

Curriculum vitae: Prof. Dr. Michael Kühl

Personal data

<i>Name, Academic title</i>	Michael Kühl, Prof. Dr. rer. nat.
<i>Nationality</i>	German
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<i>Present position</i>	Full professor in Biochemistry, tenured Director of Institute Chairman International Graduate School in Molecular Medicine
<i>www</i>	http://www.uni-ulm.de/med/med-biomolbio.html

University education

1987-1992	Study of Biochemistry, Free University Berlin
1992-1995	PhD thesis work (Dr. rer. nat.) at Free University Berlin & Ulm University

Scientific training/Positions

1995 - 1998	Postdoc at Ulm University with Prof. Dr. D. Wedlich, working on Wnt/ β -catenin signaling pathway
1998 - 1999	Postdoc with Prof. Dr. R. T. Moon, University of Washington, Dept. of Pharmacology, HHMI, Seattle, USA, working on non-canonical Wnt pathways with <i>DFG postdoctoral fellowship</i>
2000 - 2002	Independent junior group leader, Dept. of Biochemistry, University of Göttingen, Funded by the DFG as part of the collaborative research centre SFB 271
2002	Venia legendi for Biochemistry, Göttingen (German higher teaching allowance)
2002-2006	Associate professor in Biochemistry, Ulm University
Since 2006	Full professor in Biochemistry, Ulm University

Organisation/Management

2002	International Symposium: „Molecular mechanisms of development: From stem cells to complex cellular networks“, Göttingen
2004	5th GfE School, Society for Developmental Biology (Germany): „Molecular control of organ development“, Reischensburg
2004	International Symposium: „Signalling pathways in cellular differentiation“, Ulm
2004-2006	Coordinator of collaborative research network, State of Baden-Württemberg: „Molecular mechanisms of stemness“

Since 9/2004	Coordinator of „International PhD Programme in Molecular Medicine“ at Ulm University
Since 2/2006	Chairman “International Graduate School in Molecular Medicine Ulm”, GSC 270, funded within the frame work of the German Excellence Initiative
2007 - 2016	Summer School in Molecular Medicine in Wuhan, China, 2 Weeks, Each year since 2007
Since 2016	Annual Spring School at SEU Nanjing, China, 1 week

Prizes/Awards

2003	Prize for best Habilitation, Göttingen
2003	Merckle Research Prize, Ulm
2014	Best teaching award, preclinical studies, Ulm University
2015	Best teaching award, preclinical studies, Ulm University

University Obligations

2002-2006	Board member of MD thesis committee
since 2003	Elected member Faculty Board (Fakultätsrat), Medical Faculty
since 2004	Head of PhD Committee International PhD Programme in Molecular Medicine
since 2006	Chairman of International Graduate School in Molecular Medicine Ulm
since 2006	Member Study Committee BSc/MSc Molecular Medicine
2009-2012	Member Study Committee BSc/MSc Biochemistry
2009-2016	Member PhD committee, Dr. rer. nat., Faculty of Natural Sciences
2011-2016	Member Ethics Committee, Ulm University
since 2011	Member Research Committee, Medical Faculty, Ulm University
since 2014	Member of Senate Ulm University
since 2016	Dean of Studies Molecular Medicine, Ulm University
since 2016	Scientific member of the DFG senate committee on Research Training Groups

Funding

Total amount	Past and current funding in total of app. 2.5 Mio. Euros since 1998 by DFG, BMBF, State of Baden-Württemberg, Ulm University in addition app. 14 Mio. Euros as Chairman of GSC270 (2007-2018)
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Reviewer

Scientific funding agencies

Deutsche Forschungsgemeinschaft (German Research Foundation), Boehringer Ingelheim Fonds, Deutsche Krebshilfe (German Cancer Aid), National Science Foundation (USA), NIH (USA), German-Israeli Foundation for Scientific Research and Development (Israel), Israeli Science Foundation (Israel), The Wellcome Trust, (England), Biomedical Research Council (Singapore), Dutch National Science Foundation, NWO (Netherlands), Comision Nacional de Investigacion Cientifica and Tecnologica CONICYT (Chile)

