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Facharzt für Augenheilkunde

### **Ausbildung und Werdegang**

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seit 2021	Angestellter Facharzt, OSG Augenzentrum Bamberg und Schweinfurt
2019	Habilitation und Venia Legendi für das Fach Augenheilkunde
2016	Naturwissenschaftliche Promotion (Dr. nat. med.), Zentrum für Molekulare Medizin Köln, Universität zu Köln
seit 2016	Angestellter Facharzt und wissenschaftlicher Mitarbeiter, Zentrum für Augenheilkunde, Uniklinik Köln
2016	Europäische und deutsche Facharztprüfung im Fach Augenheilkunde
2011 - 2016	Angestellter Assistenzarzt, Zentrum für Augenheilkunde, Uniklinik Köln
2010	Approbation als Arzt
2010	Medizinische Promotion (Dr. med.), Universität Erlangen-Nürnberg
2002 - 2010	Studium der Humanmedizin und Molekularen Medizin, Universität Erlangen-Nürnberg und Harvard Medical School, Boston, USA

## Mitgliedschaften

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- Deutsche Ophthalmologische Gesellschaft (DOG)
- European Association for Vision and Eye Research (EVER)
- Association for Research in Vision and Ophthalmology (ARVO)

## Publikationen

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Schaub F, Mestanoglu M, Cursiefen C, Hos D. Impact of early intensified postoperative corticosteroids on immune reaction rates after Descemet membrane endothelial keratoplasty (DMEK). *Graefes Arch Clin Exp Ophthalmol.* 2021 Sep 1. doi: 10.1007/s00417-021-05393-9.

Hou Y, Bock F, Hos D, Cursiefen C. Lymphatic Trafficking in the Eye: Modulation of Lymphatic Trafficking to Promote Corneal Transplant Survival. *Cells.* 2021 Jul 2;10(7):1661. doi: 10.3390/cells10071661.

Cursiefen C, Hos D. Cutting Edge: Novel Treatment Options Targeting Corneal Neovascularization to Improve High-Risk Corneal Graft Survival. *Cornea.* 2021 Dec 1;40(12):1512-1518.

Matthaei M, Hos D, Bock F, Le VNH, Hou Y, Schaub F, Siebelmann S, Zhang W, Roters S, Bachmann BO, Cursiefen C. [Preconditioning of vascularized high-risk eyes using fine-needle diathermy and cross-linking]. *Ophthalmologe.* 2021 Jun;118(6):553-560.

Händel A, Siebelmann S, Hos D, Ögrünc F, Matthaei M, Cursiefen C, Bachmann B. Comparison of Mini-DMEK versus predescemet sutures as treatment of acute hydrops in keratoconus. *Acta Ophthalmol.* 2021 Dec;99(8):e1326-e1333.

Hadrian K, Willenborg S, Bock F, Cursiefen C, Eming SA, Hos D. Macrophage-Mediated Tissue Vascularization: Similarities and Differences Between Cornea and Skin. *Front Immunol.* 2021 Apr 7;12:667830.

Hos D, Schlereth S, Schrittenlocher S, Hayashi T, Bock F, Matthaei M, Bachmann BO, Cursiefen C. [Descemet membrane endothelial keratoplasty (DMEK) for graft failure after penetrating keratoplasty and in vascularized high-risk eyes]. *Ophthalmologe.* 2021 Jun;118(6):536-543.

Schaub F, Matthaei M, Enders P, Siebelmann S, Hos D, Bachmann BO, Cursiefen C. [Treatment of vascularized high-risk eyes with a Boston keratoprosthesis]. *Ophthalmologe.* 2021 Jun;118(6):544-552.

Schaub F, Hou Y, Zhang W, Bock F, Hos D, Cursiefen C. Corneal Crosslinking to Regress Pathologic Corneal Neovascularization Before High-Risk Keratoplasty. *Cornea.* 2021 Feb 1;40(2):147-155.

