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Presentation of Partners

**P11 BPI**



H2020-MSCA-RISE-2016  
CURE-XF - 734353

## **BENAKI PHYTOPATHOLOGICAL INSTITUTE**



**BENAKI  
PHYTOPATHOLOGICAL  
INSTITUTE**

**CURE-XF Kick-off Meeting**  
*CIHEAM Bari 28-29 September, 2017*



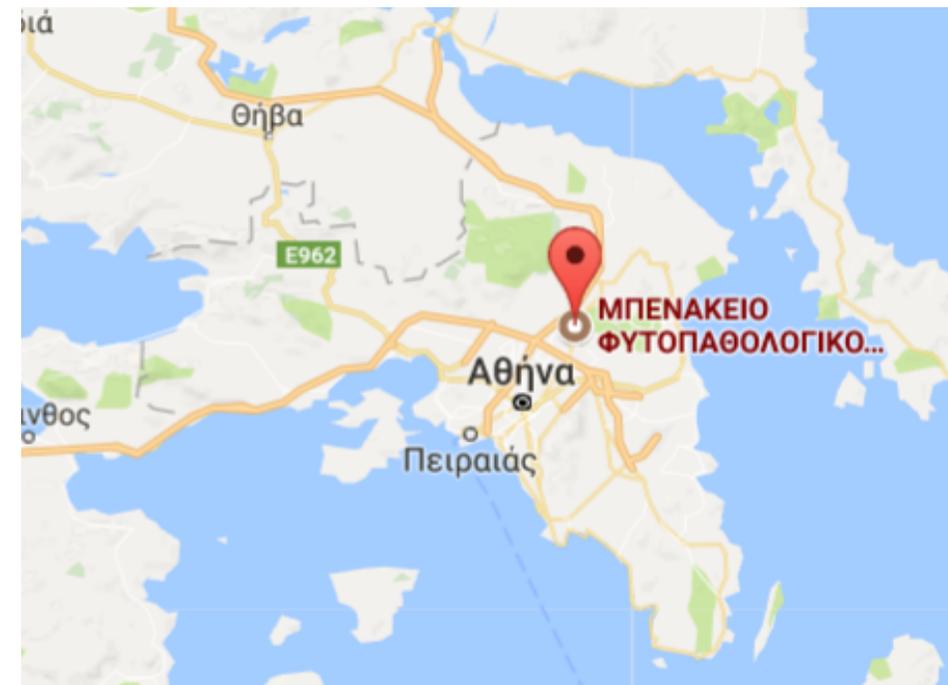
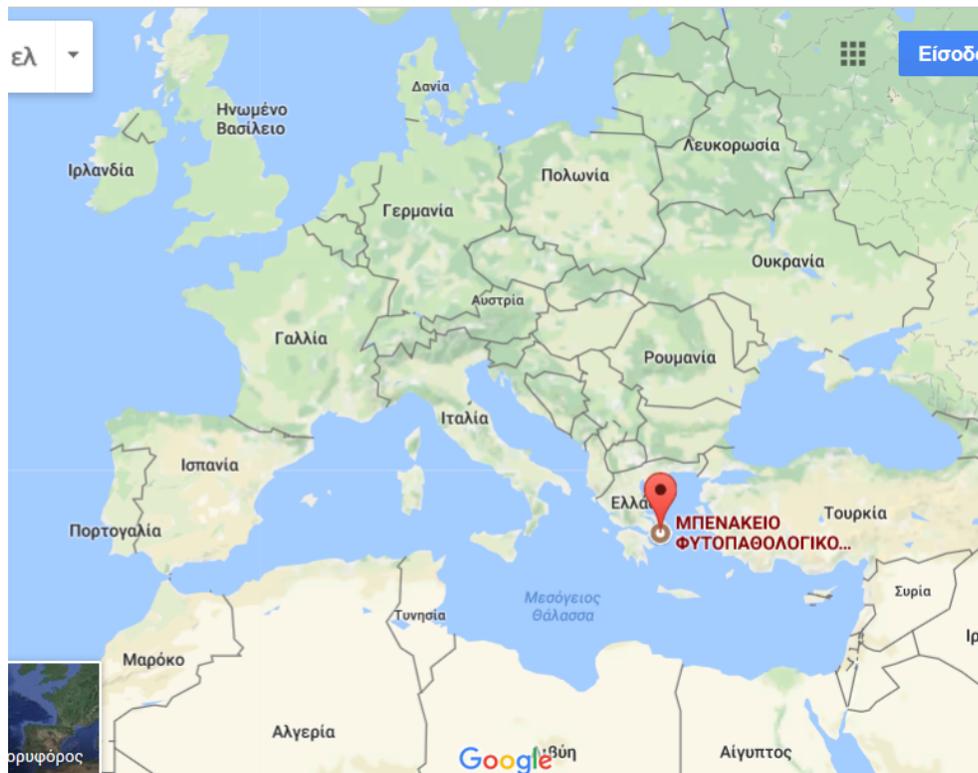
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**Location** in Greece, in the city of Kifissia, about 15 km from the capital (Athens).



