



# Dr med Dr sc nat Mathias Abegg

Specialist in ophthalmology, specialising in ophthalmic surgery

---

## Languages

DE

## Education

2010	Fellowship in strabismus surgery, Rotterdam Eye Hospital, Holland
2004–2007	Resident at the University Eye Clinics in Zurich and Bern
2000–2004	International PhD programme in Neuroscience, Centre for Neuroscience Zurich
1999–2004	MD/PhD programme at the Institute for Brain Research Zurich
1993–1999	Medical studies in Zurich and Lausanne

## Work Experience

since 2022	Co-owner and ophthalmologist, ONOVIS eye practice, Berne
2014–2022	Head of Orthoptics, University Clinic for Ophthalmology, Inselspital, Bern
2010–2014	Senior Physician, Department of Ophthalmology, Inselspital, Bern
2008–2009	Fellow in Neuroophthalmology, University of British Columbia, Canada
2006–2007	Resident, Department of Ophthalmology, Inselspital, Bern
2004–2006	Resident, University Hospital Zurich
1999–2004	PhD student, Institute for Brain Research, Zurich

## Competences

### Professional qualifications / degrees

2017 - Associate professorship, University of Bern

2017 - Specialist title "Ophthalmic Surgery"

2014 - Habilitation, University of Bern

2008 - Specialist FMH & F.E.B.O. for ophthalmology,

2005 - Doctorate (Dr sc.nat.), University of Zurich  
Dissertation title: "Neurotransmission in the Injured Brain"

2003 - Diploma in Neurobiology, Physiology and Molecular Biology, University of Zurich

2001 - Doctorate in Medicine, University of Zurich  
Dissertation title: "Therapeutic Strategies in Retinitis Pigmentosa: light at the End of the Tunnel"

