



**UNIKLINIK
KÖLN**



Universität
zu Köln



Medizinische Fakultät

MAX PLANCK INSTITUTE
FOR BIOLOGY OF AGEING



The Department of Molecular Genetics of Ageing at the Max Planck Institute for Biology of Ageing and the Department II of Internal Medicine, University Hospital of Cologne, are looking for medical students for comprehensive experimental theses.

Doctoral Theses for MD Students (m/f/d)

This project aims to establish biomarkers of ageing. Despite the constantly changing demographics towards an aged population, the ageing process is not yet well understood. Particularly, no easily accessible biomarker of ageing has been established so far. We seek to transfer our knowledge gained from experiments in the nematode *C. elegans* to mouse models and human samples. Therefore, we have already established a mouse model as well as several patient cohorts to study potential biomarkers. Currently, these models need in depth characterisation and optimization of methodology before large cohorts will be analysed in a high-throughput fashion.

Your tasks may include:

- Application of methods frequently used in basic research, such as western blotting, PCR, cell culture and sequencing among others.
- Histology of different mouse tissues making use of our well-equipped histology lab.
- Detailed characterisation of murine cells and tissue using Immunofluorescence. This may include independent use of state-of-the-art confocal microscopes.
- Translational approaches such as extracting immune cells from patient samples. This may include performing flow cytometry on patient samples.

Your profile:

- Good communication skills in English for any lab work.
- Motivation to acquire new skills and to interact in a scientific environment.
- Preferably 12 months full-time for experimental lab work (scholarship applications supported).
- Previous experiences in laboratory work are welcome but not a prerequisite.

Our offer:

- Direct interaction with Prof. Adam Antebi, research group leader and director at the Max Planck Institute for Biology of Ageing.
- Teaching of both basic and advanced methodology. This will enable independent work on experiments and the acquisition of skills that can be transferred to any future scientific lab work regardless of the specific research field.
- Work in a highly international research group and participation in lab meetings, journal clubs and conferences.
- Access to Core facilities such as FACS&Imaging, Metabolomics, Proteomics and Bioinformatics.
- Participation in training courses covering a wide range of topics offered by the Max-Planck-Academy.

For further questions, please do not hesitate to contact us or send an application with a CV and letter: Joachim Steiner (joachim.steiner@age.mpg.de). Website: www.age.mpg.de/science/research-laboratories/antebi