

Do naturally occurring biofilm inhibitors increase susceptibility of *Haemophilus influenzae* to antibiotics used to treat infections in Chronic Obstructive Pulmonary Disease (COPD) patients?

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With the support and research funding from TTA, we wish to increase our understanding of biofilm production for bacterial survival in the presence of antibiotics. Focusing on bacteria causing infections in patients with Chronic Obstructive Pulmonary Disease (COPD), we will test the effects of naturally occurring biofilm inhibitors. COPD is a rising socioeconomic and community health problem. Everyday life for these patients is a struggle, partly due to recurrent lung infections requiring treatment with broad-spectrum antibiotics. Bacteria causing these infections frequently produce biofilm within the mucus, thus forming stable environments for bacteria to thrive and exchange antimicrobial resistance determinants. Natural biofilm inhibitors bear the prospect of a novel approach to treat chronic infections and improve quality of life for COPD patients struggling with accumulating mucus. Also, it is interesting to see if there is any synergic effect with narrow-spectrum antibiotics, in which case biofilm inhibitors would represent an important contribution to clinical practice and a powerful weapon in the war against antibiotic resistance. This study is part of the master's project for BLS Kaja Marienborg. Project collaborators include Department of Life Science and Health, OsloMet - Oslo Metropolitan University, and the Department of Microbiology, Vestfold Hospital Trust.