



H2020-MSCA-RISE-2016-Virus free fruit nurseries (VirFree)



Introduction

- Fruit trees and grapevine are propagated vegetatively and are often grafted
- As a result they suffer from a high number of pathogens such as **viruses** and **viroids**, with some of them causing severe yield losses and reducing the productive life of the affected plants
- These pathogens cannot be controlled by the application of chemicals therefore the most efficient way to combat them is the production and commercialization of high quality pathogen-tested propagative material



Objectives of VirFree

VirFree brings together participants from both academia and private companies to collaborate through their expertise on the following objectives:

- 1) to identify **new viral and viroid strains or species** affecting fruit trees and grapevine
- 2) to optimize existing and develop novel **detection methods** and
- 3) to improve **propagation and sanitation methods** for producing high quality (virus-tested) plant material of **fruit trees and grapevine**

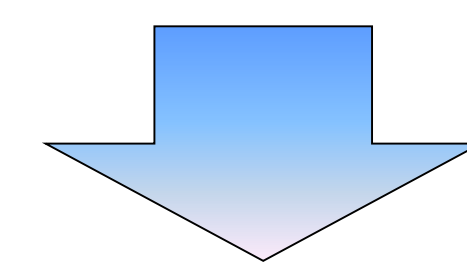
Approach

Diagnostic tools currently used in certification schemes will be combined with cutting edge technologies such as **NGS** and **Nanobodies**

Expected benefits

- training of a new generation of researchers to fulfill the needs of both industrial and academic sectors
- enrich the knowledge on viruses/viroids associated with different diseases
 - improve the sensitivity of detection methods
 - development of new detection products
- improvement of the disseminated propagative material of fruit trees and grapevine

Institutions and companies participating to VirFree



Academic institutions:

- Laboratory of Plant Pathology, Aristotle University of Thessaloniki (**Coordinator**) (V.I. Maliogka, N.I. Katis) (Greece)
- Istituto per la Protezione Sostenibile delle Piante, CNR (F. Di Serio) (Italy)
- Institut de Biologie Moléculaire des Plantes, CNRS (C. Ritzenthaler) (France)
- Institute of Molecular Biology and Biotechnology, FoRTH (K. Kalantidis) (Greece)
- Mustafa Kemal University (K. Caglayan) (Turkey)
- Namik Kemal University (H. Ilbagi) (Turkey)
- Instituto Valenciano de Investigaciones Agrarias (A. Olmos) (Spain)
- University of Basilicata (B. Dichio) (Italy)

Companies:

- AGRITEST S.r.l (Italy)
- Beta Fidan (Turkey)
- BIOREBA AG, REINACH (Switzerland)
- Fitotechniki -XILOGIANNIS BROS UN.CO. (Greece)
- Lifesequencing, S.L. (Spain)

Partners (in Third Countries):

- ✓ Institute of plant protection, Chinese Academy of Agricultural Sciences (S. Li) (China)
- ✓ Instituto superior politécnico do kuanza sul (A.T. da Cunha) (Angola)
- ✓ University of Pretoria (G. Pietersen) (South Africa)

