

Curriculum Vitae

Personal Information

Name	Martina Knecht-Boesch
Degree (title)	Federal diploma in medicine (Dr. med.) FMH Ophthalmology (Swiss Medical Association) FMH Ophtho-surgery (Swiss Medical Association) Fellow of European Board of Ophthalmology (FEBO) Venia Legendi (PD)
E-Mail	martina.knecht-boesch@augenklinik-baden.ch, pascal.knecht@hin.ch
Medical school	University of Zurich
GLN	7601000384348
Researcher ID (ORCID)	0009-0008-7763-4665

Education

1977 – 1984	Grammar School, Preschool (Lincroft and Oakhurst, New Jersey, USA)
1985 – 1993	High school (Kantonsschule Sargans, St. Gallen, Switzerland)
1993 – 1999	Bachelor and Master of Medicine (University of Zurich, Zurich, Switzerland)
2000	Doctoral Thesis: <i>"Assessment of Postoperative Sequelae on Children after Adenotonsillectomy and Adenoidectomy."</i> (Prof. Dr. med. Fisch and Prof. Dr. med. Holzmann, Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Zurich, Zurich, Switzerland)

Professional Activities and Career

01/2000 – 02/2001	Residency in Internal Medicine (Department of Internal Medicine, Spital Davos, Davos, Switzerland)
03/2001 – 12/2001	Residency in Ophthalmology (Department of Ophthalmology, Cantonal Hospital Aarau, Aarau, Switzerland)
01/2002 – 06/2002	Residency in Otorhinolaryngology (Department of Otorhinolaryngology, Head and Neck Surgery, Cantonal Hospital St. Gallen, St. Gallen, Switzerland)
07/2002 – 02/2006	Residency in Ophthalmology (Department of Ophthalmology, University Hospital Zurich, Zurich, Switzerland)
08/2005 – 11/2005	Anterior Segment Surgical Fellowship (Department of Ophthalmology, Institute Oftalmo Salud, Lima, Peru)
03/2006 – 07/2007	Consultant in General Ophthalmology (Department of Ophthalmology, University Hospital Zurich, Zurich, Switzerland)
07/2007 – 06/2008	Clinical and Research Fellowship in Anterior Segment Disorders (Save Sight Institute and Sydney Eye Hospital, Sydney, Australia)
08/2008 – 07/2010	Consultant in Anterior Segment Disorders (Department of Ophthalmology, University Hospital Zurich, Zurich, Switzerland)
07/2010 – 09/2013	Consultant and Head of the Cornea Department and Eye-banking (Department of Ophthalmology, University Hospital Zurich, Zurich, Switzerland)
10/2013 – 2018	Senior Consultant in Anterior Segment Disorders (Vista Diagnostics, Zurich, Switzerland)
11/2013 – today	Medical Director St. Lucy foundation
05/2014 – today	Co-Owner and Co-Director Augenpraxis Centerpassage (Wettingen, Switzerland)

04/2020 – today	Co-Owner and Co-Director Augenklinik Wettingen (formerly known as Augenpraxis Centerpassage, Wettingen, Switzerland)
07/2020 – today	Co-Owner and Co-Director Chirurgie Wettingen (Wettingen, Switzerland)
05/2021	Scientific Co-leader and Founder of Update Refresher for Swiss Ophthalmologists 1 for FOMF (Zurich, Switzerland)
11/2021 – today	Co-Owner and Co-Director Augenklinik Baden (Baden, Switzerland)
01/2022 – today	Acquisition, Co-Owner and Co-Director Augenpraxis Etzelmatt (formerly known as Praxis Dr. von Büren, Wettingen, Switzerland)
05/2022	Scientific Co-Founder of the ophthalmology conference hosted by FOMF: Update Refresher for Swiss Ophthalmologists (Zurich, Switzerland)
04/2023	SIWF status C1 and D2 (enables the teaching of residents and surgical fellows within the private practice setting)
05/2023	Scientific Co-Chair of the Update Refresher in Ophthalmology
10/2023- today	Founder and scientific Chair of the yearly conference “Ophtha Skills Day” for Swiss Ophthalmologists hosted by the Augenklinik Baden, Wettingen (Baden, Switzerland)

