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The importance of Streptococcus zooepidemicus surface protein SZ008560 in attachment and/or invasion of the equine respiratory tract

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On-going project: an overview



We identified 39 putative surface proteins encoded in the genome of *Streptococcus zooepidemicus* strain H70. One of these, SZO08560, was associated with *S. zooepidemicus* isolates recovered from the lower respiratory tract or cases of pneumonia and is potentially the first streptococcal protein to be regulated by recombinase-mediated promoter inversion, a method bacteria use for dealing with rapidly varying environments. We hypothesise that SZO08560 plays an important role in the attachment and colonisation of the equine respiratory tract.

We will determine the importance of SZO08560 using an air interface model of the equine respiratory tract and a mouse model of *S. Zooepidemicus* infection. The level of protection against *S. zooepidemicus* conferred on vaccination of mice with SZO08560 will be quantified. Finally, the mechanism of SZO08560 gene regulation will be confirmed.

On-going project: an overview



This project will establish the importance of SZO08560 to *S. zooepidemicus* and evaluate the potential of vaccines based on this exciting surface protein for the improved health of horses.
