

# Investigating the Role of Bacterial Community Cultures on Plant Growth and Root Morphological Traits

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The EuroScholars Program: A European Academic Research Experience









## About Me

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FUTURE PLANS:









#### Plant soil feedback

• A plant can alter its soil properties by creating communities (soil legacies) that influence the growth of the next seedling or plant in the same soil, positively, neutrally, or negatively





#### Rhizosphere

•Two plants grow together, rootassociated microbes of the neighboring plant can be transmitted to the focal plant (+ or -) •Neighboring plants can affect a focal plant growth by interspecific interactions





Question: How do the community cultures cultivated from roots of the focal plant grown in mono/mixed culture in home/away soil affect a plant's growth?
Which combination of plant species culture affects a focal plant biomass positively?

Positive feedback from specific community cultures.

• Explore microbe role in plant growth



• Hypothesis: Focal plant will produce more biomass if inoculated and plated with community cultures from different plant species because there are more chances for the focal plant to recruit plant-beneficial microbes.















Seedlings germination



Plating after inoculation



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