Memberships

Since 2005	FMH Swiss Medical Association
Since 2021	European Society of Cataract and Refractive Surgery
Since 2014	Swiss Society of Ophthalmology

Certifications

09/1996	United States Medical Licensing Examination Step 1 (Geneva, Switzerland)
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2000	Advanced Cardiac Life Support (Zurich, Switzerland)
2001	Standardized Ocular Ultrasound Course (Vienna, Austria)
2002	Standardized Ocular Ultrasound Course (Bern, Switzerland)
2003	Schober refraction course (Munich, Germany)
2003	Ocular Laser Course (Greifswald, Germany)
03/2003	Basic Science Examination, Optics and Refraction (International Council of Ophthalmology)
2006	Microsurgical Suture Technique Course (Las Vegas, USA)
2006	Microsurgical Anterior and Posterior Segment Course (Regensburg, Germany)
05/2005	Fellow of the European Board of Ophthalmology (Paris, France)
05/2005	FMH Ophthalmology (Bern, Switzerland)
10/2009	United States Medical Licensing Examination Step 2 (Geneva, Switzerland)
01/2009	FMH Ophthalmo-surgery (Bern, Switzerland)
10/2011	Venia legendi (University of Zurich, Zurich, Switzerland)
2011	Certification for Implantable Collamer Lenses – Artisan- (Zurich, Switzerland)
2011	Leadership Course (Zurich, Switzerland)
2015	Certification for Femtolaser-assisted Cataract Surgery (Zurich, Switzerland)

Publications

Please see web site www.augenklinik-wettingen.ch

Publications PD Dr. med. Martina Knecht-Boesch

Original Papers

1. Time-varying signal analysis to detect high-altitude periodic breathing in climbers ascending to extreme altitude.
 Garde A, Giraldo BF, Jané R, Latshang TD, Turk AJ, Hess T, Bosch MM, Barthelmes D, Merz TM, Hefti JP, Schoch OD, Bloch KE.
 Med Biol Eng Comput. 2015 Aug;53(8):699-712. doi: 10.1007/s11517-015-1275-x. Epub 2015 Mar 31.
 PMID: 25820153
2. Determination of the excimer laser ablation rate in previously cross-linked corneas.
 Richoz O, Arba Mosquera S, Kling S, Hammer A, Magnago T, Bosch MM, Hafezi F.
 J Refract Surg. 2014 Sep;30(9):628-32. doi: 10.3928/1081597X-20140815-03.
 PMID: 25250420
3. Treatment of traumatic corneal abrasions: a three-arm, prospective, randomized study.
 Menghini M, Knecht PB, Kaufmann C, Kovacs R, Watson SL, Landau K, Bosch MM.
 Ophthalmic Res. 2013;50(1):13-8. doi: 10.1159/000347125. Epub 2013 May 3.
 PMID: 23652196 Clinical Trial.
4. [Methotrexate treatment in severe chronic ocular graft versus host disease (GvHD)].
 Sabti S, Halter JP, Bosch MM, Goldblum D.
 Klin Monbl Augenheilkd. 2013 Apr;230(4):344-5. doi: 10.1055/s-0032-1328334.
 Epub 2013 Apr 29.
 PMID: 23629775 German. No abstract available.
5. Cognitive performance in high-altitude climbers: a comparative study of saccadic eye movements and neuropsychological tests.
 Merz TM, Bosch MM, Barthelmes D, Pichler J, Hefti U, Schmitt KU, Bloch KE, Schoch OD, Hess T, Turk AJ, Schwarz U.
 Eur J Appl Physiol. 2013 Aug;113(8):2025-37. doi: 10.1007/s00421-013-2635-6.
 Epub 2013 Apr 6.
 PMID: 23563571
6. Periodic breathing during ascent to extreme altitude quantified by spectral analysis of the respiratory volume signal.
 Garde A, Giraldo BF, Jane R, Latshang TD, Turk AJ, Hess T, Bosch MM, Barthelmes D, Hefti JP, Maggiorini M, Hefti U, Merz TM, Schoch OD, Bloch KE.

