As a modern maximum-care hospital with a capacity of approximately 1,540 beds, the University Hospital of Cologne is dedicated to the practice of innovative academic medical excellence and assumes important societal functions in the fields of research, education and health care. The University Hospital of Cologne provides treatment to over 340,000 patients annually, with 60,300 of them receiving inpatient care. With more than 10,700 employees from over 80 nations the University Hospital of Cologne is one of the largest employers in Cologne and ranks among the leading university clinics in Germany.

The Research Unit FOR 2240 “Angiogenesis, Lymphangiogenesis and Cellular Immunity in Inflammatory Diseases of the Eye” in the Department of Ophthalmology at the University Hospital of Cologne is seeking applications for full-time

Postdoc (f/m/x)
“Role and therapeutic potential of autophagy-related mechanisms in UV-induced blinding ocular stem cell disorders”

to be employed under a 24 month limited-time contract (WissZeitVG). The position is within the CMMC Framework (CMMK).

The FOR 2240 aims to better understand the pathogenesis of a diverse range of sight-threatening, immune-mediated, inflammatory and age-related diseases of the eye. This successful research unit is funded by the German Research Foundation (DFG). All seven projects in the unit currently work to achieve translationally relevant results and are supported by two additional central projects (management and imaging).

Project Specifics:
Due to their position, LESC are exposed to UV irradiation, which can damage their niche and function. Increased levels of autophagic activity within the basal limbal epithelium indicate that LESC employ autophagy to repair damage accumulating during their long cycle. Pterygium, a tumour of the conjunctiva which grows onto the cornea impairing vision is linked to UV-induced LESC damage. We have previously reported that LESC differentiate under UV exposure, leading to a pro-inflammatory shift in their niche. Pterygium is linked to reduced autophagy via mTORC1 in the epithelium which boosts proliferation and causes aberrant apoptosis. The direct involvement of the LESC in pterygium pathogenesis via this mechanism is unclear. Therefore, we aim to: 1. elucidate the molecular mechanisms by which autophagy affects the maintenance of ABCB5-positive LESC phenotype and how these change in pterygium and 2. unravel if and how UV light damages ABCB5-positive LESC via reduction of autophagic activity. A better understanding of the autophagic activity mechanisms exerted by LESC and their damage by UV light will open the way to new treatment options in the form of mTOR inhibitors against UV-related stem cell disorders in the eye and beyond.

Your responsibilities will include:

• Postdoc: Design and perform experiments using cell and molecular biology techniques in the project-related area, evaluate data, and assist in imaging analysis (immunofluorescence, confocal, FACS analysis)
• Present and publish the findings under the close guidance of the project leaders

Minimum qualifications:

• PhD in a related area (Ophthalmology, Stem Cells, Molecular Biology)
We offer:

- Excellent laboratory facilities, excellent opportunities for international scientific networking on the Cologne Life Sciences campus, and specific support for female scientists

Your salary will be based on TV-L.

Applications from female candidates are expressly welcome and will be given priority in the event of equal suitability, competence and professional performance.

People with disabilities are welcome to apply and will be treated preferentially in the event of equal suitability and qualification.

The position is suitable for staffing with part-time employees.

Please address telephone enquiries to Dr. Maria Notara and Sabrina Weber at +49 221 478-32785/-32845.

Further information is available at Augenklinik and For 2240.

Have we been able to spark your interest? If so, please send your informative and full application using the on-line form on our "Careers" by 1. March 2020

We prefer on-line applications as they accelerate the application process. If applying on-line should not be feasible for you, obviously, you can send in your application by surface mail. In that case please address your application to:

Uniklinik Köln
Geschäftsbereich Personal
BewerbungsManagement
Number of job posting: 00001540
50924 Köln