## Publications

- Belachew, Nebiyat F., Severin Baschung, William Almiri, Ruben Encinas, Johannes Kaesmacher, Tomas Dobrocky, Christoph J. Schankin, et al. "Casper Versus Precise Stent for the Treatment of Patients with Idiopathic Intracranial Hypertension." *Clinical Neuroradiology*, May 18, 2021. <https://doi.org/10.1007/s00062-021-01024-2>.
- Morrison, Miranda, Hassen Kerkeni, Athanasia Korda, Simone Räss, Marco D. Caversaccio, Mathias Abegg, Erich Schneider, and Georgios Mantokoudis. "Automated Alternate Cover Test for 'HINTS' Assessment: A Validation Study." *European Archives of Oto-Rhino-Laryngology*, July 23, 2021. <https://doi.org/10.1007/s00405-021-06998-w>.
- Petroulia, Valentina Daphne, Dominik Brügger, Robert Hoepner, Rino Vicini, Anna Winklehner, Mathias Abegg, and Franca Wagner. "MRI Signs Helpful in the Differentiation of Patients with Anterior Ischaemic Optic Neuropathy and Optic Neuritis." *The British Journal of Ophthalmology*, July 19, 2021. <https://doi.org/10.1136/bjophthalmol-2021-319537>.
- Bruegger, D., and M. Abegg. "Prediction of Cortical Theta Oscillations in Humans for Phase-Locked Visual Stimulation." *Journal of Neuroscience Methods* 361 (September 1, 2021): 109288. <https://doi.org/10.1016/j.jneumeth.2021.109288>.
- Kucur, Şerife Seda, Sebastian Häckel, Jan Stapelfeldt, Jeannine Odermatt, Milko E. Iliev, Mathias Abegg, Raphael Sznitman, and Rene Höhn. "Comparative Study Between the SORS and Dynamic Strategy Visual Field Testing Methods on Glaucomatous and Healthy Subjects." *Translational Vision Science & Technology* 9, no. 13 (December 2, 2020). <https://doi.org/10.1167/tvst.9.13.3>.
- Veselaj, Krenar, Nicole Kamber, Myriam Briner, Christoph Friedli, Lara Diem, Kirsten Guse, Andrei Miclea, et al. "Evaluation of Diagnostic Criteria and Red Flags of Myelin Oligodendrocyte Glycoprotein Encephalomyelitis in a Clinical Routine Cohort." *CNS Neuroscience & Therapeutics*, October 13, 2020. <https://doi.org/10.1111/cns.13461>.
- Kucur, Şerife Seda, Pablo Márquez-Neila, Mathias Abegg, and Raphael Sznitman. "Patient-Attentive Sequential Strategy for Perimetry-Based Visual Field Acquisition." *Medical Image Analysis* 54 (2019): 179-92.
- Mühlemann, Fabian, Hilary Grabe, Anthony Fok, Franca Wagner, Dominik Brügger, Claire A. Sheldon, and Mathias Abegg. "Homonymous Hemiatrophy of Ganglion Cell Layer from Retrochiasmal Lesions in the Visual Pathway." *Neurology* 94, no. 3 (21 2020): e323-29.
- Vicini, Rino, Dominik Brügger, Mathias Abegg, Anke Salmen, and Hilary Michelle Grabe. "Differences in Morphology and Visual Function of Myelin Oligodendrocyte Glycoprotein Antibody and Multiple Sclerosis Associated Optic Neuritis." *Journal of Neurology*, August 12, 2020.
- Abegg M, Ebnetter A and Dysli M. Reply. *Retina* (Philadelphia, Pa.), February 25, 2019.
- Dysli M, Ebnetter A, Menke M, Zinkernagel M, Wolf S, Grabe H and Abegg M. Patients with Epiretinal Membranes Display Retrograde Maculopathy after Surgical Peeling of the Internal Limiting Membrane *Retina* (Philadelphia, Pa.), August 29, 2018.
- Feil M, Abegg Meinrad and Abegg Mathias. "Timing of Concurrent Visual Stimuli Determines Modulation of Saccadic Amplitude." *Journal of Vision* 18, no. 11 (October 1, 2018): 8.
- Mekabaty A, Gralla J, Meier N, Abegg M, Raabe A and Mordasini P. Sinus Stenting of Idiopathic Intracranial Hypertension. *Swiss Medical Forum* 18, no. 1 (2018): 26-28.
- Borruat F, Dysli M, Voide N, and Abegg M. Acetazolamide Reduces Retinal Inner Nuclear Layer Thickness in Microcystic Macular Edema Secondary to Optic Neuropathy. *European Neurology*, 2018, 150-53.
- Feil M, Moser B and Abegg M. The Interaction of Pupil Response with the Vergence System. *Graefe's Archive for Clinical and Experimental Ophthalmology*, 16 August 2017.
- Brazerol J, Iliev ME, Höhn R, Fränkl S, Grabe H, Abegg M. Retrograde Maculopathy in Patients With Glaucoma. *J Glaucoma*. Feb 6 [Epub ahead of print] (2017).
- Christen M and Abegg M. The effect of magnification and contrast on reading performance in different types of simulated low vision. *Journal of Eye Movement Research*, [S.l.], v. 10, n. 2, May 2017
- Dysli M and Abegg M Nystagmus is not Limiting Reading Ability in Albinism *PlosOne*. Jul 8;11(7):e0158815 (2016).

Bolognini R, Gerth-Kahlert C, Abegg M, Bartholdi D, Mathis N, Sturm V, Gallati S and Schaller A. Characterisation of Two Novel Intronic OPA1 Mutations Resulting in Aberrant Pre-mRNA Splicing. *BMC Medical Genetics* 18, no. 1 (28 2017): 22.

Abegg M and Gentile E Visual training in children. *Therapeutic Review* 73(2):73-7; (2016)

Ebneter A, Jaggi D, Abegg M, Wolf S and Zinkernagel M Relationship between presumptive inner nuclear layer thickness and geographic atrophy progression in age-related macular degeneration *Invest Ophthalmol Vis Sci.* Jul 1;57(9):OCT 299-306 (2016).

Dysli M and Abegg M. Gaze Dependent Phoria and Vergence Adaptation. *Journal of Vision.* Feb 1;16(3):2 (2016).

Bär S, Hauf M, Barton JJS, Abegg M. The neural network of saccadic foreknowledge. *Experimental Brain Research.* October 2015.

Häner NU, Dysli M, Abegg M, Zinkernagel MS. Enhanced-depth optical coherence tomography for imaging horizontal rectus muscles in Graves' orbitopathy. *Graefes' Archive for Clinical and Experimental Ophthalmology.* June 2015.

Dysli M, Keller F, Abegg M. Acute onset incommittant image disparity modifies saccadic and vergence eye movements. *Journal of Vision.* 2015;15(3):12-12.

