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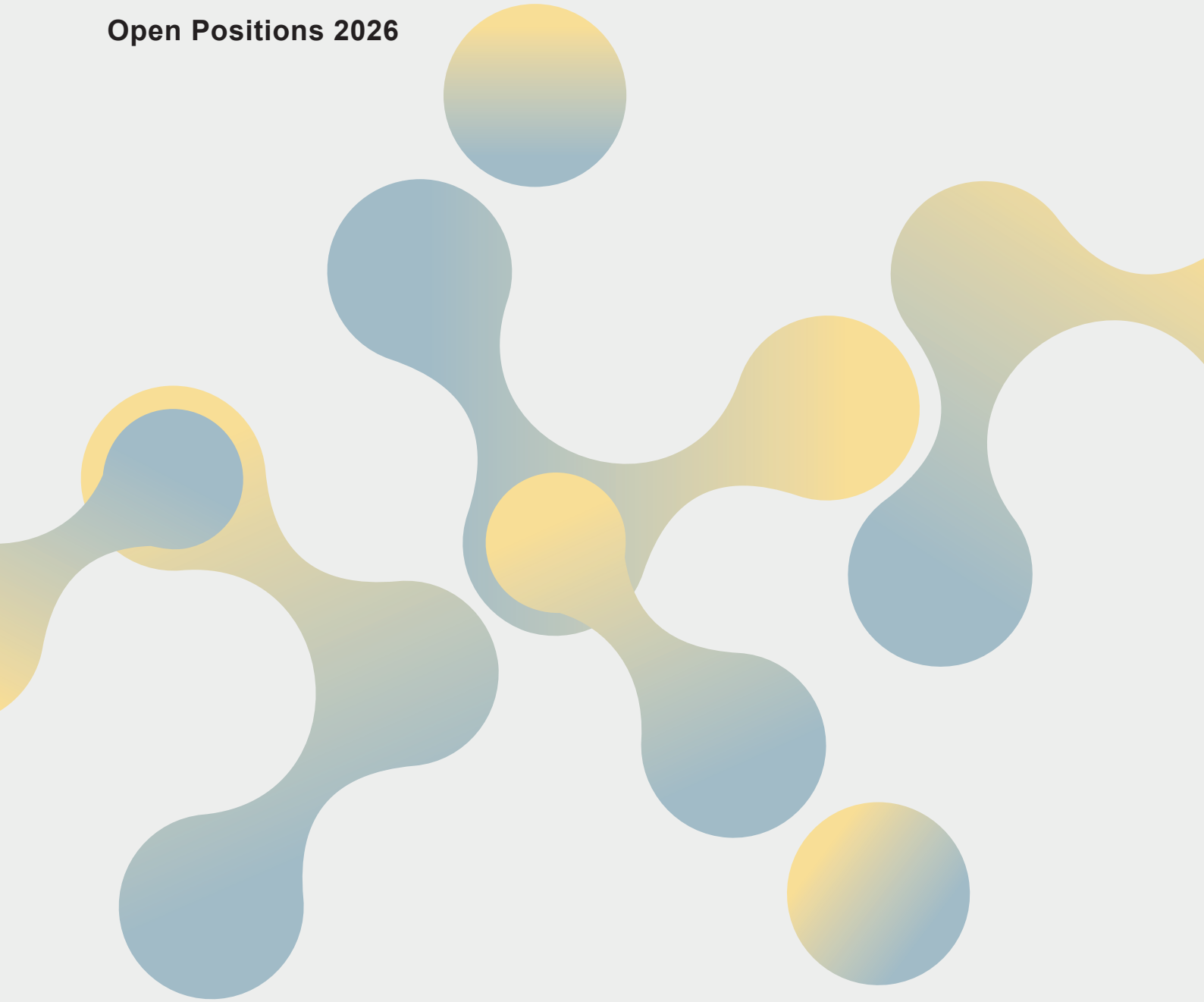
Collaborative Research Center 1506