## short description

- Benaki Phytopathological Institute (BPI) is a Legal Entity of the **Public Sector (Academic Sector)**, donated by the National Benefactor Emmanouel Benakis.
- Established in 1929. It was the first Greek research institute to have a broad scientific basis in plant health and plant protection.
- It operates under the supervision of the Hellenic Ministry of Rural Development & Food.

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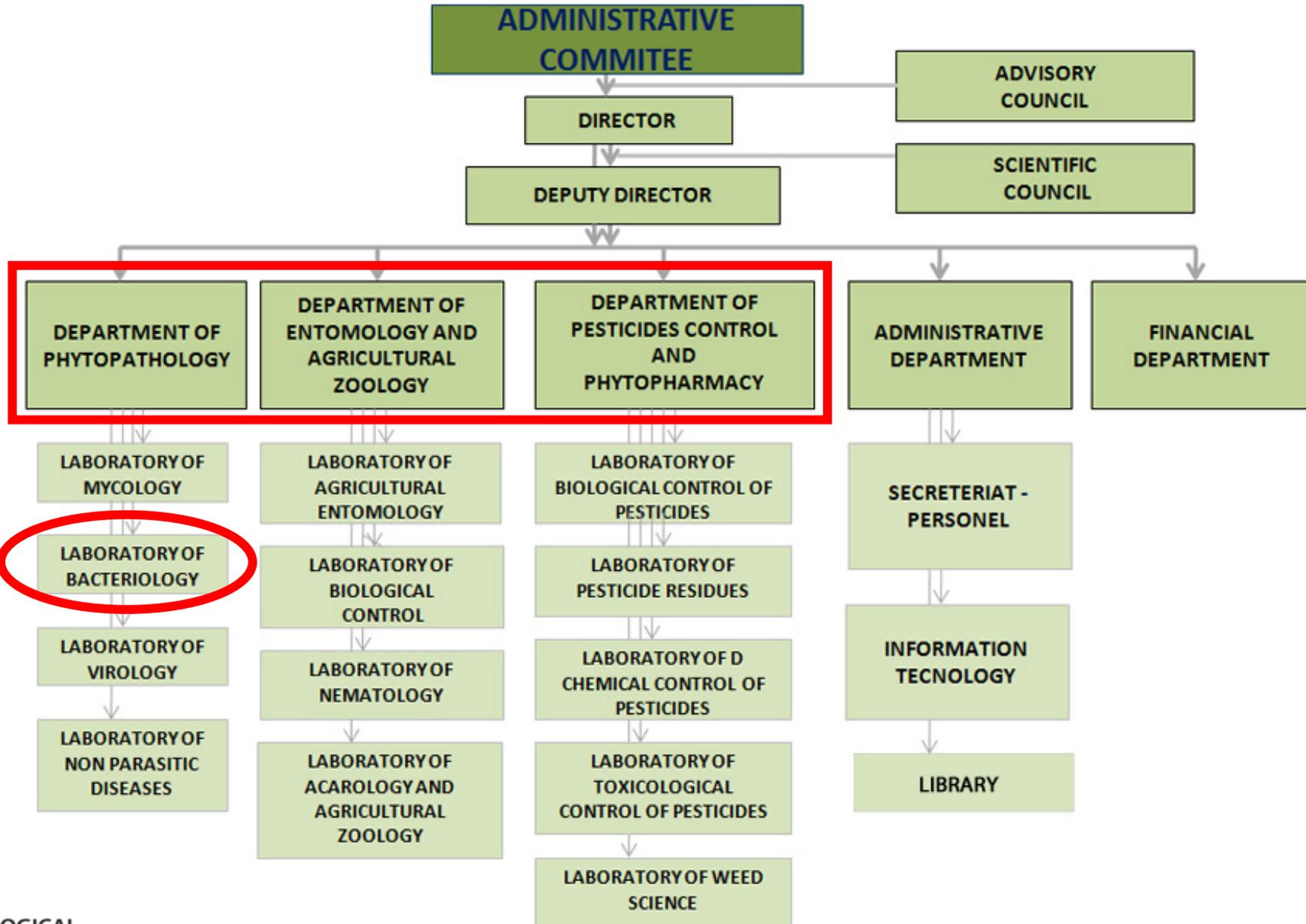