International peer reviewed journals

Science, Nature Cell Biology, Genes and Development, PNAS, Journal of Cell Biology, Journal of Biological Chemistry, Circulation, Circulation Research, Cardiovascular Research, Journal of Clinical Investigations,

Oncogene, Development, Developmental Biology, Mechanisms of Development, Developmental Dynamics, PlosONE, Cell Systems, BioEssays, Experimental Cell Research, Trend in Endocrinology and Metabolism, Gene, European Journal of Clinical Chemistry and Clinical Biochemistry, Differentiation, Biotechniques, Cellular and Molecular Life Sciences, British Journal of Cancer

Publications

Numeric overview

58	Original publications
23	Reviews
11	Book chapters
1	Book Editor
9	Text Books and contributions
38	H Index
63	i10 Index
10615	Total Citations (all as of February 10, 2017, Google Scholar)

Original papers

58. Rothe M, Kanwal N, Dietmann P, Seigfried FA, Hempel A, Schütz D, Reim D, Engels R, Linnemann A, Schmeisser MJ, Bockmann J, **Kühl M**, Boeckers TM, Kühl SJ (2017) An Epha4/Sipa113/Wnt pathway regulates eye development and lens maturation. **Development**, accepted
57. Oswald F, Rodriguez P, Giaimo BD, Antonello ZA, Mira L, Mittler G, Thiel VN, Collins KJ, Tabaja N, Cizelsky W, Rothe M, Kühl SJ, **Kühl M**, Ferrante F, Hein K, Kovall RA, Dominguez M, Borggreffe T. (2016) A phosho-dependent mechanism involvinv NCoR and KMT2D controls a permissie chromatin state at Notch target genes. **Nucleic Acids Res** 44, 4701-4720.
56. Grieb M, Burkovski A, Sträng JE, Kraus JM, Groß A, Palm G, **Kühl M**⁺, Kestler HA⁺ (2015) Predicting variabilities in cardiac gene expression with a Boolean network incorporating uncertainty. **PlosOne** 10, e0131832. ⁺corresponding authors
55. Hein K, Mittler G, Cizelsky W, **Kühl M**, Ferrante F, Liefke R, Berger I, Just S, Sträng JE, Kestler HA, Oswald F, Borggreffe T (2015) Site-specific methylation of Notch1 controls the amplitude and duration of the Notch1 response, **Sci Signal**, 8, ra30
54. Pfister AS, Keil M, **Kühl M** (2015) The Wnt target genes Peter Pan defines a novel p53-independent nucleolar stress response pathway, **J. Biol. Chem.**, 290, 10905-10918
53. Tao S, Tang D, Morita Y, Sperka T, Omrani O, Lechel A, Sakk V, Kraus J, Kestler HA, **Kühl M**⁺, Rudolph KL⁺ (2015) Wnt activity and basal niche position sensitize intestinal stem and progenitor cells to DNA damage. **EMBO J**, 34, 624-640, ⁺corresponding authors,
52. Dorn T, Goedel A, Lam JT, Haas J, Tian Q, Herrmann F, Bundschu K, Dobрева G, Schiemann M, Dirschinger R, Guo Y, Kühl SJ, Sinnecker D, Lipp P, Laugwitz K, **Kühl M**⁺, Moretti A⁺ (2015) Direct Nkx2-5 transcriptional repression of Isl1 controls cardiomyocyte