Hayashi T, Zhang W, Hos D, Schrittenlocher S, Nhat Hung Le V, Siebelmann S, Matthaei M, Bock F, Bachmann B, Cursiefen C. Descemet Membrane Endothelial Keratoplasty in Vascularized Eyes: Outcome and Effect on Corneal Neovascularization. *Cornea.* 2021 Jun 1;40(6):685-689.

Le VNH, Hos D, Hou Y, Witt M, Barkovskiy M, Bock F, Cursiefen C. VEGF TrapR1R2 Suspended in the Semifluorinated Alkane F6H8 Inhibits Inflammatory Corneal Hem- and Lymphangiogenesis. *Transl Vis Sci Technol.* 2020 Oct 14;9(11):15. doi: 10.1167/tvst.9.11.15.

Hos NJ, Fischer J, Hos D, Hejazi Z, Calabrese C, Ganesan R, Murthy AMV, Rybniker J, Kumar S, Krönke M, Robinson N. TRIM21 Is Targeted for Chaperone-Mediated Autophagy during *Salmonella Typhimurium* Infection. *J Immunol.* 2020 Nov 1;205(9):2456-2467. doi: 10.4049/jimmunol.2000048.

Schlereth SL, Hos D, Matthaei M, Hamrah P, Schmetterer L, O'Leary O, Ullmer C, Horstmann J, Bock F, Wacker K, Schröder H, Notara M, Haagdorens M, Nuijts RMMA, Dunker SL, Dickman MM, Fauser S, Scholl HPN, Wheeler-Schilling T, Cursiefen C. New Technologies in Clinical Trials in Corneal Diseases and Limbal Stem Cell Deficiency: Review from the European Vision Institute Special Interest Focus Group Meeting. *Ophthalmic Res.* 2021;64(2):145-167. doi: 10.1159/000509954.

Salabarria AC, Koch M, Schonberg A, Zinser E, Hos D, Hamdorf M, Imhof T, Braun G, Cursiefen C, Bock F. Topical VEGF-C/D Inhibition Prevents Lymphatic Vessel Ingrowth into Cornea but Does Not Improve Corneal Graft Survival. *J Clin Med.* 2020 Apr;28(5):1270. doi: 10.3390/jcm9051270.

Hayashi T, Hos D, Schrittenlocher S, Siebelmann S, Matthaei M, Franklin J, Clahsen T, Bock F, Bachmann B, Cursiefen C. Effect of Iris Color on the Outcome of Descemet Membrane Endothelial Keratoplasty. *Cornea.* 2020 Mar 13. doi: 10.1097/ICO.0000000000002305.

Schaub F, Collmer M, Schrittenlocher S, Bachmann BO, Cursiefen C, Hos D. Outcome of Descemet Membrane Endothelial Keratoplasty Using Corneas from Donors  $\geq$ 80 Years of Age. *Am J Ophthalmol.* 2020 Mar;211:200-206.

Hos D, Matthaei M, Bock F, Maruyama K, Notara M, Clahsen T, Hou Y, Le VNH, Salabarria AC, Horstmann J, Bachmann BO, Cursiefen C. Immune reactions after modern lamellar (DALK, DSAEK, DMEK) versus conventional penetrating corneal transplantation. *Prog Retin Eye Res.* 2019 Nov;73:100768.

Hos D, Le VNH, Hellmich M, Siebelmann S, Roters S, Bachmann B, Cursiefen C. Risk of Corneal Graft Rejection After High-Risk Keratoplasty Following Fine-Needle Vessel Coagulation of Corneal Neovascularization Combined With Bevacizumab: A Pilot Study. *Transplantation Direct.* 2019 Apr 25;5(5):e452.

Schaub F, Bachmann B, Cursiefen C, Hos D. Midterm Follow-up of Immune Reactions after Descemet Membrane Endothelial Keratoplasty (DMEK). *Graefes Arch Clin Exp Ophthalmol.* 2019 Aug;257(8):1811-1812

Hos D, Schaub F, Cursiefen C. Does anterior chamber-associated immune deviation (ACAID) play a role in posterior lamellar keratoplasty? Case report of a splenectomized patient. *BMC Ophthalmol.* 2019 May;19(1):100.

