

PD DR. RER. NAT. ANJA UHMANN

biologist, geneticist, lecturer, project manager

Core competencies

- .Research and project management
- .Experimental design and broad molecular biology methodology
- .Scientific data analysis and biostatistics
- .Interpretation and visualization of complex data sets
- .Scientific supervision and team leadership
- .Interdisciplinary and international collaboration
- .Science communication and knowledge transfer

Professional experience

RESEARCH GROUP AND PROJECT LEADER

2010 to present

University Medical Center Göttingen (UMG)

- .Management of research projects in the field of molecular stem cell and tumor genetics and signaling pathway analysis
- .Acquisition and management of third-party funding
- .Planning, execution, and interpretation of quantitative in vivo and in vitro experiments
- .Supervision of bachelor's, master's, and doctoral projects as well as young postdocs
- .Collaboration with interdisciplinary teams from molecular biology, biostatistics, and medicine

DFG-FUNDED POSITION (HEAD OF JUNIOR RESEARCH GROUP)

2008-2010

UMG

- .Independent research in the field of molecular genetics
- .Recognition of scientific independence through DFG funding

POSTDOCTORAL RESEARCHER

2006-2008

UMG

- .Investigation of molecular signaling pathways in tumor diseases
- .Implementation of new experimental approaches

Leadership and commitment

- .Member of various institutional committees (animal welfare, biosafety, graduate center)
- .Selection committee member for master's programs in molecular biology and molecular medicine
- .Lecturer and module coordinator in genetics, molecular biology, and medicine
- .Mentoring and career guidance for early-career scientists
- reviewer for scientific journals and research funding agencies

Education

HABILITATION

2016

UMG

Teaching qualification in molecular genetics

DISSERTATION

2002-2006

UMG

Genetics & Molecular Biology (Dr. rer. nat.)

DIPLOMA

1996-2002

Universität Bayreuth

Genetics, microbiology, biochemistry

Isolation, Culture, and Analyses of Keratinocytes, Fibroblasts, and Hair Follicles from Normal Human Skin and Cancer-Associated Fibroblasts from Skin Tumors. Lorenz VN, UhmANN A. *Methods Mol Biol.* 2025 Sep 25. doi: 10.1007/7651_2025_663. Online ahead of print. PMID: 40991146

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Tumor suppressive functions of WNT5A in rhabdomyosarcoma. Ragab N, Bauer J, UhmANN A, Marx A, Hahn H, Simon-Keller K. *Int J Oncol.* 2022 Sep;61(3):102. doi: 10.3892/ijo.2022.5392. Epub 2022 Jul 7. PMID: 35796028

Oncogenic NRAS Accelerates Rhabdomyosarcoma Formation When Occurring within a Specific Time Frame during Tumor Development in Mice. Ragab N, Bauer J, Botermann DS, UhmANN A, Hahn H. *Int J Mol Sci.* 2021 Dec 13;22(24):13377. doi: 10.3390/ijms222413377. PMID: 34948179

Hedgehog signaling in endocrine and folliculo-stellate cells of the adult pituitary. Botermann DS, Brandes N, Frommhold A, Heß I, Wolff A, Zibat A, Hahn H, Buslei R, UhmANN A. *J Endocrinol.* 2021 Mar;248(3):303-316. doi: 10.1530/JOE-20-0388. PMID: 33480359

Spreading of Isolated Ptch Mutant Basal Cell Carcinoma Precursors Is Physiologically Suppressed and Counteracts Tumor Formation in Mice. Brandes N, Mitkovska SH, Botermann DS, Maurer W, Müllen A, Scheile H, Zabel S, Frommhold A, Heß I, Hahn H, UhmANN A. *Int J Mol Sci.* 2020 Dec 5;21(23):9295. doi: 10.3390/ijms21239295. PMID: 33291515

Heterozygous truncating variants in SUFU cause congenital ocular motor apraxia. Schröder S, Liz Y, Yigitz G, Altmüller J, Bader I, Bevo A, Biskup S, Dreha-Kulaczewski S, Korenke C, Kottke R, Mayr JA, Preisel M, Tölle S, Wentz-Schulz S, Wortmann SB, Hahn H, Boltshauser E, UhmANN A, Wollnik B, Brockmann K. *Genet Med.* 2021 Feb;23(2):341-351. doi: 10.1038/s41436-020-00979-w. Epub 2020 Oct 7. PMID: 33024317

WIF1 Suppresses the Generation of Suprabasal Cells in Acanthotic Skin and Growth of Basal Cell Carcinomas upon Forced Overexpression. Becker M, Bauer J, Pyczek J, König S, Müllen A, Rabe H, Schön MP, UhmANN A, Hahn H. *J Invest Dermatol.* 2020 Aug;140(8):1556-1565.e11. doi: 10.1016/j.jid.2019.11.030. Epub 2020 Jan 25. PMID: 31987884

Regulation and Role of GLI1 in Cutaneous Squamous Cell Carcinoma Pathogenesis. Pyczek J, Khizanishvili N, Kuzyakova M, Zabel S, Bauer J, Nitzki F, Emmert S, Schön MP, Boukamp P, Schildhaus HU, UhmANN A, Hahn H. *Front Genet.* 2019 Dec 4;10:1185. doi: 10.3389/fgene.2019.01185. eCollection 2019. PMID: 31867038 Free PMC article.

