



Slow-growing anaerobic bacteria in implant-associated infections

Background

Implant-associated infections (IAIs) are one of the major reasons for implant failure after orthopedic surgery and result in high morbidity and mortality. The diagnosis and management of IAIs are challenging. Besides staphylococci other skin residents such as slow-growing Gram-positive anaerobic bacteria (SGAB) have also been found in IAIs. They may be underestimated since they are slow-growing and detection is hindered due to overgrowth of faster growing bacteria in polymicrobial infections. The assignment of SGAB as etiological agents of IAIs is thus challenging.

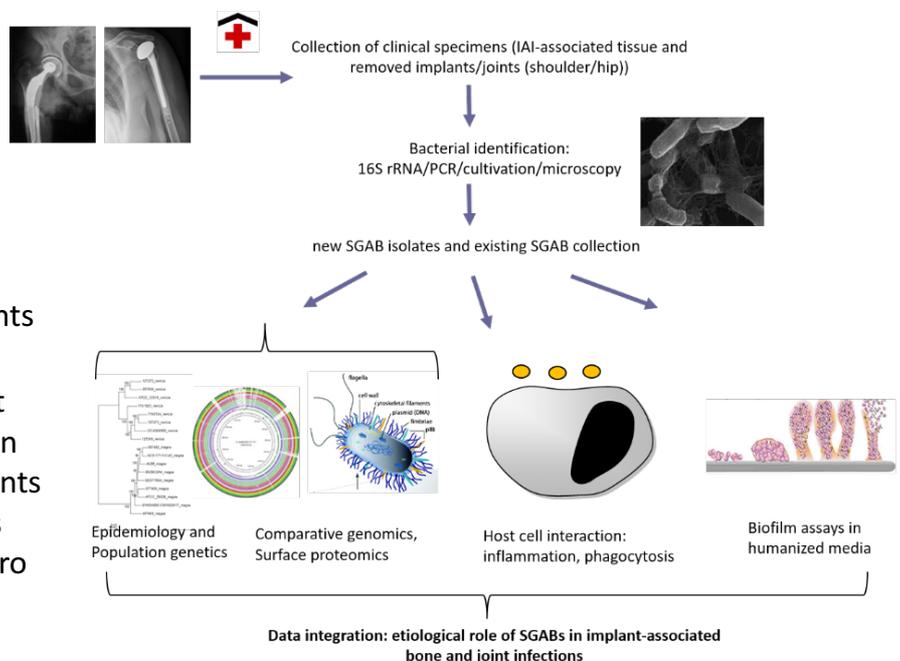
Projects

- Detection and identification of known and unknown SGAB from medical devices
- Characterization of a newly identified anaerobic staphylococcal species isolated from IAI
- Characterization of biofilm-forming and host-interacting properties of a newly identified *Finegoldia* species detected in prosthetic joint infections

Techniques

- Genome and amplicon sequencing and analyses
- Bacteriological cultivation
- (confocal) microscopy
- Proteome analyses
- Biofilm assays
- Cell culture infection experiments

Projects are mainly carried out at the Department of Biomedicine in collaboration with the Departments of Bioscience (AU) and Infectious Diseases (AUH, Skejby) and Örebro University Hospital, Sweden.



References

- Brüggemann et al. Pan-genome analysis of the genus *Finegoldia* identifies two distinct clades, strain-specific heterogeneity, and putative virulence factors. *Sci. Rep.* 2018
- Söderquist et al. *Finegoldia magna* isolated from orthopedic joint implant-associated infections. *J. Clin. Microbiol.* 2017
- Wildeman et al. *Propionibacterium avidum* as an etiological agent of prosthetic hip joint infection. *PLoS One* 2016