- Annu Int Conf IEEE Eng Med Biol Soc. 2012;2012:707-10. doi: 10.1109/EMBC.2012.6346029.
PMID: 23365990
7. High altitude retinal hemorrhages--an update.
Bosch MM, Barthelmes D, Landau K.
High Alt Med Biol. 2012 Dec;13(4):240-4. doi: 10.1089/ham.2012.1077.
PMID: 23270439 Review.
 8. Corneal melting two weeks after pterygium excision with topical mitomycin C: successfully treated with lamellar keratoplasty and amnion membrane transplantation.
Menghini M, Watson SL, Bosch MM.
Case Rep Ophthalmol. 2012 Jan;3(1):24-9. doi: 10.1159/000336452. Epub 2012 Jan 31.
PMID: 22615697 **Free PMC article.**
 9. Stony intraocular foreign body (eye of stone).
Töteberg-Harms M, Ciechanowski PP, Chaloupka K, Bosch MM, Kovacs R, Sturm V.
Klin Monbl Augenheilkd. 2012 Apr;229(4):459-61. doi: 10.1055/s-0031-1299287.
Epub 2012 Apr 11.
PMID: 22496032 No abstract available.
 10. Interdisciplinary endoscopic assisted surgery of a patient with a complete transorbital intracranial impalement through the dominant hemisphere.
Burkhardt JK, Holzmann D, Strobl L, Woernle CM, Bosch MM, Kollias SS, Reisch R.
Childs Nerv Syst. 2012 Jun;28(6):951-4. doi: 10.1007/s00381-011-1674-8. Epub 2012 Mar 10.
PMID: 22407385 No abstract available.
 11. Acclimatization improves submaximal exercise economy at 5533 m.
Latshang TD, Turk AJ, Hess T, Schoch OD, Bosch MM, Barthelmes D, Merz TM, Hefti U, Hefti JP, Maggiorini M, Bloch KE.
Scand J Med Sci Sports. 2013 Aug;23(4):458-67. doi: 10.1111/j.1600-0838.2011.01403.x. Epub 2011 Nov 3.
PMID: 22093058
 12. The ocular pulse amplitude at different intraocular pressure: a prospective study.
Knecht PB, Bosch MM, Michels S, Mannhardt S, Schmid U, Bosch MA, Menke MN.
Acta Ophthalmol. 2011 Aug;89(5):e466-71. doi: 10.1111/j.1755-3768.2011.02141.x. Epub 2011 Mar 15.

PMID: 21401909 Clinical Trial.

13. Delayed appearance of high altitude retinal hemorrhages.
 Barthelmes D, Bosch MM, Merz TM, Petrig BL, Truffer F, Bloch KE, Holmes TA, Cattin P, Hefti U, Sellner M, Sutter FK, Maggiorini M, Landau K.
 PLoS One. 2011 Feb 17;6(2):e11532. doi: 10.1371/journal.pone.0011532.
 PMID: 21379571 **Free PMC article.** Clinical Trial.
14. Use of intraoperative fourier-domain anterior segment optical coherence tomography during descemet stripping endothelial keratoplasty.
 Knecht PB, Kaufmann C, Menke MN, Watson SL, Bosch MM.
 Am J Ophthalmol. 2010 Sep;150(3):360-365.e2. doi: 10.1016/j.ajo.2010.04.017.
 Epub 2010 Jun 29.
 PMID: 20591396
15. Nocturnal periodic breathing during acclimatization at very high altitude at Mount Muztagh Ata (7,546 m).
 Bloch KE, Latshang TD, Turk AJ, Hess T, Hefti U, Merz TM, Bosch MM, Barthelmes D, Hefti JP, Maggiorini M, Schoch OD.
 Am J Respir Crit Care Med. 2010 Aug 15;182(4):562-8. doi: 10.1164/rccm.200911-1694OC. Epub 2010 May 4.
 PMID: 20442435 Clinical Trial.
16. Swiss patient with a subconjunctival *Dirofilaria repens*.
 Hasler S, Grimm F, Thiel MA, Müller NJ, Eberhard R, Bosch MM.
 Klin Monbl Augenheilkd. 2010 Apr;227(4):332-3. doi: 10.1055/s-0029-1245245.
 Epub 2010 Apr 20.
 PMID: 20408091 No abstract available.
17. New insights into changes in corneal thickness in healthy mountaineers during a very-high-altitude climb to Mount Muztagh Ata.
 Bosch MM, Barthelmes D, Merz TM, Knecht PB, Truffer F, Bloch KE, Thiel MA, Petrig BL, Turk AJ, Schoch OD, Hefti U, Landau K.
 Arch Ophthalmol. 2010 Feb;128(2):184-9. doi: 10.1001/archophthalmol.2009.385.
 PMID: 20142540 Clinical Trial.
18. Changes of coagulation parameters during high altitude expedition.
 Pichler Hefti J, Risch L, Hefti U, Scharrer I, Risch G, Merz TM, Turk A, Bosch MM, Barthelmess D, Schoch O, Maggiorini M, Huber AR.
 Swiss Med Wkly. 2010 Feb 20;140(7-8):111-7. doi: 10.4414/smw.2010.12910.
 PMID: 19950043 Clinical Trial.
19. Intraocular pressure during a very high altitude climb.
 Bosch MM, Barthelmes D, Merz TM, Truffer F, Knecht PB, Petrig B, Bloch KE, Hefti U, Schubiger G, Landau K.

