Weidinger lab at the Institute of Biochemistry and Molecular Biology

PhD “Role of elevated anti-aging mechanisms in zebrafish heart regeneration”

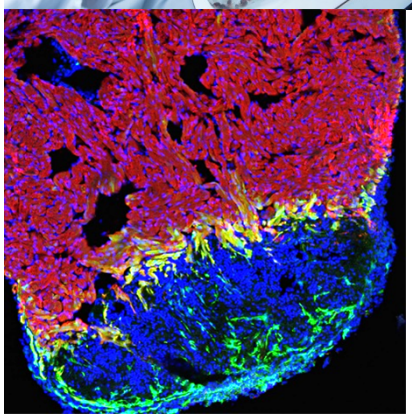
Zebrafish can completely regenerate heart injuries. Surprisingly, we have found that they need to overcome replication stress, which limits regeneration in aged mammals, to regenerate the cardiomyocytes (*Vasudevarao et al., **Nature Communications** 2025*). The project will study whether regeneration of the endocardium requires BMP signaling-mediated alleviation of replication stress as well. It will use transgenic and genetic manipulations of BMP signaling, combined with immunofluorescence and confocal microscopy, cell sorting and bulk and single cells RNASeq to uncover the underlying molecular mechanisms. The project will thus confirm and extend the exciting principle that the enormous regenerative abilities of zebrafish depend on elevated anti-aging mechanisms. See https://www.uni-ulm.de/med/med-biomolbio/research-groups/weidinger/open-positions-weidinger-lab/ for more information.

We are looking for a highly motivated scientist (f/m/d) who is dedicated to performing fundamental research.

We expect:

- Training in developmental biology, molecular biology, cellular biology or related fields.
- Enthusiasm for regenerative biology.
- Excellent communication skills in spoken and written English.

Applications including a CV, a statement of research experience and interests (max. 2 pages) and contact data for 2-3 references should be emailed to Prof. Dr. **Gilbert Weidinger,** gilbert.weidinger@uni-ulm.de until 31.7.2026.



Employment takes place through the administration department of the University Medical Center Ulm, which acts in the name and on behalf of the federal state of Baden-Württemberg. Handicapped people with equal qualifications will be employed preferentially. Ulm University strives for an increased proportion of women in research and teaching and therefore strongly encourages female qualified scientists to apply for the position. In general, full-time positions are divisible. A subsequent employment is possible.