Hos D, Cursiefen C, Dahlke C. Von Hippel Lindau Disease. *J Pediatr.* 2019 Mar; S0022- 3476(19)30153-2.

Kiesewetter A, Cursiefen C, Eming SA, Hos D. Phase-specific functions of macrophages determine injury-mediated corneal hem- and lymphangiogenesis. *Sci Rep.* 2019 Jan; 22;9(1):308.

Matthaei M, Bachmann B, Hos D, Siebelmann S, Schaub F, Cursiefen C. [Boston type I keratoprosthesis implantation technique : Video article]. *Ophthalmologe.* 2019 Jan;116(1):67-72.

Matthaei M, Schrittenlocher S, Hos D, Siebelmann S, Bucher F, Schaub F, Hoerster R, Sigel R, Roters S, Heindl LM, Bachmann B, Cursiefen C. [10 years of Descemet membrane endothelial keratoplasty in Fuchs endothelial corneal dystrophy: What have we learned?] *Ophthalmologe.* 2019 Mar;116(3):236-242.

Schlereth SL, Karlstetter M, Hos D, Matthaei M, Cursiefen C, Heindl LM. Detection of Pro- and Antangiogenic Factors in the Human Sclera. *Curr Eye Res.* 2018 Oct 25:1-13.

Schrittenlocher S, Schaub F, Hos D, Siebelmann S, Cursiefen C, Bachmann B. Evolution of Consecutive Descemet Membrane Endothelial Keratoplasty Outcomes Throughout a 5-Year Period Performed by Two Experienced Surgeons. *Am J Ophthalmol.* 2018 Jun;190:171-178.

Hos NJ, Ganesan R, Gutierrez S, Hos D, Klimek J, Abdullah Z, Kronke M, Robinson N. Type I interferon enhances necroptosis of *Salmonella Typhimurium*-infected macrophages by impairing antioxidative stress responses. *J Cell Biol.* 2017 Dec 4;216(12):4107-4121.

Prokosch-Willing V, Hos D, Joachim SC. [Research during residency]. *Ophthalmologe.* 2017 Oct;114(10):901-905.

Hos D, Bukowiecki A, Horstmann J, Bock F, Bucher F, Heindl LM, Siebelmann S, Steven P, Dana R, Eming SA, Cursiefen C. Transient Ingrowth of Lymphatic Vessels into the Physiologically Avascular Cornea Regulates Corneal Edema and Transparency. *Sci Rep.* 2017 Aug 3;7(1):7227.

Bukowiecki A, Hos D, Cursiefen C, Eming SA. Wound-Healing Studies in Cornea and Skin: Parallels, Differences and Opportunities. *Int J Mol Sci.* 2017 Jun 12;18(6). pii: E1257.

Cursiefen C, Bock F, Clahsen T, Regenfuss B, Reis A, Steven P, Heindl LM, Bosch JJ, Hos D, Eming S, Grajewski R, Heiligenhaus A, Fauser S, Austin J, Langmann T. [New Therapeutic Approaches in Inflammatory Diseases of the Eye - Targeting Lymphangiogenesis and Cellular Immunity: Research Unit FOR 2240 Presents Itself]. *Klin Monbl Augenheilkd*. 2017 May;234(5):679-685.

Hos D, Tuac O, Schaub F, Stanzel TP, Schrittenlocher S, Hellmich M, Bachmann BO, Cursiefen C. Incidence and Clinical Course of Immune Reactions after Descemet Membrane Endothelial Keratoplasty: Retrospective Analysis of 1000 Consecutive Eyes. *Ophthalmology*. 2017 Apr;124(4):512-518

Bock F, Onderka J, Braun G, Schneider AC, Hos D, Bi Y, Bachmann BO, Cursiefen C. Identification of Novel Endogenous Anti(lymph)angiogenic Factors in the Aqueous Humor. *Invest Ophthalmol Vis Sci*. 2016 Dec 1;57(15):6554-6560.