subtype identity, **Stem Cells**, 33, 1113-1129, ⁺corresponding authors,

51. Cizelsky W*, Tata A*, **Kühl M⁺**, Kühl SJ⁺ (2014) The Wnt/JNK target gene *alcam* is required for embryonic kidney development, **Development**, 141, 2064-74, *equal first authors, ⁺corresponding authors
50. Guo Y*, Kühl SJ*, Pfister AS, Cizelsky W, Denk S, Beer-Molz K, **Kühl M** (2014) Comparative analysis reveals distinct and overlapping functions of Mef2c and Mef2d during cardiogenesis in *Xenopus laevis*, **Plos One**, 9(1):e87294, * equal contribution
49. Wehner D, Cizelsky W, Vasudevaro MD, Ozhan H, Haase C, Kagermeier-Schenk, Röder A, Dorsky RI, Moro E, Argenton F, **Kühl M**, Weidinger G (2014) Wnt/ β -Catenin signaling defines organizing centers that orchestrate growth and differentiation of the regenerating zebrafish caudal fin, **Cell Rep**, 6, 467-81
48. Schmeisser JM, Kühl SJ, Schön M, Beth NH, Weis TM, Grabrucker AM, **Kühl M**, Böckers T (2013) The Nedd4 binding protein 3 (N4BP3) is crucial for axonal and dendritic branching in developing neurons, **Neural Dev.**, 8, 18
47. Weidgang CE, Russel R, Tata PR, Kühl SJ, Illing A, Müller M, Lin Q, Brunner C, Böckers TM, Bauer K, Kartikasari AER, Guo Y, Radenz M, Bernemann C, Weiß M, Seufferlein T, Zinke M, Iacovino M, Kyba M, Schöler HR, **Kühl M**, Liebau S, Kleger A (2013) Tbx3 directs cell-fate decision towards mesendoderm, **Stem Cell Reports**, 1, 248-265
46. Özan G, Sezgin E, Wehner D, Pfister AS, Kühl SJ, Kagermeier-Schenk B, **Kühl M**, Schulle P and Weidinger G (2013) Lypd6 enhances Wnt/ β -catenin signaling by promoting Lrp6 phosphorylation in raft plasma membrane domains, **Dev. Cell**, 26, 331-45
45. Cizelsky W*, Hempel A*, Tao S, Metzsig M, Hollemann T, **Kühl M**, Kühl SJ (2013) Sox4 and Sox11 function during *Xenopus laevis* eye development, **PlosONE**, 8(7):e69372,, *equal contribution
44. Herrmann F*, Groß A*, Zhou D, Kestler HA, **Kühl M** (2012) A boolean model of the cardiac regulatory network determining first and second heart field identity, **PLOS one**, 7, e46798, 1-10, *equal contribution
43. Hopfensitz M, Müssel C, Wawra C, Maucher M, **Kühl M**, Neumann H, Kestler HA (2012) Multiscale binarization of gene expression data for reconstructing Boolean networks, **IEEE/ACM**, 9, 487-498
42. Murugan S, Shan J, Kühl SJ, Tata A, Pietulä I, **Kühl M**, Vainio SJ (2012) WT1 and Sox11 regulate synergistically the promotor of Wnt4 gene that encodes a critical signal for nephrogenesis, **Exp. Cell Res.**, 318, 1134-45
41. Herrmann F*, Bundschu K*, Kühl SJ, **Kühl M** (2011) Tbx5 overexpression favours a first heart field lineage in murine embryonic stem cells and in *Xenopus laevis* embryos, **Dev. Dyn.**, 240, 2634-2645, * both contributed equally
40. Tao S, **Kühl M**, Kühl SJ (2011) Expression of periostin during *Xenopus laevis* embryogenesis, **Dev. Genes Evol.**, 221, 247-254
39. Tecza A, Bugner V, **Kühl M**, Kühl SJ (2011) Pes1 and ppan function during *Xenopus laevis* pronephros development, **Biol. Cell**, 103, 483-498,

