

# SUSTAIN

ENDOPHYTES FOR A GROWING WORLD

Programme and abstract book  
28<sup>th</sup> -29<sup>th</sup> August 2017



Trinity  
College  
Dublin

The University of Dublin

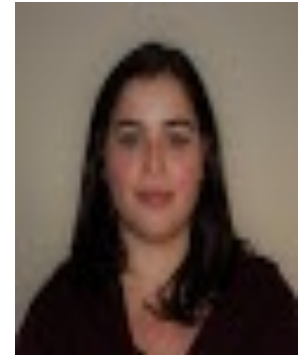


## Screening of antagonistic fungal agents for biological control of *Quercus suber* diseases

Costa Daniela\*<sup>1</sup>, Cunha João<sup>1</sup>, Tavares Rui M.<sup>1</sup>, Baptista Paula<sup>2</sup>, Lino-Neto Teresa<sup>1</sup>

<sup>1</sup>*BioSystems & Integrative Sciences Institute (BioISI), Plant Functional Biology Centre, University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal.*

<sup>2</sup>*CIMO/School of Agriculture, Polytechnic Institute of Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal.*



Cork oak (*Quercus suber* L.) is an evergreen tree species, typically found throughout the Mediterranean Basin, displaying a great economic and ecological importance. Several diseases are currently affecting cork oaks compromising cork production, including those caused by *Diplodia corticola* and *Biscogniauxia mediterranea* pathogens. The incidence of both diseases seems to increase when trees are affected by several environmental stresses, in particular drought stress. Given the predicted climate changes, the future cork oak productivity could be drastically threatened by these pathogens. Fungicides are until now the only technique used for the treatment of such diseases, but can lead to environmental hazards and toxicity. The use of beneficial plant–microorganism interactions, like plant-endophyte symbiosis, could be a promising strategy for coping with such adverse conditions, since they may stimulate plant growth and enhance tolerance to disease causal agents and drought. The collection and identification of endophytic fungi in cork oak was performed in sites with differences in water availability. Antagonist assays were performed in dual culture to identify the fungal agents most promising to the biological control of these diseases.