- Invest Ophthalmol Vis Sci. 2010 Mar;51(3):1609-13. doi: 10.1167/iovs.09-4306.
Epub 2009 Oct 29.
PMID: 19875651 Clinical Trial.
20. Tunnelled versus straight intravitreal injection: intraocular pressure changes, vitreous reflux, and patient discomfort.
Knecht PB, Michels S, Sturm V, Bosch MM, Menke MN.
Retina. 2009 Sep;29(8):1175-81. doi: 10.1097/IAE.0b013e3181aade74.
PMID: 19734766 Clinical Trial.
 21. Dynamic contour tonometry: handheld versus slit-lamp-mounted.
Knecht PB, Bosch MM, Menke MN, Bachmann LM, Funk J, Kaufmann C.
Ophthalmology. 2009 Aug;116(8):1450-4. doi: 10.1016/j.ophtha.2009.02.006.
Epub 2009 Jun 4.
PMID: 19500848 Clinical Trial.
 22. Effect of ascent protocol on acute mountain sickness and success at Muztagh Ata, 7546 m.
Bloch KE, Turk AJ, Maggiorini M, Hess T, Merz T, Bosch MM, Barthelmes D, Hefti U, Pichler J, Senn O, Schoch OD.
High Alt Med Biol. 2009 Spring;10(1):25-32. doi: 10.1089/ham.2008.1043.
PMID: 19326598 Clinical Trial.
 23. Ocular pigmentation associated with clozapine.
Borovik AM, Bosch MM, Watson SL.
Med J Aust. 2009 Feb 16;190(4):210-1. doi: 10.5694/j.1326-5377.2009.tb02353.x.
PMID: 19220190
 24. New insights into ocular blood flow at very high altitudes.
Bosch MM, Merz TM, Barthelmes D, Petrig BL, Truffer F, Bloch KE, Turk A, Maggiorini M, Hess T, Schoch OD, Hefti U, Sutter FK, Pichler J, Huber A, Landau K.
J Appl Physiol (1985). 2009 Feb;106(2):454-60. doi: 10.1152/jappphysiol.90904.2008. Epub 2008 Dec 4.
PMID: 19057000
 25. High incidence of optic disc swelling at very high altitudes.
Bosch MM, Barthelmes D, Merz TM, Bloch KE, Turk AJ, Hefti U, Sutter FK, Maggiorini M, Wirth MG, Schoch OD, Landau K.
Arch Ophthalmol. 2008 May;126(5):644-50. doi: 10.1001/archophth.126.5.644.
PMID: 18474774
 26. Fibrotic racemose haemangioma of the retina.
Knecht PB, Bosch MM, Helbig H.
Klin Monbl Augenheilkd. 2008 May;225(5):495-6. doi: 10.1055/s-2008-1027350.