Open Positions 2026



2nd Funding Period 07/2026 - 12/2029

ulm university universität ulm

Weidinger lab at the Institute of Biochemistry and Molecular Biology

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

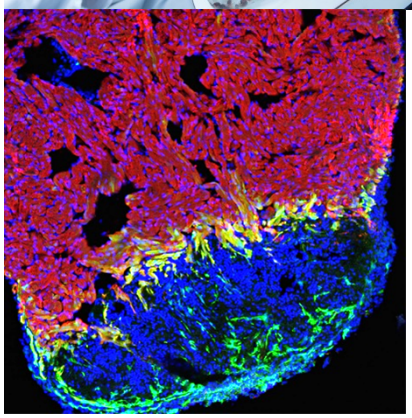
Zebrafish can completely regenerate heart injuries. Surprisingly, we have found that they need to overcome replication stress, which limits regeneration in aged mammals, to regenerate the cardiomyocytes (*Vasudevarao et al., **Nature Communications** 2025*). The project will study whether regeneration 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.

Riegger lab at the Division of Experimental Orthopedics

PhD “Impaired Mechanotransduction as a Potential Key Driver of Senescence-Related Bone Loss in the Aging Skeleton”

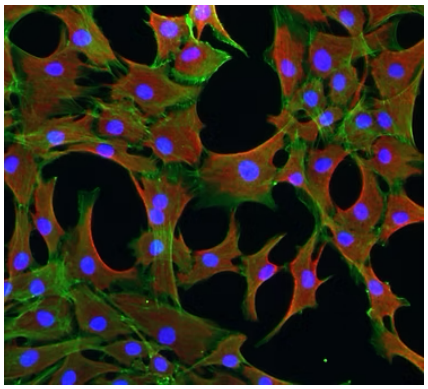
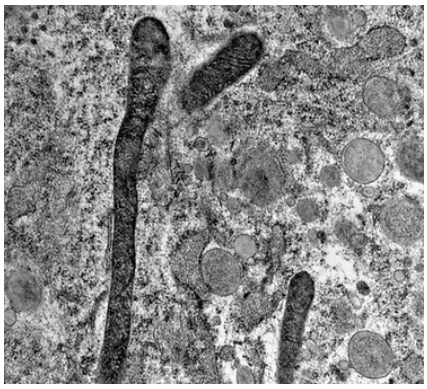
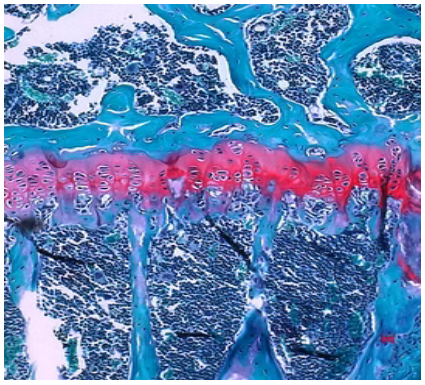
Aging increases the risk of osteoporosis by promoting senescence in bone cells, which release inflammatory SASP factors and lose their ability to sense mechanical load (Riegger *et al*., 2023. DOI: 10.1186/s11658-023-00489-y). Moreover, senescent osteoblasts are believed to impair bone formation and mechanosensitivity through paracrine signaling. The project will investigate how senescent osteocytes and osteoblasts disrupt mechanotransduction in aged bone and influence healthy bone cells via SASP factor secretion. As a therapeutic approach, different senolytic compounds will be tested to restore bone responsiveness to mechanical stimuli (Maurer *et al.,* 2025: DOI: 10.1111/acel.14361).
The project combines human and murine cell culture models, immunofluorescence and confocal microscopy, flow cytometry/ cell sorting, secretome analysis, gene expression analysis, and bulk RNASeq to uncover the underlying molecular mechanisms. The project will thus contribute to a better understanding of the pathomechanisms underlying age-related osteoporosis and will help to combat the disease through targeted senolytic therapies.

We are looking for a highly motivated scientist (f/m/d) who is dedicated to performing fundamental research with direct clinical relevance. During the first months, the successful candidate will be based at the University of Ulm and receive comprehensive training in the experimental techniques required for the project. Subsequently, the doctoral research will be continued at Friedrich-Alexander University (FAU) Erlangen-Nürnberg. Therefore, willingness to relocate to Erlangen is essential.

We expect:

- Training in molecular biology, cellular biology or related fields.
- Strong interest in aging, skeletal diseases, and translational biomedical research.
- 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 1-2 references should be emailed to PD Dr. Jana Riegger-Koch, jana.riegger@uni-ulm.de until 31.7.2026.

