



Fighting Biofilms

Biofilms at the surface of medical devices can be life-threatening. acib offers methods to understand the structure and functionality of biofilms in order to eliminate them.

BACKGROUND

Biofilm-associated implant-related, bone and joint infections are clinically important due to the extensive morbidity, cost of care and socioeconomic burden that they cause. Although research in the field of biofilms has expanded in the past two decades, there is a gap in translating this knowledge to prevent biofilm-associated infections.

TECHNOLOGY

In vitro models of biofilms allow the testing of antimicrobial susceptibility and the analysis of biofilm architecture, as well as the molecular behaviour. acib is able to investigate whether biofilms grow *in vitro* on metal discs and on microtiter plates. The evaluation of the biofilms formed on different surfaces is accessed by comparing the antibiotic susceptibility of the opportunistic pathogen *S. aureus* and by examining the structure of *S. aureus* biofilms grown by scanning electron microscopy (SEM). Several biomaterials can be tested in addition for biofilm growth and efficacy tests for biomaterials with antimicrobial properties. Also, biofilm-specific genes can be detected by molecular methods, like real time polymerase chain reaction (RT-PCR). By better understanding the pathogenesis of implant-infections it is possible to develop new diagnostic and treatment methods for device-related infections.



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OUR OFFER

acib offers to evaluate possible strategies for investigating biofilm-formation on your materials and products by advanced and proven methods. Once we have assessed how the problem can be tackled by our unique expertise, we will offer a comprehensive project plan for the realization of this method!

EXPERTS

Dr. Débora C. Coraça-Huber
Prof. Dr. Michael Nogler

AVAILABLE FOR

- Joint Research Project
- Contract Research
- RL

DEVELOPMENT STATUS

TRL 2-3

KEYWORDS

- Biofilm
- Infection
- Implant
- Prosthesis
- Antimicrobial Resistance

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