# Organization chart of BPI

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staff

## Laboratory of Bacteriology

### Current laboratory staff

#### Scientific staff

- **Maria C. Holeva**, PhD, Plant Pathologist-Bacteriologist, Associate Research Scientist, Head of the Laboratory
- **Charikleia Karafila**, Agronomist Technologist
- **Paraskevas E. Glynos**, Agronomist Technologist
  
- **Eleftheria Siderea**, Agronomist Technologist
- **Athanasios Toggias**, Agronomist Technologist

#### Technical assistant

- **Spyridon P. Drakoulis**



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# Main activities in the Laboratory of Bacteriology at BPI



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## **A. Diagnosis of diseases of agricultural crops caused by bacterial pathogens or phytoplasmas**

(application, development and comparative evaluation of diagnostic techniques)

e.g. Laboratory phytosanitary control of imported/exported plant material - Laboratory assays for surveys-Ring tests

## **B. Pathogen characterization** (epidemiological and genetic characteristics)

e.g. haplotype characterization, phylogenetic relationships

## **C. Pathosystem studies**

e.g. pathogen's virulence factors, plant genetic resources for resistance

## **D. Disease control**

e.g. development of new means for the control of plant diseases (non-transgenic) or exploiting the antibacterial activity of plant extracts

## **E. Pest Risk Analysis (PRA) on quarantine phytopathogenic bacteria**

## **F. Educational activities**

e.g. theoretical seminars and laboratory practical training for agronomists

e.g. supervision of the practical stage and dissertations of students from Universities and Technological Educational Institutes



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# Main facilities and scientific equipment used by the Laboratory of Bacteriology



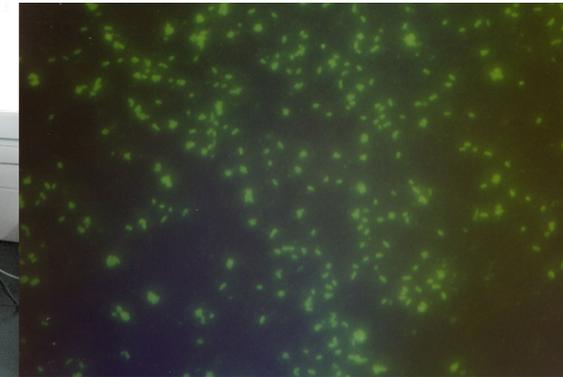
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Laminar flow cabinets, incubators, water-bath devices  
Various refrigerated/non-refrigerated centrifuges