Abegg Mathias, Pianezzi Dario, Barton Jason JS. A Vertical Asymmetry in Saccades. *Journal of Eye Movement Research.* 2015;8(5):1-10.

Dysli M, Vogel N, Abegg M. Reading performance is not affected by a prism induced increase of horizontal and vertical vergence demand. *Frontiers in Human Neuroscience.* 2014;8.

Abegg M, Zinkernagel M, Wolf S. Re: Rönnbäck et al: Imaging of the macula indicates early completion of structural deficit in autosomal-dominant optic atrophy (Ophthalmology 2013;120:2672-7). *Ophthalmology.* 2014;121(6):e29-e30.

Dysli C, Quéllec G, Abegg M, et al. Quantitative analysis of fluorescence lifetime measurements of the macula using the fluorescence lifetime imaging ophthalmoscope in healthy subjects. *Invest Ophthalmol Vis Sci.* 2014;55(4):2106-2113.

Abegg M, Dysli M, Wolf S, Kowal J, Dufour P, Zinkernagel M. Microcystic macular edema: retrograde maculopathy caused by optic neuropathy. *Ophthalmology.* 2014;121(1):142-149. doi:10.1016/j.ophtha.2013.08.045.

Abegg M, Zinkernagel M, Wolf S. Microcystic macular degeneration from optic neuropathy. *Brain.* 2012;135(Pt 12):e225.

Rastgardani T, Lau V, Barton JJS, Abegg M. Trial history biases the spatial programming of antisaccades. *Exp Brain Res.* 2012;222(3):175-183.

Sheldon CA, Abegg M, Sekunova A, Barton JJS. The word-length effect in acquired alexia, and real and virtual hemianopia. *Neuropsychologia.* 2012;50(5):841-851.

Egli M, Goldblum D, Kipfer A, et al. Assessment of a new Goldmann applanation tonometer. *Br J Ophthalmol.* 2012;96(1):42-46.

Abegg M, Sharma N, Barton JJS. Antisaccades generate two types of saccadic inhibition. *Biol Psychol.* 2012;89(1):191-194.

Simpson SA, Abegg M, Barton JJS. Rapid adaptation of visual search in simulated hemianopia. *Cereb Cortex.* 2011;21(7):1593-1601.

Pfeffer G, Abegg M, Vertinsky AT, Ceccherini I, Caroli F, Barton JJS. The ocular motor features of adult-onset alexander disease: a case and review of the literature. *J Neuroophthalmol.* 2011;31(2):155-159.

Scheel M, Abegg M, Lanyon LJ, Mattman A, Barton JJ. White and grey matter alterations in adults with Niemann-Pick disease type C: a cross-sectional study. *Neurology.* 2011;76(2):201; author reply 201-202.

Abegg M, Manoach DS, Barton JJS. Knowing the future: partial foreknowledge effects on the programming of prosaccades and antisaccades. *Vision Res.* 2011;51(1):215-221.

Van der Stigchel S, Nijboer TCW, Bergsma DP, Abegg M, Barton JJS. Anomalous global effects induced by "blind" distractors in visual hemifield defects. *Brain Cogn.* 2010;74(1):66-73.

Abegg M, Rodriguez AR, Lee H, Barton JJS. "Alternate-goal bias" in antisaccades and the influence of expectation. *Exp Brain Res.* 2010;203(3):553-562.

Mitra AR, Abegg M, Viswanathan J, Barton JJS. Line bisection in simulated homonymous hemianopia. *Neuropsychologia.* 2010;48(6):1742-1749.

