and ramipril on action potentials after myocardial infarction in rats. *Eur J Pharmacol.* 388:263-6, 2000.
  53. Theres H, **Wagner KD**, Günther J, Romberg D, Reusch HP, Schimke I, Vetter R. Chronic postinfarction treatment with the CPT-1 inhibitor etomoxir attenuates diastolic dysfunction in rat heart. *Exp Clin Cardiol.* 5:137-142, 2000.
  54. Gunther J, **Wagner KD**, Theres H, Schimke I, Born A, Scholz H, Vetter R. Myocardial contractility after infarction and carnitine palmitoyltransferase I inhibition in rats. *Eur J Pharmacol.* 406:123-6, 2000.
  55. Theres HP, **Wagner KD**, Romberg D, Feig C, Strube S, Leiterer KP, Gunther J, Stangl K, Baumann G, Schimke I. Combined treatment with ramipril and metoprolol prevents changes in the creatine kinase isoenzyme system and improves hemodynamic function in rat hearts after myocardial infarction. *Cardiovasc Drugs Ther.* 14:597-606, 2000.
  56. Willam C, Koehne P, Jurgensen JS, Grafe M, **Wagner KD**, Bachmann S, Frei U, Eckardt KU. Tie2 receptor expression is stimulated by hypoxia and proinflammatory cytokines in human endothelial cells. *Circ Res.* 87:370-7, 2000.
  57. Wagner N, **Wagner KD**, Sefton M, Rodriguez-Tebar A, Grantyn R. An abnormal response of retinoblastoma cells (Y-79) to neurotrophins. *Invest Ophthalmol Vis Sci.* 41:1932-9, 2000.
  58. Theres H, **Wagner KD**, Schulz S, Strube S, Leiterer KP, Romberg D, Gunther J, Scholz H, Baumann G, Schimke I. Oxygen radical system in chronic infarcted rat heart: the effect of combined beta blockade and ACE inhibition. *J Cardiovasc Pharmacol.* 35:708-15, 2000.
  59. Kamkin A, Kiseleva I, **Wagner KD**, Leiterer KP, Theres H, Scholz H, Gunther J, Lab MJ. Mechano-electric feedback in right atrium after left ventricular infarction in rats. *J Mol Cell Cardiol.* 32:465-77, 2000.
  60. Kiseleva I, Kamkin A, **Wagner KD**, Theres H, Ladhoff A, Scholz H, Gunther J, Lab MJ. Mechanoelectric feedback after left ventricular infarction in rats. *Cardiovasc Res.* 45:370-8, 2000.
  61. Kamkin A, Kiseleva I, **Wagner KD**, Lammerich A, Bohm J, Persson PB, Gunther J. Mechanically induced potentials in fibroblasts from human right atrium. *Exp Physiol.* 84:347-56, 1999.

62. **Wagner KD**, Geil D, Schimke I, Stauss HM, Lammerich A, Theres H, Pfitzer G, Vetter R, Gunther J. Decreased susceptibility of contractile function to hypoxia/reoxygenation in chronic infarcted rat hearts. *J Mol Cell Cardiol.* 30:2341-53, 1998.
63. Kiseleva I, Kamkin A, Pylaev A, Kondratjev D, Leiterer KP, Theres H, **Wagner KD**, Persson PB, Gunther J. Electrophysiological properties of mechanosensitive atrial fibroblasts from chronic infarcted rat heart. *J Mol Cell Cardiol.* 30:1083-93, 1998.
64. **Wagner KD**, Theres H, Born A, Strube S, Wunderlich N, Pfitzer G, Baumann G, Gunther J. Contractile function of papillary muscle from rats with different infarct size after beta-adrenergic blockade and ACE-inhibition. *J Mol Cell Cardiol.* 29:2941-51, 1997.
65. Lammerich A, Bohm J, Schimke I, **Wagner KD**, Storch E, Gunther J. Effects of hypoxia, simulated ischemia and reoxygenation on the contractile function of human atrial trabeculae. *Mol Cell Biochem.* 160-161:143-51, 1996.

**\*: equal contribution of the co-authors**

### **Congress contributions**

Approx. 150 abstracts and congress contributions

### **Chapters in Books**

Mechanosensitivity in Cells and Tissues ed. Kamkin & Kiseleva, Academia, Moscow, 2005