

# Cologne Evolution Colloquium

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## **Antibiotic-induced bacteriocin expression; regulatory interplay between the *blp* and *com* systems in *Streptococcus pneumoniae***

The rapid spread of antibiotic resistance, combined with a near absence of new antibiotics, are leading to a public health threat. One of the leading bacterial causes of morbidity and mortality worldwide is *Streptococcus pneumoniae* (the pneumococcus). Frighteningly, inappropriate antibiotic treatments can accelerate the occurrence of multidrug resistance by activation of a developmental process called bacterial competence.

In this seminar, Veening will discuss how antibiotics promote competence development. Furthermore, our recent unpublished work shows that antibiotics also induce upregulation of the ubiquitous bacteriocin *blp* gene-cluster, via competence. These bacteriocins mediate intra- and interspecific competition in the human nasopharynx. We have unraveled the molecular mechanism between this regulatory interplay, and, together with the audience, will discuss the potential ecological and evolutionary ramifications for this intertwined regulatory system.

Wednesday, May 27, 2015, 17:00  
University of Cologne, Institute for Genetics  
Seminar Room 0.46

Hosted by Berenike Maier

Molecular Basis of  
Evolutionary Innovations

SFB 680