



ORPRAMed



Risk assessment of introduction of *Xanthomonas citri* subsp. *citri* through commercial trade of ornamental rutaceous plants in the Mediterranean basin

(2016 – 2019)

Overall budget: 1,328,000 €

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ARIMNet & ARIMNet2 meeting – 14-16 March 2016, Lisbon, Portugal



CONSORTIUM



Coordinator: Germplasm collections of citrus and citrus *Rutaceae* relatives. Genomics and transcriptomics expertise.



Plant pathology: diagnostic protocols, genomics and mechanism of pathogenicity studies. **Agri-food Economics:** socio-economic analysis and management of agricultural and food firms.



Specialized in species of *Xanthomonas*. Expertise on molecular mechanisms involved in the early steps of the infection process.



Population biology of genetic variants of the pathogen, host specialization and fitness-associated traits, and molecular diagnostics.



Respect of plant protection, monitoring and prevention of plant diseases; detection, identification and characterization of plant pathogenic bacteria.

ORPRAMed, as a transnational project, will create new collaborations between different countries tackling the same risk in a coordinated way. Each partner will get involved in a ring-test to validate a molecular-based protocol as new tool for *Xcc* rapid detection.

PROJECT OBJECTIVES

- Analysis of the actual flows of the ornamental citrus and rutaceous relatives towards the Mediterranean basin whose distribution and trade are actually unknown;
- To provide new data on the behaviour of many ornamental Rutaceae regarding *Xcc*, to expand the knowledge about the epiphytic and endophytic colonization of the pathogen and the bacterium's ability to survive;
- Acquiring new genomic and transcriptomic information and ornamental citrus relatives genome not yet available;
- To acquire methods, abilities and protocols to work with quarantine bacterial diseases, as *Xcc* to face possible pathogenic threats;
- To provide the needed useful information for the definition and/or update of a new directive on plant protection.

SCIENTIFIC APPROACH

ORPRAMed promotes a multidisciplinary approach involving the use of diverse scientific areas and methods including:

- Economic studies (analysis of official data on international trade, interviews, etc.)
- Surveys on nurseries and groves;
- Microbiology (laboratory screening, *in vitro* and *in vivo* assays);
- Plant genomics (molecular-based protocols, genomic and transcriptomic analysis);
- A ring-test to validate molecular-based protocol.

EXPECTED IMPACT & INNOVATION



Update the state of the art on the trade of Rutaceae



Update import / export regulation and directive on plant protection



EU economy: savings of public funds that would be required in the case of CBC diffusion



New genome also useful for other citrus emerging diseases like HLB

The innovation of ORPRAMed consists in establishing a network of researchers with different expertise and local plant protection services and nurseries, to raise awareness about this issue and to implement the cooperation of these stakeholders with research institutions.

CONTACTS

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Thanks for your attention!