38. Bugner V, Aurhammer T, **Kühl M** (2011) *Xenopus laevis* insulin receptor substrate IRS-1 is important for eye development, **Dev. Dyn.**, 240, 17-15
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34. Gessert S, Schmeisser MJ, Tao S, Böckers TM, **Kühl M** (2011) The spatio-temporal expression of ProSAP/Shank family members and their interaction partner LAPSER1 during *Xenopus laevis* development, **Dev. Dyn.**, 240, 1528-36
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32. Gessert S, Bugner V, Tecza A, Pinker M, **Kühl M** (2010) FMR1/FXR1 and the miRNA pathway are required for eye and neural crest development, **Dev. Biol.**, 341, 222-35
31. Gessert S and **Kühl M** (2009) Comparative gene expression analysis and fate mapping studies suggest an early segregation of cardiogenic lineages in *Xenopus laevis*, **Dev. Biol.** 334, 395-408
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29. Gessert S, Maurus D, **Kühl M** (2008) Repulsive guidance molecule A (RGM A) and its receptor Neogenin during neural and neural crest development of *Xenopus laevis*, **Biol. Cell**, 100, 659-73
28. Anton R, Kestler HA, **Kühl M** (2007) β -catenin signalling contributes to stemness and regulates differentiation in murine embryonic stem cells, **FEBS Letters** 581, 5247-5254,
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26. Brade T, Gessert S, **Kühl M**, Pandur P (2007) The amphibian second heart field: *Xenopus* islet-1 is required for cardiovascular development, **Dev. Biol.** 311, 297-310,
25. Wawra C, **Kühl M**, Kestler HA (2007) Extended analyses of the Wnt/beta-catenin pathway: robustness and oscillatory behavior, **FEBS Lett**, 581, 4043-8
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18. Pandur P, Läsche M, Eisenberg L, **Kühl M** (2002) Wnt-11 stimulation of a non-canonical Wnt-pathway is required for cardiogenesis, **Nature** 418, 636-641
17. Hitz MP, Pandur P, Brand T, **Kühl M** (2002) Cardiac specific expression of *Xenopus* Popeye-1 (Pop-1). **Mech. Dev.** 115, 123-126
16. Martin B, Schneider R, Janetzky S, Waibler Z, Pandur P, **Kühl M**, Behrens J, von der Mark K, Starzinski-Powitz A, Wixler V (2002) The LIM-only protein FHL2 interacts with β -catenin and promotes differentiation of mouse myoblasts. **J. Cell Biol.** 159, 113-122
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14. Semenov M, Tamai K, Brott BK, **Kühl M**, Sokol S, He X (2001) Head inducer dickkopf-1 is a ligand for Wnt co-receptor LRP-6, **Curr. Biol.** 11, 951-961
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11. **Kühl M**, Sheldahl L, Malbon CC, Moon RT (2000) Calmodulin-dependent kinase II is stimulated by Wnt and Frizzled homologs and promotes ventral cell fates in *Xenopus*, **J. Biol. Chem.** 275, 12701-12711
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9. Gradl D*, **Kühl M***, Wedlich D (1999) The Wnt/Wg signal transducer β -catenin controls fibronectin expression, **Mol. Cell Biol.** 19: 5576-5587,* both contributed equally
8. Geis G, Aberle H, **Kühl M**, Kemler R, Wedlich D (1998) Expression of murine p120cas1B in *Xenopus* embryos effects head differentiation but not axis formation. **Genes, Development and Evolution** 207, 471-481
7. Behrens J, Jerchow B, Würtele, M, Grimm J, Asbrand C, Wirtz R, **Kühl M**, Wedlich D,

Birchmeier W (1998) Functional interaction of an axin homolog, conductin, with β -catenin, APC, and GSK3 β . **Science** 280, 596-599

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4. **Kühl M**, Finnemann S, Binder O, Wedlich D (1996) Dominant negative expression of a cytoplasmically deleted mutant of XB/U-cadherin disturbs mesoderm migration during gastrulation in *Xenopus laevis*. **Mech. Dev.** 54, 76-88

