

Curriculum vitae

Dr rer. nat. Martina Kropp

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PERSONAL DATA

Name	Kropp
Forename	Martina
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Date of Birth	September, 6 th , 1976
Place of birth	Kiel, Germany
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PROFESSIONAL BACKGROUND

2018-present	<i>Maître Assistant</i> and Project Manager of the Laboratory of Experimental Ophthalmology (lead: Prof. G. Thumann), University and University Hospitals of Geneva (UNIGE and HUG), Dept. of Ophthalmology, CH, director: Prof. G. Thumann
2014-2017	Post-doctorant, PhD, Project Manager of the Laboratory of Experimental Ophthalmology (lead: Prof. G. Thumann), University and University Hospitals of Geneva (UNIGE and HUG), Dept. of Ophthalmology, CH, director: Prof. G. Thumann
2012 - 2014	Research assistant, Project Manager of the Laboratory of Experimental Ophthalmology (lead: Prof. G. Thumann), UNIGE and HUG, Dept. of Ophthalmology, CH, director: Prof. F. Hafezi
2012	Research assistant, UKA, Dept. of Ophthalmology, DE, director: Prof. P. Walter
2009 – 2011	Research Assistant (PhD student), Heinrich-Heine Universität and Universitätsklinikum Düsseldorf (HHU and UKD), Dept. of Cardiology, Pulmonary Diseases and Vascular Medicine, DE, director: Prof. M. Kelm
2007 - 2009	Research Assistant (PhD student), UKA, Dept. of Cardiology, Pulmonary Diseases and Vascular Medicine, DE, director: Prof. M. Kelm
2007	Fellow, UKA, Dept. of Pathology, Group of PD Dr rer. nat. S. Neuss-Stein, DE
2006	Research assistant (Diploma student), RWTH Aachen University, Institute for Biology II, DE, director: Prof. H. Wagner
2000 - 2006	Student Assistant, behavioural experiments with seals, University of Cologne, DE; behavioural experiments with barn owls, supervision of practical courses and programming with „Igor“, RWTH Aachen University, Institute for Biology II, DE

FORMATION

2019	Formation sur “Les Bonnes Pratiques Des Essais Cliniques”, CRC, HUG/UNIGE, CH
2018	Internship about “Culture of embryonic stem cells”, Prof. Z. Izsvák, MDC, Berlin, DE

Curriculum vitae

2018	workshop "Isolation Techniques in Advanced Therapy Applications", Lausanne, CH, organized by EuroClone, IT
2014	PhD Thesis: "Impact of Inorganic Nitrate in Cardiovascular Ischemic Disease", directed by Prof. H. Wagner, RWTH Aachen University, DE
2014	Qualification to direct animal experiments, University of Zurich, Institute of Laboratory Animal Science, CH: LTK module 2 "Training for Persons Responsible for Directing Animal Experiments" (equivalent to FELASA C)
2012	GCP-Schulung für Prüfärzte (GCP cours for investigators)
2012	FELASA B Training "Laboratory Animal Science and Methods of Animal Experimentation", UKA, Institute for Laboratory Animals, DE
2010- 2012	Selma-Meyer-Wiss Mentoring program, HHU, Büro der Gleichstellungsbeauftragten, DE
2010	Qualification for use of the LDPI & LDPM devices, Perimed Stockholm, SE
2010	Certificate in „Project management for scientific research“, HHU, Bildungszentrum, DE
2010	„Fachkundenachweis gemäß §9 des geltenden Tierschutzgesetzes“ (certificate of knowledge according to §9 of valid animal protection act), HHU, Tierversuchsanstalt, DE
2006	Diploma Thesis, directed by Prof. H. Wagner, RWTH Aachen University, Institute for Biology II, DE
1998 – 2006	Study of Biology, RWTH Aachen University, DE

TEACHING

Pre-graduate

2018-present	Enrolled for WS2018/2019: practical course " <i>In vitro</i> techniques for cell culturing and viability measures" and the lectures "Gene therapy – Science fiction becomes reality" and "Stem cells – a hope for future or horror scenario?"
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Post-graduate

