Assemblage and functioning of bacterial communities in soil and rhizosphere

Yan, Y.

Propositions

Propositions associated with the PhD thesis

"Assemblage and functioning of bacterial communities in soil and rhizosphere"

Yan Yan

Leiden, 8th June 2016

1. The dilution approach is a useful method to reduce the biodiversity of microbial communities in soil, but does not allow for accurate prediction of the community composition (*this thesis*).

2. The exploration of the rare biosphere requires the development of suitable methodologies based on sensitive sampling depth (*this thesis*).

3. Soil abiotic factors are important drivers of the structuring of the microbiome in terrestrial ecosystems (*this thesis*).

4. Revealing the microbial community functionality will certainly help to shed light on the dark rhizosphere environment and its impact on plant growth (*this thesis*).

5. The rhizosphere microbiome is selected from the reservoir of microorganisms present in soil. Thus, the bulk soil is key to the structuring of the rhizosphere microbial community.

6. Plants manage the soil microbiome for the benefit of their fitness and productivity.

7. Next generation sequencing approaches are not themselves the science, but rather tools, and the main differences between them and other methods is the huge amount of data they generate (Jansson, 2013).

8. All methods of studying microbial communities in natural ecosystems have biases. Thus results obtained with these methods should be taken with caution and understanding the biases is a prerequisite for proper science.

9. Four hours round trip between Leiden and Wageningen is not enough to digest all fancy ideas.