Open PhD Position

"Aging at the interface of placental trophoblasts, NK cells and endogenous retroviruses"

The research group "Mechanisms of Innate Antiviral Immunity" (Prof. Dr. D. Sauter) at the University Hospital Tübingen is looking for a

PhD student (f/m/d)

to investigate the interplay of human endogenous retroviruses (HERVs), immune activation, cellular senescence, and aging in the context of pregnancy-associated disorders. The PhD candidate will primarily investigate how HERV-driven mechanisms contribute to pregnancy complications, in particular preeclampsia (PE). PE is associated with impaired placental development, dysregulated immune responses, and accelerated maternal and fetal tissue aging. Recent data suggest that senescence-associated secretory phenotype (SASP) factors and aberrant trophoblast–NK cell interactions impair syncytiotrophoblast formation and placental function. The PhD project will help to understand how dysregulated immune-developmental programs trigger immunosenescence and accelerated aging in placental cells. Starting date is the second half of 2026.

Ideal candidates will be excited to do fascinating science together with an international team of highly cooperative and competent lab members. They will be creative, curious, highly motivated, and have a strong background in cell biology and immunology. Research experience in the fields of retrovirology, transposable elements, women's health or aging is a plus. Applicants can read, write and speak English fluently, have a strong ability to learn new techniques and to advance their scientific projects. We seek candidates with a strong interest in HERV biology and a desire to pursue a career in research.

Please send your application as a single pdf file to daniel.sauter@med.uni-tuebingen.de. Application deadline is July 15th 2026. Find out more about the research group via the following link: https://tinyurl.com/zw3y2mhv.

We offer remuneration in accordance with TV-L (collective wage agreement for the Public Service of the German Federal States) in addition to all the customary benefits granted to employees working in Public Services. Severely handicapped persons with equal qualifications are given preferential consideration. The University of Tübingen is anxious to increase its quota of female scientific staff, and therefore emphatically requests women to apply for this position. The Administration of the University Hospital is responsible for all employment matters. Personnel appointments will be made pursuant to the fundamental stipulations of the legal statutes for universities in Germany. Before taking up employment, proof of sufficient vaccination against measles or immunity against measles in accordance with § 23a in conjunction with § 20 Para. 9 of the Infection Protection Act must be provided (scope of application birth cohorts as of 01.01.1971). Interview expenses are not covered.

Position advertisement

The Grigoryan Lab (Stem Cell Niche & Aging Research Group) at the Institute of Molecular Medicine at Ulm University invites highly motivated and qualified applicants to apply for an open PhD position within the project funded by SFB 1506 “Aging at Interfaces”.

Type of employment: Temporary position (3 years), TV-L (EG 13) 65% contract
Start of employment: 01.09.2026, or by agreement
Application deadline: 31.07.2026

Project description

Bone fracture healing capacity is significantly impaired in the elderly, which can ultimately lead to morbidity and mortality. Aging of human skeletal stem and progenitor cells (SSPCs) is one of the causes of impaired bone regeneration in the elderly. The changes that occur in aged human SSPCs remain elusive. Our preliminary data suggest that changes in mechanical properties of cells may be one of the underlying causes of human SSPC aging. Using an advanced, aging-focused human bone organ model, we will investigate whether alterations in cell mechanical properties are the cause of SSPC aging and whether modulating cell mechanics leads to the rejuvenation of aged SSPC and thus to improved regeneration of aging bone. The long-term goal of the study is to create opportunities for the development of therapies to prevent or delay age-related bone diseases.

For more information on the advanced human bone model, please read:
A. Grigoryan *et al.*, Engineering human mini-bones for the standardized modeling of healthy hematopoiesis, leukemia, and solid tumor metastasis. *Sci Transl Med* **14**, eabm6391 (2022).

Your Profile

- Master’s degree in biological sciences (Biology, Biochemistry, Cell/Molecular Biology, Molecular Medicine) or related study programs, with a CGPA of 2.0 or better according to the German ranking system.
- Experience in mechanobiology and mouse experiments will be an advantage.
- Willingness to perform *in vivo* mouse experiments.
- Good English Language proficiency (written and spoken).
- Good planning and organisational skills and ability to work independently.

How to apply

Interested candidates that meet the above criteria are kindly requested to submit their applications (in English only) per email, complete with the following documents in PDF format.

