

PUSCH, STEFAN, PD DR. RER. NAT.

GENERAL INFORMATION



Post Doc

University Hospital Heidelberg, Institute of Pathology, Dep. of Neuropathology
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B03

ACADEMIC EDUCATION & QUALIFICATION

Year(s)	Education
2004	Diploma degree in biology; supervisor: Prof. Dr. Arp Schnittger (MPIZ); overall grade 1
1999-2004	Study of biology at the University of Cologne; biochemistry, botany, organic chemistry

SCIENTIFIC EDUCATION & QUALIFICATION

Year(s)	Education
2021	Venia legendi of the medical faculty of the university Heidelberg
2008	PhD degree in biology; supervisor: Prof. Dr. Arp Schnittger (MPIZ); overall grade 1
2004-2008	PhD studies at the Max-Planck Institute for plant breeding research (MPIZ)

PROFESSIONAL EXPERIENCE

Year(s)	Experience
2017- ongoing	Postdoc at the University Hospital Heidelberg, in the group of Prof. von Deimling
2009- ongoing	Postdoc at the German Cancer Research Institute (DKFZ) in the group of Prof. von Deimling

OTHER QUALIFICATIONS/ROLES/RESPONSIBILITIES

Year(s)	Qualifications/Roles/Responsibilities
2013	Achieved the „Baden-Württemberg Zertifikat für Hochschuldidaktik“
2010	Qualification for project leader / officer for biological safety

SELECTED PUBLICATIONS

1. Kilian M, Friedrich M, Sanghvi K, Green E, Pusch S, Kawauchi D, Löwer M, Sonner JK, Krämer C, Zaman J, Jung S, Breckwoldt MO, Willimsky G, Eichmüller SB, von Deimling A, Wick W, Sahm F, Platten M, Bunse L. T cell receptor therapy targeting mutant capicua transcriptional repressor in experimental gliomas. **Clin Cancer Res.** 28:378–89. (2022)
2. Friedrich M, Hahn M, Michel J, Sankowski R, Kilian M, Kehl N, Günter M, Bunse T, Pusch S, von Deimling A, Wick W, Autenrieth SE, Prinz M, Platten M, Bunse L. Dysfunctional dendritic cells limit antigen-specific T cell response in glioma. **Neuro-Oncology**, doi: 10.1093/neuonc/noac138 (2022)
3. Martija AA, Pusch S. The Multifunctional Role of EMP3 in the Regulation of Membrane Receptors Associated with IDH-Wild-Type Glioblastoma. **Int J Mol Sci.** 2021 May 17;22(10):5261. doi: 10.3390/ijms22105261.
4. Friedrich M*, Sankowski R*, Bunse L*, Kilian M, Green E, Ramallo-Guevara C, Pusch S, Poschet G, Sanghvi K, Hahn M, Bunse T, Münch P, Sonner JK, von Landenberg A, Cichon F, Aslan K, Trobisch T, Schirmer L, Abu-Sammour D, Kessler T, Ratliff M, Schrimpf D, Sahm F, Hopf C, Heiland DH, Schnell O, Beck J, Böttcher C, Fernandez-Zapata C, Priller J, Heiland S, Gutcher I, Quintana FJ, von Deimling A, Wick W, Prinz M*, Platten M*. Tryptophan metabolism drives dynamic immunosuppressive myeloid states in IDH-mutant gliomas. **Nature Cancer.** 2, 723–740. (2021)
5. Bunse L*, Pusch S*, Bunse T*, Sahm F, Sanghvi K, Friedrich M, Alansary D, Sonner JK, Green E, Deumelandt K, Kilian M, Neftel C, Uhlig S, Kessler T, von Landenberg A, Berghoff AS, Marsh K, Steadman M, Zhu D, Nicolay B, Wiestler B, Breckwoldt MO, Al-Ali R, Karcher-Bausch S, Bozza M, Oezen I, Kramer M, Meyer J, Habel A, Poschet G, Weller M, Preusser M, Nadji-Ohl M, Thon N, Burger M, Harter P, Ratliff M, Harbottle R, Benner A, Schrimpf D, Okun J, Herold-Mende CM, Turcan S, Kaulfuss S, Hess-Stumpp H, Bieback K, Cahill DP, Plate KH, Hänggi D, Dorsch

- M, Suva M, Niemeyer BA, von Deimling A, Wick W, Platten M. Suppression of antitumor T cell immunity by the oncometabolite R-2-hydroxyglutarate. **Nat Med.** doi: 10.1038/s41591-018-0095-6. (2018).
6. Pusch S, Krausert S, Fischer V, Balss J, Ott M, Schrimpf D, Capper D, Sahm F, Eisel J, Beck A, Jugold M, Eichwald V, Kaulfuss S, Pankin O, Rehwinkel H, Zimmermann K, Hillig RC, Guenther J, Toschi L, Neuhaus R, Haegebart A, Hess-Stumpff H, Bauser M, Wick W, Unterberg A, Herold-Mende C, Platten M, von Deimling A. Pan-IDH1 mutant inhibitor BAY 1436032 effectively treats IDH1 mutant astrocytoma in vivo. **Acta Neuropathologica.** 2017; 133, 629-644
 7. Osswald M, Jung E, Sahm F, Solecki G, Venkataramani V, Blaes J, Weil S, Horstmann H, Wiestler B, Syed M, Huang L, Ratliff M, Karimian Jazi K, Kurz FT, Schmenger T, Lemke D, Gömmel M, Pauli M, Liao Y, Häring P, Pusch S, Herl V, Steinhäuser C, Krunic D, Jarahian M, Miletic H, Berghoff AS, Griesbeck O, Kalamakis G, Garaschuk O, Preusser M, Weiss S, Liu H, Heiland S, Platten M, Huber PE, Kuner T, von Deimling A, Wick W, Winkler F. Brain tumour cells interconnect to a functional and resistant network. **Nature.** 2015; 528, 93-98
 8. Bunse L, Schumacher T, Sahm F, Pusch S, Oezen I, Rauschenbach K, Gonzalez M, Solecki G, Osswald M, Capper D, Wiestler B, Winkler F, Herold-Mende C, von Deimling A, Wick W, Platten M. Proximity ligation assay evaluates IDH1R132H presentation in gliomas. **J Clin Invest.** 2015; 125, 593-606
 9. Schumacher T, Bunse L, Pusch S, Sahm F, Wiestler B, Quandt J, Menn O, Osswald M, Oezen I, Ott M, Keil M, Balß J, Rauschenbach K, Grabowska AK, Vogler I, Diekmann J, Trautwein N, Eichmüller SB, Okun J, Stevanović S, Riemer AB, Sahin U, Friese MA, Beckhove P, von Deimling A, Wick W, Platten M. A vaccine targeting mutant IDH1 induces antitumour immunity. **Nature.** 2014; 512, 324-327
 10. Pusch S, Schweizer L, Beck AC, Lehmler JM, Weissert S, Balss J, Miller AK, von Deimling A. D-2-Hydroxyglutarate producing neo-enzymatic activity inversely correlates with frequency of the type of isocitrate dehydrogenase 1 mutations found in glioma. **Acta Neuropathol Commun.** 2014; doi: 10.1186/2051-5960-2-19.

PATENTS

- “Means and methods for the determination of (D)-2-hydroxyglutarate (D2HG)”, an enzymatic 2-HG assay used for 2-HG determination (WO2013127997A1).