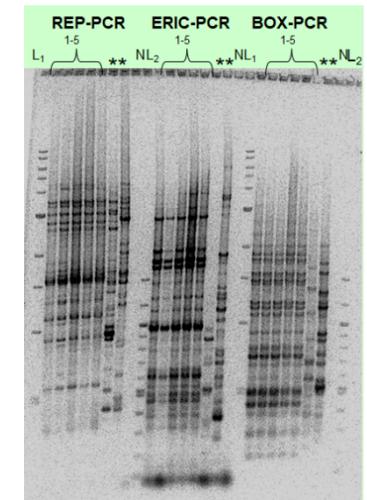


Microscopes: epi-fluorescence microscope, phase contrast microscope

Homogenizer for plant samples  
ELISA photometer



PCR machines, real-time PCR machine, nano-spectrophotometer, gel-documentation system, agarose/polyacrylamide gel electrophoresis systems, cross-linker, automatic nucleic acid extraction machine, electroporator



Deep freezers

Glasshouse facilities and growth cabinet for plants (control system for light, temperature, humidity)



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# Main facilities in the Laboratory of Bacteriology



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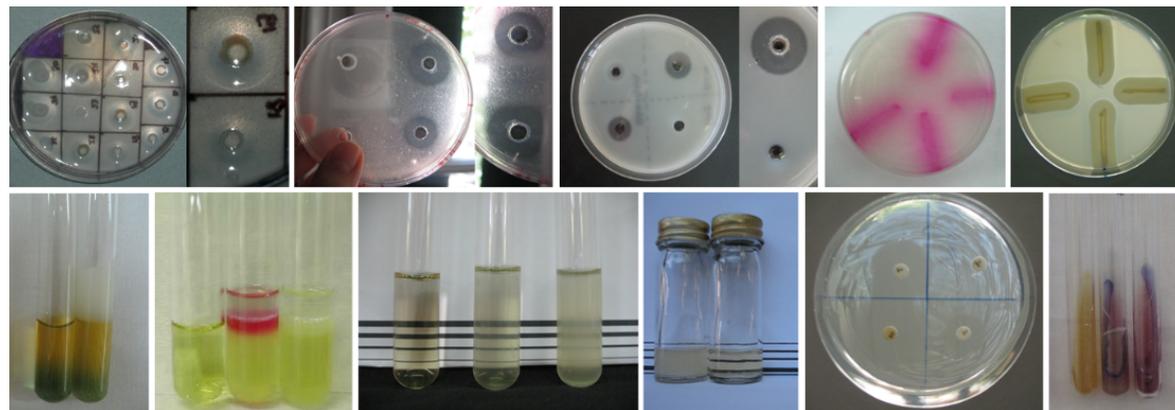
### Lab space for sampling plant tissues



### Room for microbiological cultures



### Lab space for various biochemical tests and serological tests (IF, ELISA)



### Lab space for microscopy observation of specimens



Nucleic acid extraction space (manual or automatic extraction)

PCR set up space (cabinet)

Post PCR analysis space (agarose gels electrophoresis, gel documentation system)