Therapeutic Targeting of Stat3 Using Lipopolyplex Nanoparticle-Formulated siRNA in a Syngeneic Orthotopic Mouse Glioma Model. Linder B, Weirauch U, Ewe A, UhmANN A, Seifert V, Mittelbronn M, Harter PN, Aigner A, Kögel D. *Cancers (Basel).* 2019 Mar 8;11(3):333. doi: 10.3390/cancers11030333. PMID: 30857197 Free PMC article.

Different Response of Ptch Mutant and Ptch Wildtype Rhabdomyosarcoma Toward SMO and PI3K Inhibitors. Geyer N, Ridzewski R, Bauer J, Kuzyakova M, Dittmann K, Dullin C, Rosenberger A, Schildhaus HU, UhmANN A, Fulda S, Hahn H. *Front Oncol.* 2018 Sep 25;8:396. doi: 10.3389/fonc.2018.00396. eCollection 2018. PMID: 30319965 Free PMC article.

Indian Hedgehog Suppresses a Stromal Cell-Driven Intestinal Immune Response. Westendorp BE, Büller NVJA, Karpus ON, van Dop WA, Koster J, Versteeg R, Koelink PJ, Snel CY, Meisner S, Roelofs JJTH, UhmANN A, Ver Loren van Themaat E, Heijmans J, Hahn H, Muncan V, Wildenberg ME, van den Brink GR. *Cell Mol Gastroenterol Hepatol.* 2017 Sep 5;5(1):67-82.e1. doi: 10.1016/j.jcmgh.2017.08.004. eCollection 2018. PMID: 29276753 Free PMC article.

Hedgehog signaling activation induces stem cell proliferation and hormone release in the adult pituitary gland. Pyczek J, Buslei R, Schult D, Hölsken A, Buchfelder M, Heß I, Hahn H, UhmANN A. *Sci Rep.* 2016 Apr 25;6:24928. doi: 10.1038/srep24928. PMID: 27109116 Free PMC article.

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Inactivation of patched1 in murine chondrocytes causes spinal fusion without inflammation. Dittmann K, Wuelling M, UhmANN A, Dullin C, Hahn H, Schweyer S, Vortkamp A, Wienands J. *Arthritis Rheumatol.* 2014 Apr;66(4):831-40. doi: 10.1002/art.38325. PMID: 24757136

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DMBA/TPA treatment is necessary for BCC formation from patched deficient epidermal cells in *Ptch(flox/flox)CD4Cre(+/-)* mice. UhmANN A, Heß I, Frommhold A, König S, Zabel S, Nitzki F, Dittmann K, Lühder F, Christiansen H, Reifengerger J, Schulz-Schaeffer W, Hahn H. *J Invest Dermatol.* 2014 Oct;134(10):2620-2629. doi: 10.1038/jid.2014.157. Epub 2014 Mar 24. PMID: 24662765

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Hedgehog signalling stimulates precursor cell accumulation and impairs epithelial maturation in the murine oesophagus. van Dop WA, Rosekrans SL, UhmANN A, Jaks V, Offerhaus GJ, van den Bergh Weerman MA, Kasper M, Heijmans J, Hardwick JC, Verspaget HW, Hommes DW, Toftgård R, Hahn H, van den Brink GR. *Gut.* 2013 Mar;62(3):348-57. doi: 10.1136/gutjnl-2011-301141. Epub 2012 Apr 13. PMID: 22504664

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Tumor stroma-derived *Wnt5a* induces differentiation of basal cell carcinoma of *Ptch*-mutant mice via *CaMKII*. Nitzki F, Zibat A, König S, Wijgerde M, Rosenberger A, Brembeck FH, Carstens PO, Frommhold A, UhmANN A, Klingler S, Reifengerger J, Pukrop T, Aberger F, Schulz-Schaeffer W, Hahn H. *Cancer Res.* 2010 Apr 1;70(7):2739-48. doi: 10.1158/0008-5472.CAN-09-3743. Epub 2010 Mar 16. PMID: 20233865

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Depletion of the colonic epithelial precursor cell compartment upon conditional activation of the hedgehog pathway. van Dop WA, UhmANN A, Wijgerde M, Sladdens-Linkels E, Heijmans J, Offerhaus GJ, van den Bergh Weerman MA, Boeckxstaens GE, Hommes DW, Hardwick JC, Hahn H, van den Brink GR. *Gastroenterology.* 2009 Jun;136(7):2195-2203.e1-7. doi: 10.1053/j.gastro.2009.02.068. Epub 2009 Mar 6. PMID: 19272384

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The Hedgehog receptor *Patched* controls lymphoid lineage commitment. UhmANN A, Dittmann K, Nitzki F, Dressel R, Koleva M, Frommhold A, Zibat A, Binder C, Adham I, Nitsche M, Heller T, Armstrong V, Schulz-Schaeffer W, Wienands J, Hahn H. *Blood.* 2007 Sep 15;110(6):1814-23. doi: 10.1182/blood-2007-02-075648. Epub 2007 May 29. PMID: 17536012

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