Schaub F, Hos D, Bucher F, Siebelmann S, Bachmann BO, Cursiefen C. [Bostonkeratoprosthesis: Preliminary experiences in 13 high-risk eyes from the Department of Ophthalmology of the University of Cologne]. *Ophthalmologe*. 2016 Jun;113(6):492-9.

Siebelmann S, Steven P, Hos D, Huttmann G, Lankenau E, Bachmann B, Cursiefen C. Advantages of microscope-integrated intraoperative online optical coherence tomography: usage in Boston keratoprosthesis type I surgery. *J Biomed Opt*. 2016 Jan;21(1):16005.

Hos D, Dorrie J, Schaft N, Bock F, Notara M, Kruse FE, Krautwald S, Cursiefen C, Bachmann BO. Blockade of CCR7 leads to decreased dendritic cell migration to draining lymph nodes and promotes graft survival in low-risk corneal transplantation. *Exp Eye Res*. 2016 May;146:1-6.

Hos D, Bucher F, Regenfuss B, Dreisow ML, Bock F, Heindl LM, Eming SA, Cursiefen C. IL-10 Indirectly Regulates Corneal Lymphangiogenesis and Resolution of Inflammation via Macrophages. *Am J Pathol*. 2016 Jan;186(1):159-71.

Refaian N, Schlereth SL, Koch KR, Notara M, Hos D, Mescher M, Iden S, Bosch JJ, Jager MJ, Cursiefen C, Heindl LM. Comparing the Hem- and Lymphangiogenic Profile of Conjunctival and Uveal Melanoma Cell Lines. *Invest Ophthalmol Vis Sci*. 2015 Aug;56(9):5691-7.

Regenfuss B, Dreisow ML, Hos D, Masli S, Bock F, Cursiefen C. The Naive Murine Cornea as a Model System to Identify Novel Endogenous Regulators of Lymphangiogenesis: TRAIL and rtPA. *Lymphat Res Biol*. 2015 Jun;13(2):76-84.

Lee HS, Hos D, Blanco T, Bock F, Reyes NJ, Mathew R, Cursiefen C, Dana R, Saban DR. Involvement of corneal lymphangiogenesis in a mouse model of allergic eye disease. *Invest Ophthalmol Vis Sci*. 2015 May;56(5):3140-8.

Hos D, Steven P, Dietrich-Ntoukas T. [The situation of residents in ophthalmology in Germany: Results of an online survey]. *Ophthalmologe*. 2015 Jun;112(6):498-503.

Bucher F, Fries JW, Hos D, Koch KR, Cursiefen C, Heindl LM. [Prolapse of the upper lacrimal punctum]. *Ophthalmologe*. 2015 Sep;112(9):788-90.

Bucher F, Hos D, Muller-Schwefe S, Steven P, Cursiefen C, Heindl LM. Spontaneous longterm course of persistent peripheral graft detachments after Descemet's membrane endothelial keratoplasty. *Br J Ophthalmol*. 2015 Jun;99(6):768-72.

Hos D, Schlereth SL, Bock F, Heindl LM, Cursiefen C. Antilymphangiogenic therapy to promote transplant survival and to reduce cancer metastasis: what can we learn from the eye? *Semin Cell Dev Biol*. 2015 Feb;38:117-30.

Hos D, van Essen TH, Bock F, Chou CH, Pan HA, Lin CC, Huang MC, Chen SC, Cursiefen C, Jager MJ. [Decellularized collagen matrix from tilapia fish scales for corneal reconstruction (BioCornea)]. *Ophthalmologe*. 2014 Nov;111(11):1027-32.

Hos D, Heindl LM, Bucher F, Cursiefen C. Novel lamellar, flap-based tattooing techniques for corneal opacities in scarred and vascularized blind eyes. *Cornea*. 2015 Jan;34(1):82-6.

