Set up of reliable protocols for the detection and identification of '*Candidatus* Phytoplasma phoenicium' (DIPCAPP)

Euphresco

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Research consortium

UNIMI (IT), CREA (IT), ANSES (FR), FGBU-VNIIKR (RU), NIB (SI), AUB (LB), SHIRAZU (IR), UNIBA (IT)

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Goals and objectives

This project aims to develop fast, reliable and harmonized detection protocols for the identification of genetically distinct '*Candidatus* Phytoplasma phoenicium' strains.

The following protocols will be assessed:

- PCR specific for subgroup 16SrIX-B: nested PCR for the amplification of *inmp* gene (Quaglino *et al*., 2015).
- PCR and RFLP specific for subgroup 16SrIX-B: nested PCR for the amplification of 16S rRNA fragment (primers P1/P7 followed by F2n/R2), followed by enzymatic digestion using *Taq*I (Molino-Lova *et al*., 2011).
- PCR 16S DNA barcoding specific for phytoplasma: PCR followed by sequencing of the amplified fragments (EPPO - PM 7/129).
- Real-time PCR (TaqMan) specific for subgroup 16SrIX-B: amplification of a specific fragment spanning the hyper-variable 16S-23S rRNA intergenic spacer region and the 23S rRNA region (Jawhari *et al*., 2015).
- Real-time PCR (TaqMan) for phytoplasmas: amplification of a 16S rRNA fragment (Christensen *et al*., 2004, EPPO PM 7/133).

Key outputs and results

Validated diagnostic protocol for the detection and identification of '*Candidatus* Phytoplasma phoenicium' strains.