

Project F: *Digitized antimicrobial biomaterials semantic knowledge base*

Participating researchers (PRs): M. Sierka (FSU), M. T. Figge (FSU)

Project description:

Computer-aided data processing in the field of biomaterial-associated infections (BAI) is still in its infancy. The lack of standardization as well as the lack of workflows for image data analysis have proven to be major obstacles to progress in this multidisciplinary research area.

We aim to overcome these obstacles by standardizing the computational analysis, integration and handling of experimental and simulated data suitable for in vitro situations and transferable to in vivo and clinical situations. This will be achieved by (i) developing a minimal information standard for the relevant data and implementing it in a semantic knowledge base and (ii) implementing automated analysis workflows for the objective quantification of image data generated for the comparative evaluation of BAI.

One computer scientist for developing the minimal information standard and semantic knowledge base, and one computer scientist for developing workflows of automated image analysis will work as a tandem team with the PRs on this project.

Doctoral researcher candidates apply for: “F: Digitized antimicrobial biomaterials semantic knowledge base (Sierka), Knowledge Base” or “F: Digitized antimicrobial biomaterials semantic knowledge base (Figge), Image Analysis” respectively.