- Scheel M, Abegg M, Lanyon LJ, Mattman A, Barton JJ. Eye movement and diffusion tensor imaging analysis of treatment effects in a Niemann-Pick Type C patient. *Mol Genet Metab.* 2010;99(3):291-295.
- Lee H, Abegg M, Rodriguez A, Koehn J, Barton JJS. Why do humans make antisaccade errors? *Exp Brain Res.* 2010;201(1):65-73.
- Abegg M, Lee H, Barton JJ. Systematic diagonal and vertical errors in antisaccades and memory-guided saccades. 2010 *Journal of Eye Movement Research* 2010 3,(3):5,1-10
- Hugel S, Abegg M, de Paola V, Caroni P, Gähwiler BH, McKinney RA. Dendritic spine morphology determines membrane-associated protein exchange between dendritic shafts and spine heads. *Cereb Cortex.* 2009;19(3):697-702.
- Tappeiner C, Sarra G-M, Abegg M. Abuse of vasoconstrictive eyedrops mimicking an ocular pemphigoid. *Eur J Ophthalmol.* 2009;19(1):129-132.
- Abegg M, Fleischhauer J, Landau K. Unilateral papilledema after trabeculectomy in a patient with intracranial hypertension. *Klin Monbl Augenheilkd.* 2008;225(5):441-442.
- Tappeiner C, Barthelmes D, Abegg MH, Wolf S, Fleischhauer JC. Impact of optic media opacities and image compression on quantitative analysis of optical coherence tomography. *Invest Ophthalmol Vis Sci.* 2008;49(4):1609-1614.
- Abegg M, Tappeiner C, Wolf-Schnurrbusch U, Barthelmes D, Wolf S, Fleischhauer J. Treatment of branch retinal vein occlusion induced macular edema with bevacizumab. *BMC Ophthalmol.* 2008;8:18.
- Abegg MH. Rhythmic synaptic activity induced by mechanical injury of rat CA3 hippocampal area. *J Neurotrauma.* 2007;24(9):1536-1542.
- Fischer MD, Fleischhauer J, Keusch G, Abegg MH. Rise in intraocular pressure during haemodialysis in a patient with reduced outflow facility. *Br J Ophthalmol.* 2007;91(8):1091-1093.
- Abegg M, Kurz-Levin M, Helbig H. Retinal detachment in patients with acute retinal necrosis: a case series. *Klin Monbl Augenheilkd.* 2007;224(4):360-363.
- Mori M, Abegg MH, Gähwiler BH, Gerber U. A frequency-dependent switch from inhibition to excitation in a hippocampal unitary circuit. *Nature.* 2004;431(7007):453-456.
- Abegg MH, Savic N, Ehrenguber MU, McKinney RA, Gähwiler BH. Epileptiform activity in rat hippocampus strengthens excitatory synapses. *J Physiol (Lond).* 2004;554(Pt 2):439-448.
- Schwyzler L, Mateos JM, Abegg M, et al. Physiological and morphological plasticity induced by chronic treatment with NT-3 or NT-4/5 in hippocampal slice cultures. *Eur J Neurosci.* 2002;16(10):1939-1948.
- Abegg M, Hafezi F, Wenzel A, Grimm C, Remé CE. [Therapeutic strategies in RP (retinitis pigmentosa): light at the end of the tunnel?] *Klin Monbl Augenheilkd.* 2000;216(2):83-89.
- Hafezi F, Grimm C, Wenzel A, Abegg M, Yaniv M, Remé CE. Retinal photoreceptors are apoptosis-competent in the absence of JunD/AP-1. *Cell Death Differ.* 1999;6(10):934-936.
- Hafezi F, Abegg M, Grimm C, et al. Retinal degeneration in the rd mouse in the absence of c-fos. *Invest Ophthalmol Vis Sci.* 1998;39(12):2239-2244.

### Book chapter

- Abegg M. *Retrograde maculopathy*. In: Optical coherence tomography in multiple sclerosis (pp.151-159). Springer (2015).
- Hafezi F, Abegg M, Remé Ch.E *Light damage in the eye. An overview.* edited by: C.Erb/ J.Flammer *Risk factors for eye diseases.* Verlag Hans Huber (1998).
- Abegg M and Barton J *Visual Dysfunction From Lesions of the Cerebral Cortex* Book chapter for Duane's Ophthalmology, Lippincott Williams & Wilkins

### Accreditation

[Swiss Visio Siloah](#)

[Swiss Visio](#)

## Specialties

[Ophthalmology](#)

[Strabismus \(squint\)](#)

[Eye surgery](#)

## Contact

### **Swiss Visio Siloah**

Worbstrasse 316

3073 Gümligen

T +41 31 958 11 11

[siloah@swissvisio.net](mailto:siloah@swissvisio.net)

[www.swissvisio.net](http://www.swissvisio.net)

[Download vCard](#)

### **ONOVIS**

Bollwerk 19

3011 Bern

T +41 31 311 15 55

[onovis@hin.ch](mailto:onovis@hin.ch)

<https://www.onovis.ch/>

[Download vCard](#)