Bucher F, Hos D, Matthaei M, Steven P, Cursiefen C, Heindl LM. Corneal nerve alterations after Descemet membrane endothelial keratoplasty: an in vivo confocal microscopy study. *Cornea*. 2014 Nov;33(11):1134-9.

Heindl LM, Bucher F, Caramoy A, Hos D, Matthaei M, Cursiefen C. Safety of donor tissue preparation and use of descemetoschisis and torn tissue in descemet membrane endothelial keratoplasty. *Cornea*. 2014 Oct;33(10):e7-9.

Hos D, Cursiefen C. Severe vitamin A deficiency in a child presenting as xerophthalmia. *J Pediatr*. 2014 Oct;165(4):875.

Bucher F, Adler W, Lehmann HC, Hos D, Steven P, Cursiefen C, Heindl LM. Corneal nerve alterations in different stages of Fuchs' endothelial corneal dystrophy: an in vivo confocal microscopy study. *Graefes Arch Clin Exp Ophthalmol*. 2014 Jul;252(7):1119-26.

Lipp M, Bucher F, Parthasarathy A, Hos D, Onderka J, Cursiefen C, Bock F. Blockade of the VEGF isoforms in inflammatory corneal hemangiogenesis and lymphangiogenesis. *Graefes Arch Clin Exp Ophthalmol*. 2014 Jun;252(6):943-9.

Koch KR, Refaian N, Hos D, Schlereth SL, Bosch JJ, Cursiefen C, Heindl LM. Autocrine impact of VEGF-A on uveal melanoma cells. *Invest Ophthalmol Vis Sci*. 2014 Apr 25;55(4):2697-704.

Hos D, Heindl LM, Bucher F, Cursiefen C. Evidence of donor corneal endothelial cell migration from immune reactions occurring after descemet membrane endothelial keratoplasty. *Cornea*. 2014 Apr;33(4):331-4.

Bucher F, Bi Y, Gehlsen U, Hos D, Cursiefen C, Bock F. Regression of mature lymphatic vessels in the cornea by photodynamic therapy. *Br J Ophthalmol*. 2014 Mar;98(3):391-5.

Hos D, Cursiefen C. Lymphatic vessels in the development of tissue and organ rejection. *Adv Anat Embryol Cell Biol*. 2014;214:119-41.

Hoffmann SA, Hos D, Kuspert M, Lang RA, Lovell-Badge R, Wegner M, Reiprich S. Stem cell factor Sox2 and its close relative Sox3 have differentiation functions in oligodendrocytes. *Development*. 2014 Jan;141(1):39-50.

Hos D, Koch KR, Bucher F, Bock F, Cursiefen C, Heindl LM. Serum eyedrops antagonize the anti(lymph)angiogenic effects of bevacizumab in vitro and in vivo. *Invest Ophthalmol Vis Sci*. 2013 Sep 11;54(9):6133-42.

Bucher F, Roters S, Mellein A, Hos D, Heindl LM, Cursiefen C, Hermann M. „OSMO-UTDSAEK“ using THIN-C medium. *Graefes Arch Clin Exp Ophthalmol*. 2013 Sep;251(9):2181-5.

Heindl LM, Koch KR, Bucher F, Hos D, Steven P, Koch HR, Cursiefen C. Descemet membrane endothelial keratoplasty in eyes with glaucoma implants. *Optom Vis Sci*. 2013 Sep;90(9):e241-4.

Heindl LM, Riss S, Adler W, Steven P, Hos D, Cursiefen C. Corneal graft alterations after Descemet stripping: implications for split cornea transplantation. *JAMA Ophthalmol*. 2013 May;131(5):687-9.

Cursiefen C, Regenfuss B, Hos D, Bucher F, Steven P, Heindl LM, Bock F. [Anti(lymph)angiogenic preconditioning prior to keratoplasty]. *Klin Monbl Augenheilkd*. 2013 May;230(5):500-4.

