



**Open position at the Institute of Orthopaedic Research and Biomechanics  
University Medical Centre Ulm**

**PhD student position**

(65% TV-L / EG 13)

**Bone Regeneration after Fracture**

**Institute:** The overall goal of the research activities at the Institute of Orthopaedic Research and Biomechanics ([www.biomechanics.de](http://www.biomechanics.de)) is to better understand the pathomechanisms of musculoskeletal disorders and to develop novel therapeutic strategies. The institute is member of the **Collaborative Research Centre 1149 (CRC1149)** "Danger response, disturbance factors and regeneration after acute trauma". We rely on a broad spectrum of innovative methods, an interdisciplinary research approach, and extensive local, national and international cooperation to perform high quality research. The excellent scientific environment within the institute guarantees ideal working conditions.

**Project description:**

Within the above mentioned CRC1149 we offer a PhD project dealing with compromised bone regeneration after fracture. Impaired bone fracture healing in severely injured and in aged or diseased patients is a major clinical problem. However, the underlying molecular and cellular mechanisms are so far poorly understood. The project will focus on osteoporosis, a major bone health problem which is associated with an increased fracture risk and poor bone healing. We particular study the role of ROS and mitochondrial dysfunction. The broad spectrum of methods comprises innovative mouse models, cell culture work, molecular biology, histology as well as imaging techniques. The PhD student should join the International Graduate School of Molecular Medicine Ulm (IGradU).

**Start of the projects:** August 2023, duration: 3 years

**Candidates:** We are seeking an excellent candidate (**M.Sc. in biology, molecular medicine, biochemistry etc.**) with a strong motivation to address biological and medical questions interdisciplinary approaches. Experience in immunology and molecular biology are advantageous. Detailed applications containing CV, certificates, list of publications and references should be submitted until 31. July 2023 via [med.biomechanik@uni-ulm.de](mailto:med.biomechanik@uni-ulm.de).

**Further information:**

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