2017-present	Scientific Supervision of Mr. S. Tobalem (MD thesis), UNIGE, Dept. of Ophthalmology CH
2016-present	Scientific Supervision of Mr. M. Kecik (MD thesis), UNIGE, Dept. of Ophthalmology CH
2016	Scientific supervision of M.Sc. C. Leroy (Master thesis), UNIGE, Dept. of Ophthalmology, CH
2014-2017	Scientific supervision Ms. S. Tian (MD thesis), UNIGE, Dept. of Ophthalmology, CH
2012-2018	Scientific supervision of Ms. L. Schwerm (MD thesis), UKA, Dept. of Ophthalmology, DE
2012-2017	Scientific supervision of Ms. K. Morawa (MD thesis), UKA, Dept. of Ophthalmology, DE
2009 - 2011	Scientific supervision of Dr A. Schicho (MD thesis), HHU and UKD, Dept. of Cardiology, Pulmonary Diseases and Vascular Medicine, DE
2008 - 2012	Scientific supervision of Dr M. Niessen (MD thesis), UKA, Dept. of Cardiology, Pulmonary Diseases and Vascular Medicine, DE
2008 - 2012	Scientific supervision & examination of M.Sc. D. Lou (Master thesis), UKA, Dept. of Cardiology, Pulmonary Diseases and Vascular Medicine, DE
2000 – 2006	Supervision of practical courses: „Tierphysiologisches Grundpraktikum“ and „Morphologie & Anatomie der Tiere“, RWTH Aachen University, Institute for Biology II, DE

REVIEWER

- Antibiotics
- Toxins
- Journal of Infectious Diseases Diagnosis and Treatment
- Polymers
- International Journal of Molecular Science
- Cells
- Current Trends in Ophthalmology and Visual Sciences
- Journal of Clinical Medicine
- Genes
- Ophthalmology Research and Reports

MEMBERSHIPS

- European Society of Gene & Cell Therapy
- Association for Research in Vision and Ophthalmology
- International Society for Stem Cell Research
- Schweizerischen Gesellschaft für Versuchstierkunde, SGV

COMMITTEES

- Cantonal Ethical Commission for Research (*Commission cantonale d'éthique de la recherche, CCER*)

LIST OF RELEVANT PUBLICATIONS

Peer-reviewed articles

1. Hernandez M, Recalde S, Garcia-Garcia L, Bezunartea J, Johnen S, Diarra S, Marie C, Izsvák Z, Ivics Z, Miskey C, Scherman D, **Kropp M**, Prosper F, Thumann G, Fernandez-Robredo P, Garcia-Layana A. Anti-angiogenic non-viral gene therapy using the Sleeping Beauty transposon system inhibits neovascularization in a rat model of choroidal neovascularization. *EMBO J.* prepared. [IF 10.557]
2. **Kropp M**, Mihov G, Morawa K, Diarra S, Harmening N, Bautzová T, Kecik M, Bascuas-Castillo T, Johnen S, Thies J, Thumann G. (2018) Long term *in vitro* and *in vivo* biocompatibility and bio-erosion of poly(ester amide) (PEA) fibrils as ophthalmic drug delivery system. *Materials.* In preparation.[IF 2.654]
3. Tobalem S, Weinberger A, **Kropp M**, Jacquier P, Malcles A, Souteyrand G, Thumann G. (2018) CHORIORETINAL TOXICITY OF THE PERFLUOROCTANE ALA OCTA- Results from 48 surgical procedures. *AJO.* 2018. prepared. [IF 5.5052]
4. Pastor M, Johnen S, Harmening N, Quiviger M, Pailloux J, **Kropp M**, Walter P, Ivics Z, Izsvák Z, Thumann G, Scherman D, Marie C. (2018) The antibiotic-free pFAR4 vector paired with the *Sleeping Beauty* transposon system mediates efficient transgene delivery in human cells. *Molecular Therapy Nucleic Acids.* 11:57-67. [IF 5.048]
5. Garcia-Garcia L, Recalde S, Hernandez M, Bezunartea J, Rodriguez-Madoz JR, Johnen S, Diarra S, Marie C, Izsvák Z, Ivics Z, Scherman D, **Kropp M**, Thumann G, Prosper F, Fernandez-Robredo P, Garcia-Layana A. (2017) Long-Term PEDF Release in Rat Iris and Retinal Epithelial Cells after Sleeping Beauty Transposon-Mediated Gene Delivery. *Mol Ther: Nucleic Acids* 9: 1-11. [IF 5.048]
6. Stolba U, Ansari-Shahrezaei S, Hagen S, Stattin M, Schmid S, **Kropp M**, Harmening N, Thumann G, TargetAMD Group. (2017) Neovascular age-related macular degeneration in Austria Expert review and introduction to the TargetAMD approach. *Spektrum der Augenheilkunde.* 21st July 2017:pp1-6 [IF 0.177]
7. Thumann G, Harmening N, Prat-Souteyrand C, Marie C, Pastor M, Sebe A, Miskey C, Hurst LD, Diarra