PMID: 18454409

27. Is pseudophakia a risk factor for neovascular age-related macular degeneration?
Sutter FK, Menghini M, Barthelmes D, Fleischhauer JC, Kurz-Levin MM, Bosch MM, Helbig H.
Invest Ophthalmol Vis Sci. 2007 Apr;48(4):1472-5. doi: 10.1167/iovs.06-0766.
PMID: 17389473
28. [Photodynamic therapy of AMD for the first (better sight) and the second (worse sight) eyes].
Marti AC, Sutter FK, Barthelmes D, Fleischhauer JC, Kurz-Levin MM, Bosch MM, Helbig H.
Ophthalmologe. 2007 Feb;104(2):143-6, 148. doi: 10.1007/s00347-006-1447-z.
PMID: 17180607 German.
29. Ophthalmologic findings and long-term course in patients with neurofibromatosis type 2.
Bosch MM, Boltshauser E, Harpes P, Landau K.
Am J Ophthalmol. 2006 Jun;141(6):1068-1077. doi: 10.1016/j.ajo.2005.12.042.
PMID: 16765675
30. Macular atrophy after combined intravitreal triamcinolone acetonide (IVTA) and photodynamic therapy (PDT) for retinal angiomatous proliferation (RAP).
Sutter FK, Kurz-Levin MM, Fleischhauer J, Bösch MM, Barthelmes D, Helbig H.
Klin Monbl Augenheilkd. 2006 May;223(5):376-8. doi: 10.1055/s-2006-926564.
PMID: 16705508 Clinical Trial.
31. Optic nerve sheath meningiomas in patients with neurofibromatosis type 2.
Bosch MM, Wichmann WW, Boltshauser E, Landau K.
Arch Ophthalmol. 2006 Mar;124(3):379-85. doi: 10.1001/archophth.124.3.379.
PMID: 16534058
32. Quantitative analysis of OCT characteristics in patients with achromatopsia and blue-cone monochromatism.
Barthelmes D, Sutter FK, Kurz-Levin MM, Bosch MM, Helbig H, Niemeyer G, Fleischhauer JC.
Invest Ophthalmol Vis Sci. 2006 Mar;47(3):1161-6. doi: 10.1167/iovs.05-0783.
PMID: 16505054
33. The visual impact of fractionated stereotactic conformal radiotherapy on seven eyes with optic nerve sheath meningiomas.
Landert M, Baumert BG, Bosch MM, Lütolf UM, Landau K.
J Neuroophthalmol. 2005 Jun;25(2):86-91. doi: 10.1097/01.wno.0000165105.78365.22.
PMID: 15937428
34. Blackening of a choroidal hemangioma after photodynamic therapy.

Bosch MM, Helbig H.

Klin Monbl Augenheilkd. 2005 Mar;222(3):258-60. doi: 10.1055/s-2005-857977.
PMID: 15785995

35. Atypical manifestation of neurofibromatosis type 2 in a boy.
Bosch MM, Mironov A, Killer HE.
Eye (Lond). 2005 Jun;19(6):705-6. doi: 10.1038/sj.eye.6701603.
PMID: 15192694 No abstract available.
36. Repositioning of a dislocated intraocular lens during a roller-coaster ride.
Bosch MM, Landau K, Thiel MA.
N Engl J Med. 2003 Sep 11;349(11):1094-6. doi:
10.1056/NEJM200309113491122.
PMID: 12968102 No abstract available.
37. The *in vitro* effect of fluorescein exposure on human corneal endothelial cells
Wen L, Eghtedari Y, Ooi KG, Madigan
MC, Watson SL, Petsoglou C, Bosch MM. The in vitro effect
of fluorescein exposure on human corneal endothelial cells. Ann
Eye Sci 2025;10:6.
38. Eastline M, Said S, Boesch MM, Knecht P. Exit-Strategy for Treatment of
Neovascular Age-related Macular Degeneration in a Real-World Setting: Wishful
Thinking? Klin Monbl Augenheilkd. 2025 Apr;242(4):398-404. doi: 10.1055/a-
2511-5899. Epub 2025 Feb 5.

Medical book chapters

1. Chapter Ocular Problems in Extreme Sports, Martina M Bosch, Pascal Knecht, Stephanie Watson, 2016, Extreme Sports Medicine, Springer.
2. "Ocular Surface Disease in Glaucoma Patients", Clinical Handbook, Miriam Kolko, José Manuel Benitez-Del-Castillo, Barbara Cvenkel, Nalley Ramos-Betancourt, Gysbert-Botho van Setten, Martina Knecht-Bösch, Joanna Wierzbowska, By Thea Laboratoires