

Methodology

Our research lab uses standard molecular & cellular biological techniques (e.g. qPCR, arrays, Western, cell culture, FACS) and apply these towards translational research. We integrate this with clinical diagnostics (e.g. bio-microscopy, scanning laser ophthalmoscopy, optical coherence tomography, electroretinography, adaptive optics, functional MRI) and state of the art microsurgical techniques in animal models and human patients.

Current Research

- Phase I/II clinical gene therapy trial for CNGA3 based achromatopsia: We lead this first in man clinical trial and contribute to the regulatory and pre-clinical aspects of gene therapy for achromatopsia since 2012. This work is part of the RD-CURE consortium.
- Phase II clinical gene therapy trial for choroideremia: We lead this clinical gene therapy trial as trial center for continental Europe as part of an international multi-center effort.
- Phase I/II clinical gene therapy trial for PDE6A based Retinitis Pigmentosa. Trial is expected to run throughout 2018. This work is part of the RD-CURE consortium.
- Pre-clinical development of gene therapy for RPGR based Retinitis Pigmentosa.
- Immunology of AAV-based retinal gene therapy.
- In vitro assays for gene therapy development.
- Functional MRI in patients with retinal disorders.

Contact

Institute for Ophthalmic Research Translational Research in Ophthalmology

Head: Prof. Dr. Dr. Dominik Fischer

University of Tübingen
Centre for Ophthalmology

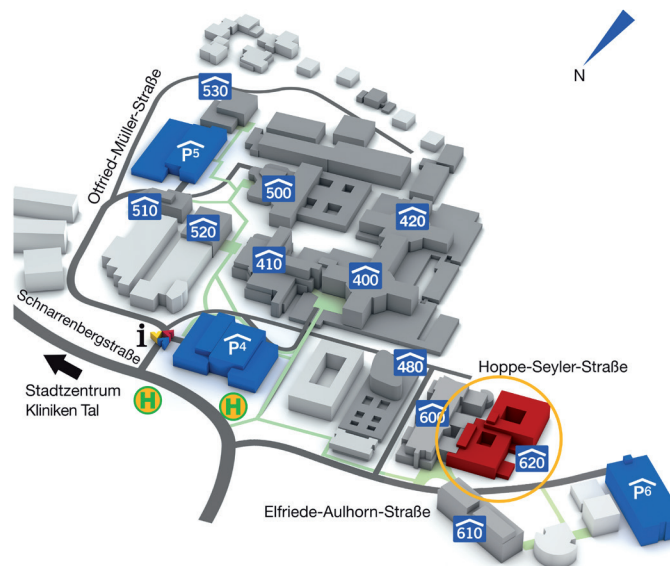
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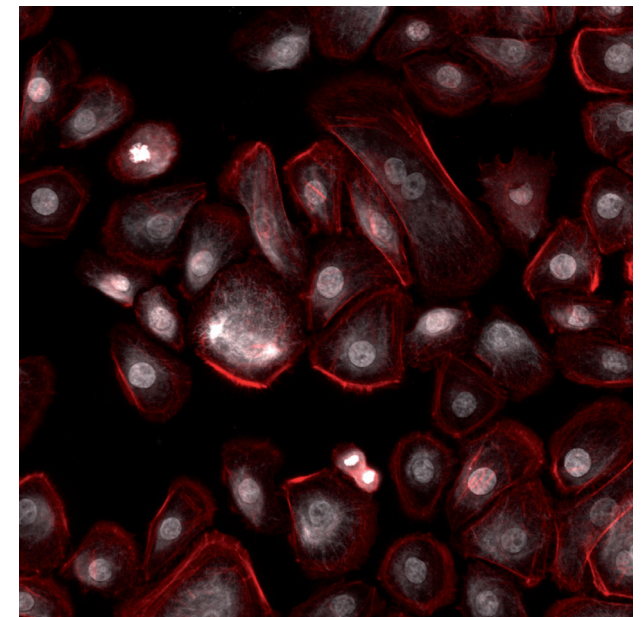
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How to find us:



Fischer Lab Translational Research in Ophthalmology





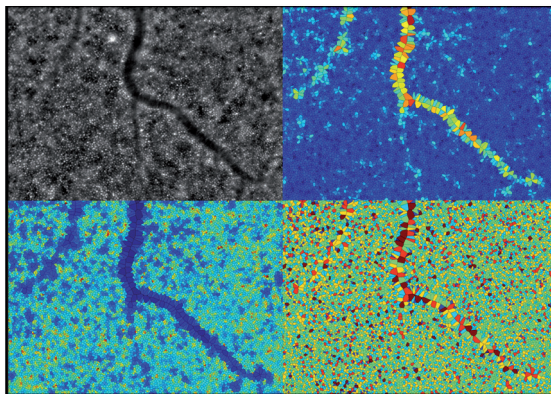
Our group aims to bring promising new therapies to patients with retinal disorders. Genetic and environmental factors can cause retinal dysfunction as well as structural damage in the eye and lead to significant morbidity in an aging population. Our mission is therefore to understand disease processes leading to blindness, developing treatment strategies and testing promising candidate treatments in clinical trials.

As clinician-scientists we test in vitro disease models, observe animal models in vivo and conduct clinical trials to more precisely understand the disease process in our patients.



M. Dominik Fischer

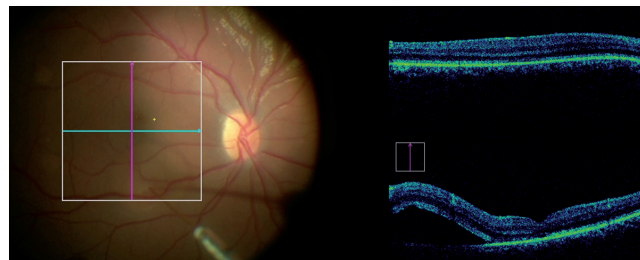
- Professor, Dr. med. Dr. phil.
- Group Leader, Professor of Ophthalmology



We use a patient-centred, integrative approach to find new therapeutic options and define relevant outcome measures for pre-clinical and clinical trials.



In line with our current focus on developing and optimising gene therapies for hereditary retinal disorders, our lab leads the world's first clinical gene therapy trial for achromatopsia (NCT02610582) as part of the RD-CURE consortium and the first gene therapy trial for choroideremia in Germany (NCT02671539).



Research toSee

The Institute for Ophthalmic Research

Seeing is an essential part of human life. As a leading centre for vision research we conduct rigorous research in order to break new ground in understanding the principles of vision and the mechanisms of blinding diseases. We are confident that this research will enable us to rationally develop effective treatments that ultimately retain or restore vision.

Within the Center for Ophthalmology at the University of Tübingen Medical Centre, we and our colleagues at the University Eye Hospital jointly strive for scientific excellence, for speed in translating the advancements into patient's benefit, and for training and mentoring the next generation of leaders in our field.

As leaders and partners in multi-national collaborations, we work for continuous strengthening our ties to fellow international scientists in the public and private sector and to foundations, industry and patient organizations.

As an integral part of Tübingen's biomedical and neuroscience campus, we offer a scientific environment that favors creativity for generating ground-breaking ideas, their transfer into reality and their translation into diagnostics and therapy to help those that suffer from vision loss.