Hos D, Koch KR, Bock F, Grajewski RS, Dietlein TS, Cursiefen C, Heindl LM. Short- and longterm corneal vascular effects of tafluprost eye drops. *Graefes Arch Clin Exp Ophthalmol*. 2013 Aug;251(8):1919-27.

Bucher F, Dietlein T, Hermann M, Hos D, Cursiefen C, Heindl LM. Retrocorneal membrane formation after Baerveldt shunt implantation for iridocorneal endothelial syndrome. *Cornea*. 2013 Jul;32(7):e161-3.

Steven P, Hos D, Heindl LM, Bock F, Cursiefen C. [Immune reactions after DMEK, DSAEK and DALK]. *Klin Monbl Augenheilkd*. 2013 May;230(5):494-9.

Heindl LM, Riss S, Adler W, Bucher F, Hos D, Cursiefen C. Split cornea transplantation: relationship between storage time of split donor tissue and outcome. *Ophthalmology*. 2013 May;120(5):899-907.

Bock F, Maruyama K, Regenfuss B, Hos D, Steven P, Heindl LM, Cursiefen C. Novel anti(lymph)angiogenic treatment strategies for corneal and ocular surface diseases. *Prog Retin Eye Res*. 2013 May;34:89-124.

Hos D, Regenfuss B, Bock F, Onderka J, Cursiefen C. Blockade of insulin receptor substrate-1 inhibits corneal lymphangiogenesis. *Invest Ophthalmol Vis Sci*. 2011 Jul 29;52(8):5778-85.

Hos D, Saban DR, Bock F, Regenfuss B, Onderka J, Masli S, Cursiefen C. Suppression of inflammatory corneal lymphangiogenesis by application of topical corticosteroids. *Arch Ophthalmol*. 2011 Apr;129(4):445-52.

Regenfuss B, Onderka J, Bock F, Hos D, Maruyama K, Cursiefen C. Genetic heterogeneity of lymphangiogenesis in different mouse strains. *Am J Pathol*. 2010 Jul;177(1):501-10.

Dietrich T, Bock F, Yuen D, Hos D, Bachmann BO, Zahn G, Wiegand S, Chen L, Cursiefen C. Cutting edge: lymphatic vessels, not blood vessels, primarily mediate immune rejections after transplantation. *J Immunol*. 2010 Jan 15;184(2):535-9.

Regenfuss B, Bock F, Bachmann B, Konig Y, Hos D, Parthasarathy A, Cursiefen C. [Topical inhibition of angiogenesis at the cornea. Safety and efficacy]. *Ophthalmologe*. 2009 May;106(5):399-406.

Bachmann BO, Luetjen-Drecoll E, Bock F, Wiegand SJ, Hos D, Dana R, Kruse FE, Cursiefen C. Transient postoperative vascular endothelial growth factor (VEGF)-neutralisation improves graft survival in corneas with partly regressed inflammatory neovascularisation. *Br J Ophthalmol*. 2009 Aug;93(8):1075-80.

Bock F, Onderka J, Hos D, Horn F, Martus P, Cursiefen C. Improved semiautomatic method for morphometry of angiogenesis and lymphangiogenesis in corneal flatmounts. *Exp Eye Res*. 2008 Nov;87(5):462-70.

Hos D, Bachmann B, Bock F, Onderka J, Cursiefen C. Age-related changes in murine limbal lymphatic vessels and corneal lymphangiogenesis. *Exp Eye Res*. 2008 Nov;87(5):427-32.

Hos D, Bock F, Dietrich T, Onderka J, Kruse FE, Thierauch KH, Cursiefen C. Inflammatory corneal (lymph)angiogenesis is blocked by VEGFR-tyrosine kinase inhibitor ZK 261991, resulting in improved graft survival after corneal transplantation. *Invest Ophthalmol Vis Sci*. 2008 May;49(5):1836-42.