3. Finnemann S, **Kühl M**, Otto G, Wedlich D (1995) Cadherin transfection of *Xenopus* XTC cells downregulates expression of substrate adhesion molecules. **Mol. Cell Biol.** 15, 5082-509

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1. Müller AH*, **Kühl M***, Finnemann S, Schneider S, van der Poel S, Hausen P, Wedlich D (1994) *Xenopus* cadherins: The maternal pool comprises distinguishable members of the family. **Mech. Dev.** 47, 213-223, * both contributed equally

Reviews

23. Hempel A, **Kühl M** (2016) A matter of the heart: The african clawed frog *Xenopus* as a model for studying vertebrate cardiogenesis and congenital heart defects, **J Cardiovasc Dev Dis**, 3, 21

22. Kühl SJ, **Kühl M** (2013) The role of Wnt/ β -catenin signaling in stem cells, **BBA general subjects**, 1820, 2297-306

21. Pandur P, Sirbu IO, Kühl SJ, Philipp M, **Kühl M** (2013) Islet1 expressing cardiac progenitor cells: A comparison across species, **Dev. Genes Evol.**, 223, 117-29

20. Kühl SJ, **Kühl M** (2012) Nobelpreise 2012, Physiologie oder Medizin, **Naturwissenschaftliche Rundschau**, 12, 5-7

19. Kühl SJ, **Kühl M** (2011) Improving cardiac function after injury: are we a step closer? **BioEssays**, 33, 669-673

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13. Anton R, **Kühl M**, Pandur P (2007) A molecular signature of the master heart cell, **BioEssays**, 29,422-26
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Book chapters

11. **Kühl M**, Kracher B, Groß A, Kestler HA (2014) Mathematical Models of Wnt signaling pathways, In: Hoppler S and Moon RT (eds), *Wnt Signaling in Development and Disease: Molecular Mechanisms and Biological Functions*. John Wiley & Sons, Ltd., Hoboken, New Jersey
10. Hoppler S, Mazotta S, **Kühl M** (2014) Wnt signaling in heart development, In: Hoppler S and Moon RT (eds), *Wnt Signaling in Development and Disease: Molecular Mechanisms and Biological Functions*. John Wiley & Sons, Ltd., Hoboken, New Jersey

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Text Books and Text Book contributions

9. Kühl S, **Kühl M** (2016) Die Abschlussarbeit in den Life Sciences, UTB, Eugen Ulmer Verlag, Stuttgart
8. Brockmann D and **Kühl M** (2015) Erfolgreich promovieren in den Life Sciences, UTB, Eugen Ulmer Verlag, Stuttgart
7. **Kühl M** (2014) Reifung, Altern und Tod, in: Pape HC, Kurtz A, Silbernagl S (eds) Physiologie, Thieme Verlag Stuttgart
6. Kühl S und **Kühl M** (2012) Stammzellbiologie, UTB, Eugen Ulmer Verlag, Stuttgart
5. **Kühl M** und Gessert S (2010) Entwicklungsbiologie, UTB Basics, Eugen Ulmer Verlag, Stuttgart
4. **Kühl M** (2009) Altern und Tod, in Physiologie: Lehrbuch, Hrsg: Klinke, Pape, Kurtz,

Silbernagel; Thieme Verlag Stuttgart

3. **Kühl M** (2003) Entwicklung und Altern, in: Lehrbuch Vorklinik (GK1), Hrsg: Unsicker, Schmidt, Fachhrsg: Birnbaumer, Kurtz, Scharl, Unsicker, Deutscher Ärzteverlag, C 575- 596
2. Linnemann M, **Kühl M** (2004) Biochemie für Mediziner, Springer Verlag Heidelberg, 7. Auflage (vorherige Auflagen: 2002, 1999, 1995, 1993, 1992, 1992)
1. Luduena RF, German translation by **Kühl M** (1997) Klinische Biochemie, 100 Fall orientierte Fragen mit Antworten, Vieweg Verlag, Wiesbaden