- S, **Kropp M**, Walter P, Scherman D, Ivics Z, Izsvák Z, Johnen S. (2017). "Engineering of PEDF-Expressing Primary Pigment Epithelial Cells by the SB Transposon System Delivered by pFAR4 Plasmids." *Mol Ther: Nucleic Acids* 6:302-314. [IF 5.048]
8. Johnen S, Djalali-Talab Y, Kazanskaya O, Moller T, Harmening N, **Kropp M**, Izsvák Z, Walter P, Thumann G. (2015). "Antiangiogenic and Neurogenic Activities of Sleeping Beauty-Mediated PEDF-Transfected RPE Cells In Vitro and In Vivo." *Biomed Research International*. Article number: 863845; DOI: 10.1155/2015/863845 [IF 1.579]
 9. **Kropp M**, Morawa K, Mihov G, Salz A, Harmening N, Franken A, Kemp A, Dias AA, Thies J, Johnen S, Thumann G. (2014). Biocompatibility of Poly(ester amide) (PEA) Microfibrils in Ocular Tissues. *Polymers*. 6:243-260 [IF 3.364]
 10. Hendgen-Cotta UB, Lüdi P, Totzeck M, **Kropp M**, Schicho A, Stock P, Rammos C, Niessen M, Heiss C, Lundberg JO, Weitzberg E, Kelm M, Rassaf T. (2012). Dietary Nitrate Supplementation Improves Revascularization in Chronic Ischemia. *Circulation*. 126(16): 1983-92 [IF 19.309]
 11. Kehmeier ES, Lepper W, **Kropp M**, Heiss C, Hendgen-Cotta UB, Balzer J, Neizel M, Meyer C, Merx MW, Verde PE, Ohmann C, Heusch G, Kelm M, Rassaf T. (2012). TNF- α , myocardial perfusion and function in patients with ST-Segment elevation myocardial infarction and primary percutaneous coronary intervention. *Clin Res Cardiol*. 101(10): 815-27 [IF 4.760]
 12. Kehmeier ES, **Kropp M**, Kleinbongard P, Lauer T, Balzer J, Merx MW, Heusch G, Kelm M, Lepper W, Rassaf T. (2008). Serial measurements of whole blood nitrite in an intensive care setting. *Free Radical Biology & Medicine*. 44(11): 1945-50. [IF 5.606]

Citable Abstracts:

13. Thumann G, **Kropp M**, TargetAMD consortium. tIPE – a GMP-grade non-viral gene therapy medicinal product (GTMP) to treat neovascular age-related macular degeneration (nvAMD). Molecular Therapy. ASGCT 22nd Annual Meeting, April 29 - May 2, 2019 in Washington, DC, USA. Meeting Abstract: #674.
14. **Kropp M**; et al. Challenges in GTMP process validation for a non-viral gene therapy. *IOVS* (2018) 59(9):4543.
15. Fernandez P; ...; **Kropp M**; et al. Efficient choroidal neovascularization reduction by Sleeping Beauty Transposon-mediated PEDF gene delivery in rat iris and retinal pigment epithelial cells by using a clinical electroporator. *IOVS* (2018) 59(9):223-
16. **Kropp M** et al. Development of GMP-compliant production of freshly isolated and transfected iris pigment epithelial (IPE) cells to treat age-related macular degeneration (AMD). *Human Gene Therapy* (2017) 28(12): A126.
17. Thumann G and **TargetAMD consortium**. Transposon-based, targeted ex vivo gene therapy to treat age-related macular degeneration – a summary of the pre-clinical data. *ESGCT and DG-GT annual congress* (Oct 2017), Berlin, Germany.
18. **Kropp M** et al. Process validation of a GMP-grade Advanced Therapy Medicinal Product for a Cell-Based Gene Therapy. *SOG annual congress* (Sept 2017), Davos, Switzerland.
19. **Kropp M** et al. Safety studies for cell-based gene therapy (TargetAMD project): in vivo exclusion of tumorigenicity and proof of cell product quality. *Human Gene Therapy* (2016) 27(11): A120-A120.
20. **Kropp M** et al. Results of a biodistribution study of Venus transfected pigment epithelial cells transplanted subretinally in rabbits. *IOVS* (2016) 57(12).
21. Harmening N,..., **Kropp M** et al. Translation of GLP-grade electroporation of primary pigment epithelial cells to GMP-grade GTMP manufacturing for clinical use. *Human Gene Therapy* (2016) 27(11): A108-A108.
22. Harmening N,..., **Kropp M** et al. Optimized Non-Viral Transfection of human RPE and IPE cells used for a Gene-Therapeutic Treatment of neovascular AMD. *IOVS* (2016) 57(12).
23. Prat-Souteyrand C,..., **Kropp M** et al. Human PEDF optimized gene for transposon-based gene therapy to treat age-related macular degeneration. *IOVS* (2016) 57(12).
24. Thumann G, **Kropp M** et al. Transposon-based, targeted ex vivo gene therapy to treat age-related macular degeneration: the TargetAMD project. *Human Gene Therapy* (2016) 27(11): A123-A123.
25. **Kropp M** et al. Over-expression of PEDF by PEDF-transfected primary pigment epithelial cells does not induce tumorigenicity. *Human Gene Therapy* (2015) 26(10): A81-A81.
26. **Kropp M** et al. pFAR4 miniplasmids in combination with the Sleeping Beauty transposon system allow

