

Erasmus+ traineeship at the Technical University of Denmark

Introduction:

Opportunity to perform an internship within Erasmus+ program at the [National Food Institute \(DTU Food\)](#), a department at the Technical University of Denmark (DTU). An intern will be a part of the Group for Microbial Biotechnology and Biorefining located in the newly renovated building. The internship should last from 6 to 12 months.

Purpose of the idea:

The proposed research will investigate the influence of nanoparticles on ESKAPE pathogens, the group of microbes responsible for the majority of nosocomial infections.

Hypothesis:

Antibacterial resistance and tolerance are supported by biofilm formation. The environment ensured by biofilm enhances the generation of bacterial persisters. Biofilm and persisters formation was proved for almost all ESKAPE pathogens, the group of microbes responsible for most nosocomial infections.

The previous studies showed, that nanoparticles have a potential to effectively eradicate biofilm built up by pathogens. This project aims at the evaluation of the inhibitory properties of nanoparticles on bacteria from ESKAPE group.

Planned work:

- Synthesis and characterization of nanoparticles
- Evaluation of bacterial growth in presence of nanoparticles and susceptibility to antibiotics

Qualifications:

- Hands-on experience with microbiology
- A highly motivated master student or new graduate with excellent analytical skills
- Very good communication skills, fluent written and oral English.

Applications:

If you feel like joining our team send your CV and cover letter to klaci@dtu.dk (Klaudia Ciurkot) and claban@food.dtu.dk (dr Claus Heiner Bang-Berthelsen). In case of any questions do not hesitate to contact us!