Funded by the European Union

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

Instituto Valenciano de Investigaciones Agrarias (IVIA)
More than 300 people at the service of our farmers

Research, Experimentation, Innovation, Techology transfer

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

Funded by the European Union

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

Public Research Institute at the service of the agri-food sector

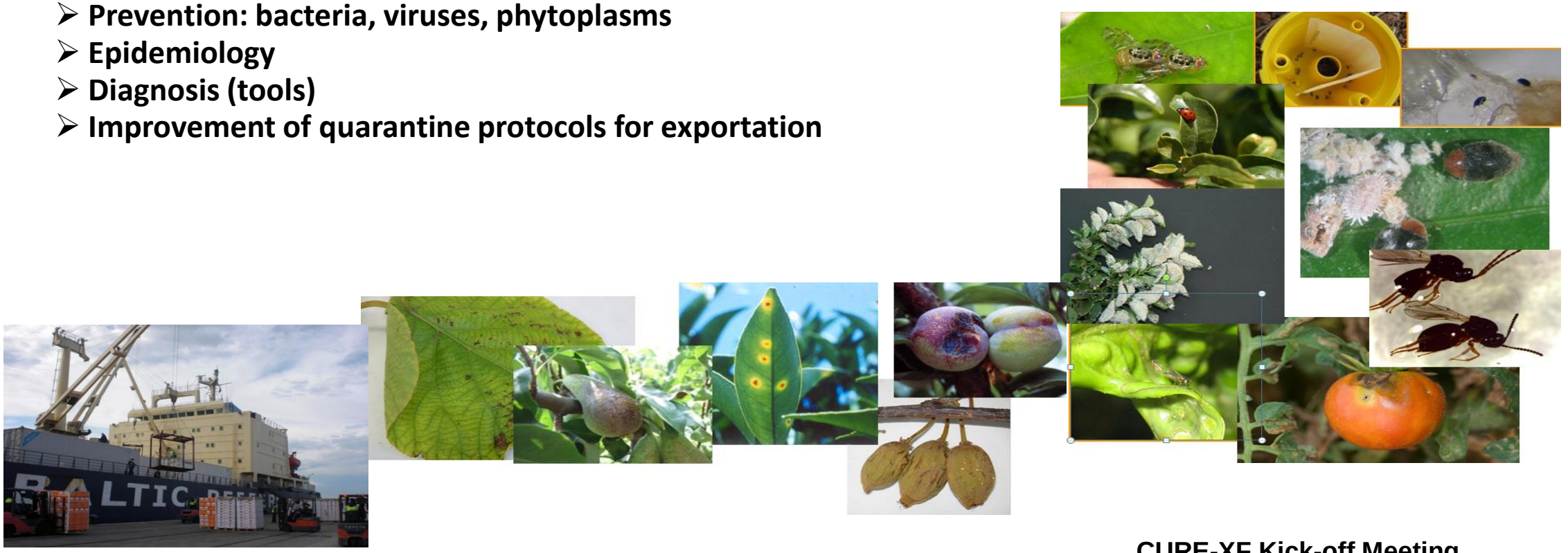
- 7 Research Centers (Moncada, Segorbe, Sueca)
  - Plant Protection and Biotechnology
    - Bacteriology Unit
    - Mycology Unit
  - Agricultural Engineering
  - Citriculture and Crop Production
  - Genomics
  - Postharvest Technology
  - Sustainable Agriculture
  - Livestock Technology

Funded by the European Union

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

Plant protection

- Quarantine, sanitation, certification of plant material
- Biological control
- Integrated Pest Management
- Prevention: bacteria, viruses, phytoplasms
- Epidemiology
- Diagnosis (tools)
- Improvement of quarantine protocols for exportation



Funded by the European Union

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

Agricultural Engineering

- **Automatic quality assessment**
  - **Early detection of rottenness in citrus**
  - **Internal quality assessment**
  - **Real time fruit monitoring trhough computer vision**

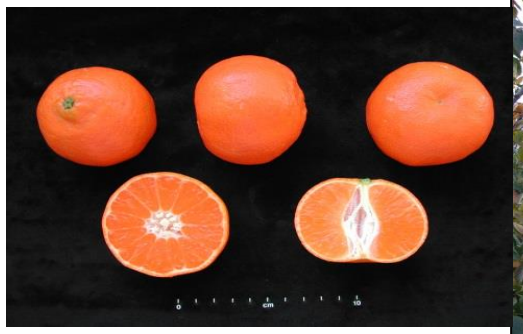
- **Agricultural mechanization**
  - **Reduction of environmental impact of pesticide treatments**
  - **Citrus harvest**
  - **Yield estimation**
  - **In field quality assessment**

