

Event	Mondays in Microbiology
Date	15. May 2023
Time	15:00-16:30 CET
Location	Zoom link: <a href="https://aarhusuniversity.zoom.us/j/61219168201">https://aarhusuniversity.zoom.us/j/61219168201</a> Meeting ID: 612 1916 8201 ***Please stay muted during the seminar***
<b>Program</b>	
15:00	Welcome Rikke L Meyer, member of DMS board
15:00-15:30	<b>Antibodies and complement against bacterial infections</b>  <i>By Suzan Rooijackers, Professor, Dept. of Medical Microbiology, University Medical Center Utrecht, Netherlands (S.H.M.Rooijackers@umcutrecht.nl)</i>  My lab aims to understand the molecular interplay between bacteria and the human immune system. Due to antibiotic resistance, there is now great interest in the development of antibody-based therapies against bacterial infections, for instance via antibodies that boost the host immune system. In this talk, I will highlight mechanisms of antibody-dependent complement activation and phagocytosis on bacteria and demonstrate how important pathogens evolved mechanisms to evade antibody-mediated killing.
15:30-16:00	<b>Chicken IgY - multiple applications</b>  <i>By Claus Moser, MD PhD, Professor, Rigshospitalet and Costerton Biofilm Center, Copenhagen University, Denmark (moser@dadlnet.dk)</i> My clinical and research focus has in almost all my post graduate career been on biofilm infections and an improvement of prevention and treatment of these troublesome infections. We have aimed at this by establishing a number of in vitro and in vivo model systems, as well as translating the relevant solutions to clinical testing and implementation. This presentation will focus on IgY and how the effect can be repurposed from pulmonary to urinary tract infectious prophylaxis.
16:00-16:30	<b>Antibody conjugates deliver potent antimicrobial to biofilm infections</b>  <i>By Rikke Louise Meyer, Professor, Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Denmark (rikke.meyer@inano.au.dk)</i> My research focuses on how bacterial form biofilms that tolerate currently available antibiotics, and how such biofilms can be prevented or treated through novel technologies that combine microbiology and nanoscience. In this talk, I will present a new study on how drugs can be targeted to biofilms, using antibody-drug conjugates. In this study, the drug Mitomycin C was covalently linked to antibodies that bind specifically to Staphylococcus aureus. Upon interaction with the bacteria, the drug was released by a bacteria-driven mechanism, and resulted in the death of the bacterial cells. This approach opens for the possibility of using more potent but toxic drugs like Mitomycin C to treat bacterial infections that resist or tolerate all other antibiotics.