

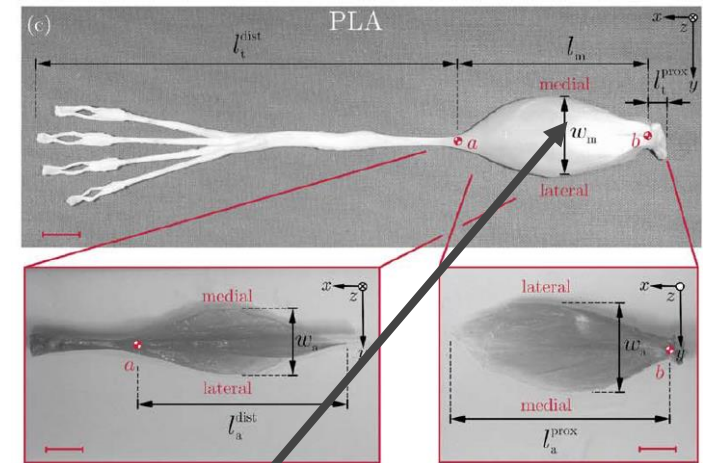
Experimental investigations and material modelling of the aponeuroses and tendons

✓ Bachelor- / Studien- / Masterarbeit

Skeletal muscle simulations, incorporating the active behavior of the total muscle, and the passive structural contribution of the tendon and the aponeuroses, require a comprehensive knowledge about the mechanical behavior and properties of each structural part. Especially the mechanical behavior of the aponeuroses, which is responsible for the load transfer between muscle and tendon, remains only briefly explored at the moment. To this end, in addition to mechanical tests on the aponeuroses and tendons of rabbit skeletal muscles, the collagen fibre distribution and dimensions of the aponeuroses need to be investigated to further establish a mechanical and structural motivated material law.

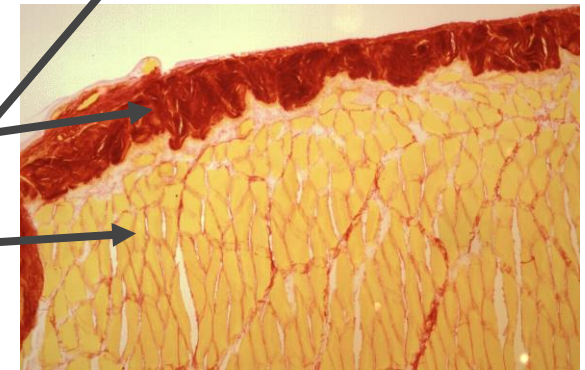
Possible Tasks:

- Uniaxial and biaxial testing
- Structural analysis of the aponeuroses
- Establishing a material model of the aponeuroses



Böl et. al. „Effects of growth on muscle, tendon and aponeurosis“, 2017

Aponeuroses
Muscle fibres
within matrix
(ECM)



Contact: M. Sc. Fabian Walter
f.walter@tu-braunschweig.de
Tel.: 391-8095, Room 010