- Curriculum Vitae
- Master’s Degree Certificate with Transcript of Records

Incomplete applications will not be considered for further processing. Send your application to Jun.-Prof. Dr. Ani Grigoryan (Email address: ani-1.grigoryan@uni-ulm.de)

The Dimou lab - Molecular and Translational Neuroscience – is offering a

PhD Position (f/m/d): Molecular Mechanisms of Myelin Regeneration and Brain Aging

Aging is associated with impaired myelin integrity, reduced oligodendrogenesis, and diminished microglial clearance, all of which contribute to cognitive decline and increased vulnerability to neurodegenerative diseases. Microglia and NG2-glia (oligodendrocyte progenitor cells, OPCs) are essential regulators of myelin maintenance and repair, yet both cell populations undergo age-related functional decline.
This PhD project aims to identify and validate molecular targets that enhance oligodendrocyte differentiation and myelin formation. Using human induced pluripotent stem cell (iPSC)-derived OPCs and oligodendrocytes, combined with single-nucleus RNA sequencing (snRNA-seq) analyses and targeted pharmacological or viral gene modulation, the project will investigate mechanisms that promote remyelination and restore myelin homeostasis during aging. The long-term goal is to uncover therapeutic strategies that preserve cognitive function and counteract age-related neurodegeneration.

Your Responsibilities

- Differentiate and culture human iPSC-derived OPCs and oligodendrocytes
- Perform and optimize cell-based assays to assess oligodendrogenesis and myelination
- Apply pharmacological and viral gene modulation approaches to validate candidate molecular targets
- Present research findings at lab meetings, conferences, and scientific workshops
- Contribute to scientific publications and collaborative research activities

We Are Looking For

We seek a highly motivated and enthusiastic PhD candidate with a strong interest in neuroscience and cellular mechanisms of brain aging.

Essential Qualifications

- Master's degree (or equivalent) in Neuroscience, Molecular Biology, Cell Biology, Biomedical Sciences, or a related discipline
- Strong interest in neurobiology, glial biology, and aging research
- Hands-on experience with mammalian cell culture and *in vitro* experimental techniques
- Excellent communication skills in spoken and written English
- Ability to work independently while contributing effectively to a collaborative research environment
- Strong organizational skills and a structured, reliable approach to scientific work

We Offer

- A fully funded PhD position with structured supervision and mentoring
- An exciting and interdisciplinary research project at the interface of neuroscience, aging, and regenerative medicine
- A supportive, collaborative, and international research environment
- Access to state-of-the-art facilities and training opportunities
- Opportunities for scientific networking, conference participation, as well as academic and industrial collaborations

- Career development support and professional training programs

Application

Please submit your application as a single PDF file including:

- A motivation letter describing your research experience and explaining why you are a suitable candidate for this project
- Curriculum vitae (CV)
- Copies of relevant academic degree certificates and transcripts
- Contact information for two academic references

to Prof. Dr. Leda Dimou, leda dimou@uni-ulm.de until July 15th.

PhD Position Available (m/f/d) – Stem Cell biology and aging

We're looking for a curious and driven **PhD student** to help uncover the metabolic mechanisms behind hematopoietic stem cell rejuvenation and push the boundaries of anti-aging research toward clinical translation.

If you're excited about the potential of hematopoietic stem cells, metabolism, and anti-aging, this is your chance to make an impact. Join us in unraveling the metabolic processes that enable hematopoietic stem cell rejuvenation. Help answer what is required to promote and sustain HSC rejuvenation at the metabolic level, and contribute to translating anti-aging strategies into clinical applications.

🎓 **Your profile**

- Master's degree in Life Sciences or a related field
- Strong interest in research and scientific curiosity
- Experience in flow cytometry, handling of mice and immunology is a plus
- Motivated, independent, and a team player
- Good English communication skills

💼 **What we offer**

- Fully funded **3 1/2-year PhD position (65% TV-L E13)**
- Mentorship by a young PI in a supportive environment
- Access to state-of-the-art facilities
- International and collaborative research atmosphere

- 📩 **Interested?**
  Send your application (CV, short motivation letter (max. 1 page), transcripts, contact details of 1–2 referees) to: mona.vogel@uni-ulm.de

Applications will be reviewed on a rolling basis — feel free to share!

#PhD #StemCells #Aging #Metabolism #ResearchJobs #LifeSciences