Universitätsklinikum Würzburg
Anstalt des öffentlichen Rechts

Department and Chair for Functional Materials
In Medicine and Dentistry

fmz
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Master‘s thesis (m/f): Investigation of in vitro macrophage polarization due to various scaffold geometries

One main challenge in the research field of tissue engineering is the development of 3-dimensional artificial tissue structures (scaffolds). Though, even today many implants fail because of the inner immune reaction. Fibrous capsule formation and foreign body reaction often prevent successful healing, thus clinical applications are not recommended. Our research starts right here. We develop biomaterials through *Melt Electro Writing* (MEW), which are supposed to promote healing due to their geometry and surface modification. Therefore it is necessary to investigate promising scaffolds *in vitro and in vivo* upon their reaction to the immune system. Aim of this Master's thesis is the cultivation of mouse macrophages on MEW scaffolds to gain evidence of enhanced macrophage polarization of the regenerative M2 type.

What we expect:
Enjoy working on new methods
Ability to work in teams
Independent and self-organized way of working

What we offer:
Accurate training and support in all relevant biological research methods
Cooperation in a young, dynamic research team

Start: From now on

Muskuloskelettales Centrum Würzburg