

Thematic area
Farming Systems



Section II

Topic 2.2 - Preventing and controlling emergence of animal and plant pests and diseases



Budget
812.338,00 €



Duration
36 months



Project
25/INTOMED

Innovative tools to combat crop pests in the Mediterranean

Objectives and expected impacts

INTOMED will identify, develop, validate and promote effective and sustainable Integrated Pest Management (IPM) tools by (a) exploiting beneficial interactions between plants and soil-borne microbes and (b) identifying naturally derived key molecules (peptides, metabolites and RNAs) to enhance the resistance of economically important Mediterranean crops against major agricultural arthropod pests and pathogens, as well as by (c) assessing the social acceptability of the proposed tools by end-users. Soil-borne beneficial microbes have long been recognized for their ability to improve plant growth and nutrition and prime the plant immune system against pathogens and herbivores in plants.

We thus aim to first, assess the potential of selected marketed and laboratory-owned strains of beneficial microbes, including endophytes, for their ability to improve crop resistance to arthropods and pathogens and second, study the molecular mechanisms involved in promising microbe-plant-pest combinations with the aim to also identify plant secondary metabolites and peptides that mediate enhanced resistance and technically support future commercial biocontrol products.

INTOMED also exploits the development of a GMO-free and effective pest control tool i.e. exogenous delivery of RNA molecules having the potential to trigger RNA interference (RNAi) against targeted pathogens/pests in both vegetables and fruit trees.

Pilot demonstration trials, targeting end-users (farmers, SMEs) will assess promising beneficial microbes and plant molecules. In addition, INTOMED will increase public awareness of the nature of the proposed tools and analyse the impact of their acceptance.

Gender will be specifically considered as a key factor in the acceptability of the proposed tools and risk perception.

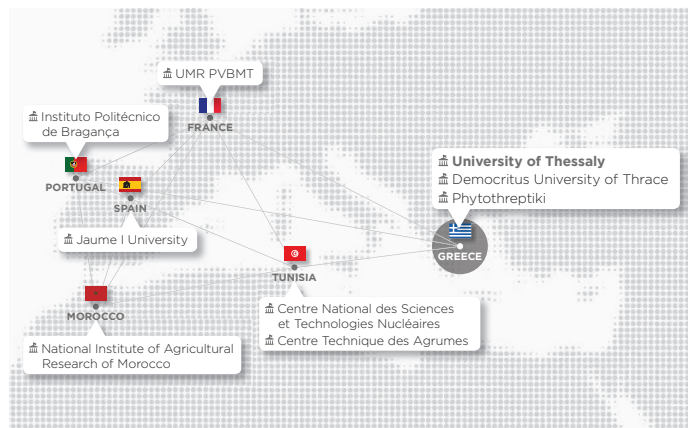
Our consortium includes 9 academic and industrial partners from Greece, Spain, France, Morocco, Portugal and Tunisia.

Coordinating country
Greece

Participating countries/ 6



Partners/ 9



Coordinating institution
University of Thessaly



**UNIVERSITY OF
THESSALY**

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Responsible and impactful research sits in the core of INTOMED that has been designed to generate knowledge, products, tools and processes (the INTOMED toolbox) to contribute and support the implementation of sustainable development goals in the Mediterranean and beyond.

