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Another Brick in the Wall: the role of the actinobacterial cell wall in antibiotic resistance, phylogeny and development

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Stellingen

Propositions accompanying the thesis

Another Brick in the Wall: The role of the actinobacterial cell wall in antibiotic resistance, phylogeny and development

1. Vancomycin resistance is an example of repurposing of existing proteins to perform an alternative function.

This thesis, Chapter 5

2. The *Streptomyces* peptidoglycan layer serves as a stress-bearing, cell shape-determining structure and can be recycled as a source of nutrients.

This thesis, Chapter 3 and Rigali, S., *et al. EMBO rep.*, 2008

3. The ratio between LL-DAP and *meso*-DAP in *Kitasatospora* correlates to major differences in cell wall composition.

This thesis, Chapter 4

4. The absence of a gene for SsgE in verticillate *Streptomyces roseifaciens* provides further support for the predictive value of the SsgA-like proteins (SALPs) for *Streptomyces* morphology.

This thesis, Chapter 2.

5. The field of taxonomy is driven by experimental innovation, which is currently centered on the large amount of full-genome sequences.

Nouioui, I., *et al. Front. Microbiol.*, 2018

6. Since both antibiotic production and antibiotic resistance occur naturally and have been around for millions of years, there will never be an antibiotic for which a resistance mechanism cannot occur.

D'Costa, V.M., *et al. Nature*, 2011

7. If the origin of life would be a monoderm bacterial spore, research on bacterial cell growth is relevant for all life on earth.

Tocheva, E., *et al. Nat. Rev. Microbiol.*, 2016

8. Scientists who spend time on communicating their work to laymen are likely to write better papers and stay more in touch with their vision.

Jucan, M.S and Jucan, N.J. *Procedia - Social and Behavioral Sciences*, 2014

9. Enjoying literature and novels in down time will improve your (scientific) writing.

Based on Stephen King's 'On Writing: A Memoir of the Craft'

10. Interdisciplinary work and collaborations result in the most interesting experiments, which is where the social skill of 'borrelen' becomes a professional quality

11. A rose by any other name might be just as sweet, but a *Streptomyces* sp. by any other name would be misannotated.