- efficient transfection of freshly isolated iris pigment epithelial cells. *IOVS* (2015) 56(7):2316.
27. Prat-Souteyrand C,..., **Kropp M et al.** Stable genomic integration of PEDF in primary pigment epithelial cells transfected with the *Sleeping Beauty* transposon system to treat age-related macular degeneration (AMD). *Human Gene Therapy* (2015) 26(10): A80-A80.
 28. Scherman D,..., **Kropp M et al.** The use of mini-plasmids free of antibiotic resistance markers for a gene therapeutical approach to treat AMD. *1st world Congress on Electroporation* (2015) Portoroz, Slovenia.
 29. Thumann G, **Kropp M et al.** Transposon-Based, Targeted Ex Vivo Gene Therapy to Treat Age-related Macular Degeneration. *IOVS* (2015) 56(7):1820.
 30. Harmening N, **Kropp M et al.** The use of mini-plasmids free of antibiotic resistance markers for a gene therapeutical approach to treat AMD. *IOVS* (2015) 56(7).
 31. Thumann G,..., **Kropp M et al.** Safety Strategies in Transposon-Based Plasmids for Gene Therapy. *Meeting of the Club Jules Gonin* (2014), Zürich, Switzerland.
 32. **Kropp M et al.** Transfection of freshly isolated pigment epithelial cells with pFAR4 miniplasmids using the *Sleeping Beauty* (SB100X) transposon system. *Human Gene Therapy* (2014) 25(11): A106-A106.
 33. Thies J,..., **Kropp M et al.** Slow-release latanoprost delivery by DSM's injectable PEA microfibers. *Annual meeting of the Association for Research in Vision and Ophthalmology* (2014). Orlando, Florida, USA.
 34. Harmening N,..., **Kropp M et al.** Use of Sleeping Beauty Transposase mRNA for Safe and Efficient Gene Delivery in Pigment Epithelial Cells. *Human Gene Therapy* (2013) 24(12): A59-A59.
 35. Thumann G,..., **Kropp M et al.** Slow-release intraocular drug delivery by injectable PEA microfibrils. *Annual meeting of the Association for Research in Vision and Ophthalmology* (2013), Seattle, Washington, USA.
 36. **Kropp M et al.** Stammzellen der Retina und des retinalen Pigmentepithels. 110 Annual Meeting of the DOG (2012), Berlin, Germany.
 37. Kehmeier ES, **Kropp M et al.** TNF- α and Myocardial Perfusion and Function in Patients with ST-Segment Elevation Myocardial Infarction and Primary Percutaneous Coronary Intervention. *78th Annual Meeting of the German Cardiac Society* (2012), Mannheim, Germany.
 38. **Kropp M et al.** Dietary nitrate mobilizes circulating angiogenic cells (Endothelial-regenerating cells) and exerts cytoprotective and angiogenic effects in the ischemic hind limb model in mice. *77th Annual Meeting of the German Cardiac Society* (2011), Mannheim, Germany.

Other articles:

39. Thumann G, **Kropp M et al.** Gentherapie statt Avastin und Co. bei AMD. *Ophthal Nachrichten* (2015). 4:12.
40. **Kropp M et al.** Gentherapie zur Behandlung der nAMD: das TargetAMD-Projekt. *Der Augenspiegel* (2016) 01/2016; 50-52.