Glasshouse facilities to run pathogenicity tests

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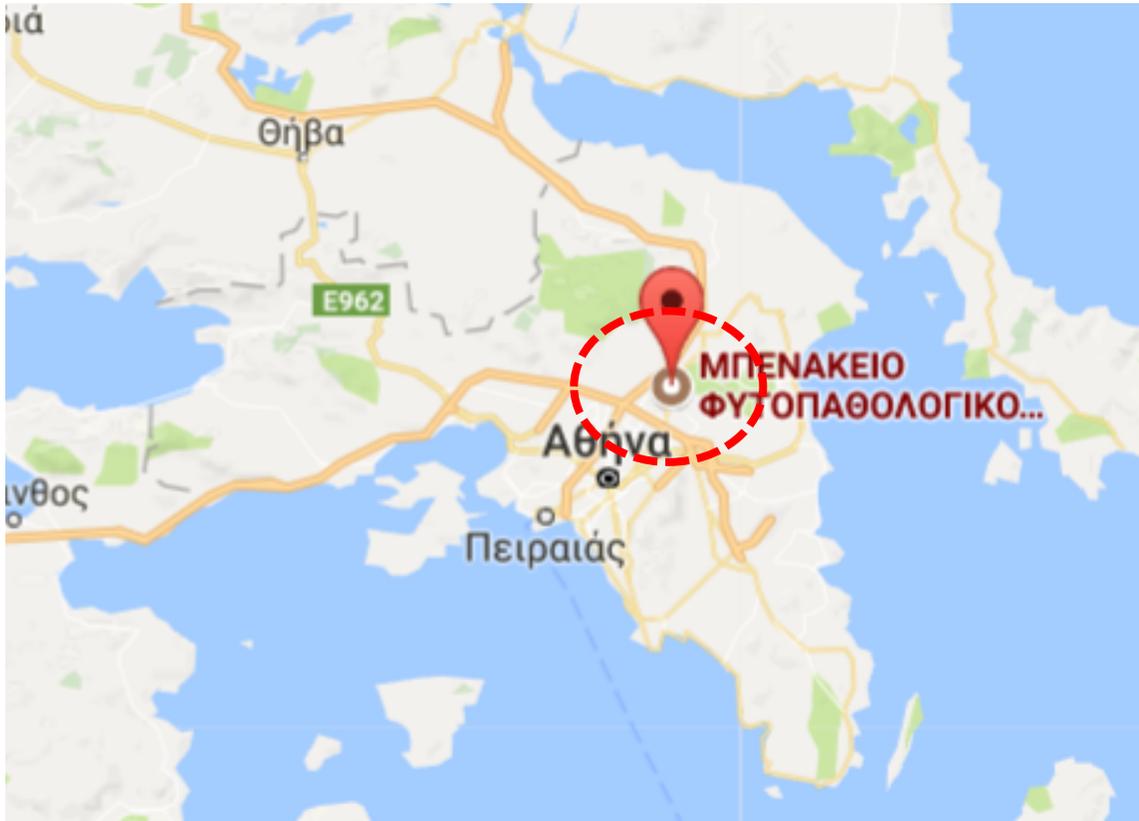


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## Accommodation



metro



bus

From BPI to other participant Institutions  
From other participant Institutions to BPI

2 secondments (1 month/secondment)  
6 secondments (1 month/secondment)



## Main activities on *Xylella fastidiosa*



### Projects-Research activities

- **EC and Hellenic Ministry of Rural Development and Food.** ‘National survey program for the recognition and maintenance of protected zones against some organisms harmful to plants (“quarantine pests”)' (2011-2017), Coordinator: BPI, [www.bpi.gr/section.aspx?id=2&subid=233](http://www.bpi.gr/section.aspx?id=2&subid=233)
- **HORIZON 2020 ‘*Xylella Fastidiosa* Active Containment Through a multidisciplinary-Oriented Research Strategy (XF-ACTORS)’** (2016-2020), Coordinator: Consiglio Nazionale delle Ricerche (CNR), Italy, [www.xfactorsproject.eu/](http://www.xfactorsproject.eu/)
- **COST ACTION CA16107 ‘Integrating science on Xanthomonadaceae for integrated plant disease management in Europe (EuroXanth)’** (2017-2021), Coordinator: Institut de Recherche pour le Developpement Montpellier, France, <https://euroxanth.eu/>

Diagnostic checks on samples sent by Phytosanitary Inspectors & samples sent by agronomists, growers, industry, etc

Xf not recorded in Greece, so live bacterial cultures are not used - work only with inactivated bacterial cells or DNA of Xf



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# Thank you for your attention!



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