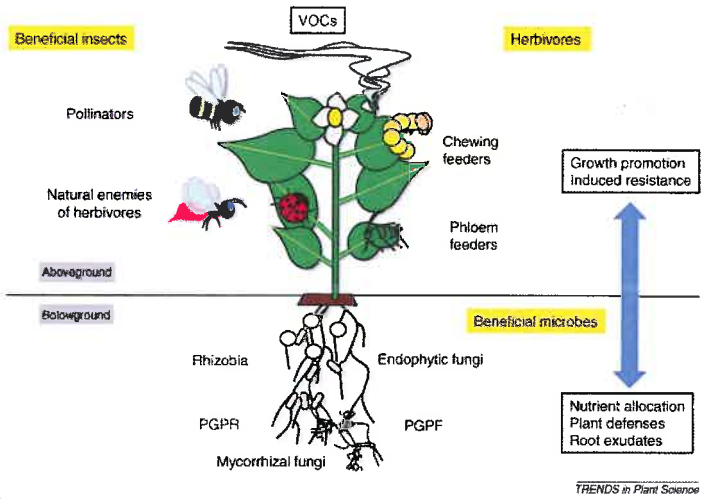
3rd Annual Meeting of the
COST Action FA1405

in collaboration with

Institute of Earth Systems
University of Malta

"Three-way interactions between plants, microbes and arthropods: impacts, mechanisms and utilisation"



after Pineda *et al.* 2010 TiPS

Venues:

24th & 25th January 2018
Marina Hotel at the Corinthia Beach Resort, St Julians

26th January 2018
University of Malta Valletta Campus
Old University Building, St Paul Street, Valletta

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EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

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Fungal endophytic community of cork oaks (*Quercus suber* L.) depends on the forest location

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ABSTRACT: *Quercus suber* is an evergreen tree species with high socio-economic and ecologic importance in the Mediterranean Basin. Cork oak forests occupy an area of more than 2 Mha worldwide, being the largest areas located in Portugal, Spain, Morocco and Algeria. Despite cork oak is well adapted to the Mediterranean climate, which is characterized by warm, dry summers and rainy winters, plant growth and cork productivity is sensitive to climatic changes. Plant microbiomes are determining factors for preserving plant health and productivity within challenging climates, due to their dual ecological function as detrimental or beneficial symbionts. Endophytes can play a beneficial role for plant sustainability, but some of them are opportunistic pathogens that take advantage of the weakened plants, stressed by different environmental conditions. Several Portuguese cork oak stands, with differences in water availability, were used for accessing the fungal endophytic of stems and branches. The diversity of fungal endophytic community in each cork stand and relations with edaphoclimatic conditions are described. Many cork oak stands presented high incidence of pathogens, such as *Biscogniauxia mediterranea*, which is deposited by *Platypus cylindrus* Fab. into the tunnels walls for feeding adults and their offspring.

*corresponding author