

## Posters

### Rhizosphere

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### **P11 - Wheat rhizosphere bacterial communities and tolerance against root rot caused by *Fusarium graminearum***

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The rhizosphere microbiome is essential for health and development of plants, providing protection against pests and diseases. Domestication of plant species may have affected the biodiversity of microbial communities in ancestral plant roots compared to the modern plants, which may have changed the defense process. As ancestral genotypes and modern cultivars may present different levels of tolerance to the pathogens, we investigated the correlation between eight wheat genotypes, including wild materials and cultivars, and the structure of microbial communities in the rhizosphere. We evaluated the variation in susceptibility to the pathogen by inoculating *Fusarium graminearum* in the soil six days after sowing. The level of disease was assessed four weeks after inoculation. The two most contrasting genotypes, considering resistance against the soil borne pathogen, were selected for further analyses. Quartzo was found as the most resistant genotype and enriched 80 specific bacterial OTUs when compared with Karakilcik, which was the most susceptible genotype and enriched 17 bacterial OTUs. Actinobacteria, Acidobacteria, Xanthomonadales, Oxalobacteraceae and Sphingomonadaceae family were significantly enriched in the resistant genotype Quartzo. The genotypes show different levels of resistance against *F. graminearum* which correlates with the bacterial communities structures in the rhizosphere. In conclusion, the results suggest that specific recruitment of bacterial families in the resistant genotype may be associated with plant protection against to the soil borne pathogen.