Funded by the European Union

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

Citriculture and Plant Production

- **New plant material for increasing diversification and guarantee economic and environmental sustainability.**
  - **More adapted to climate change**
  - **Natural resistance to pests**
  - **Better organoleptic characteristics**
  - **Longer shelf life**
  - **Adapted to a evolving market**
  - **To be used in organic farming**
  - **Recuperation of traditional cultures… and tastes!**

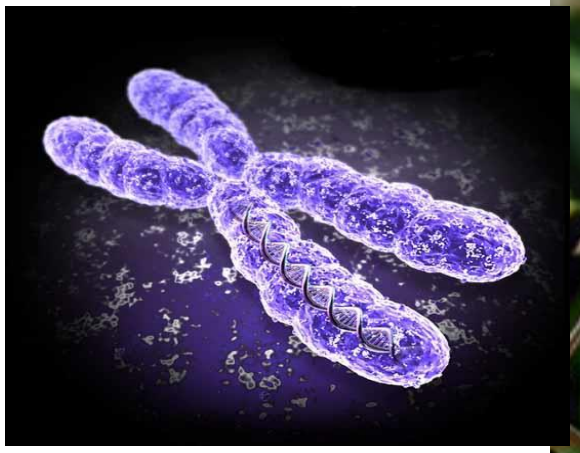


Funded by the European Union

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

Genomics

- **New genomic based technologies for new plant materials and for plant authentification**
- **New citrus and rice varieties**



Funded by the European Union

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

Sustainable agriculture

- Reduction of barriers to organic farming
  - fertilization
  - Soil biological quality
- Use of organic materials for fertilization
- Water, soil and nitrogen fertilization under climate change
- Preventing phytotoxicity and salinity stresses

Funded by the European Union

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

Irrigation technology

- New technologies to improve irrigation efficacy
- Consultancy, diffusion, technology transfer, training
- Use of water, water saving
- Water needs

Funded by the European Union

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

Post-harvest

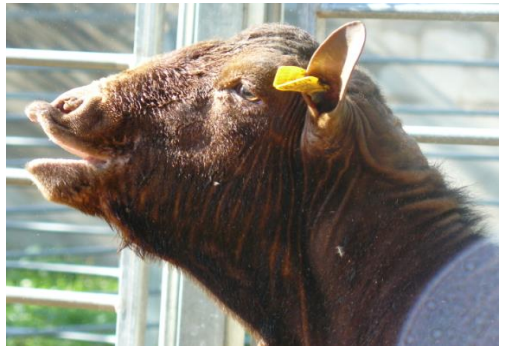
- Maximizing shelf life of the fruits for fresh consumption ensuring physicochemical and nutritional quality
- Edible coatings for fresh fruit and combined strategies for minimally processed products
- Integrated management of postharvest diseases

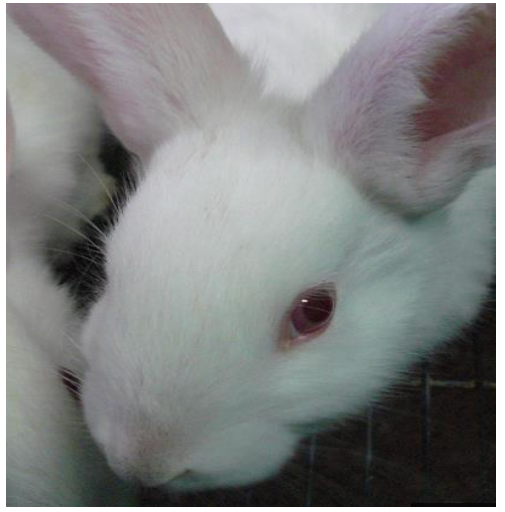
Funded by the European Union

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

Research and technology for livestock

- Animal Breeding and Genetics
- Technical and economic management of rabbit farms
- Eco-friendly solutions
- Rational use of by-products for animal feed
- Reducing emissions to the environment by dietary changes
- Scientific support for animal welfare regulations





Funded by the European Union

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

Main facilities

Labs in Agricultural Engineering Centre

- Laboratory of sensors and computer vision with software and equipment for image processing
- Different cameras and spectrometers: multispectral, hyperspectral, thermal, colour, NIR…

Labs in Bacteriology Unit

- Two laboratories for general (conventional, serological and molecular) microbiological techniques
- P2 security laboratory
- Room for post-PCR processing
- Room with two centrifuges
- Epifluorescence microscope, real-time PCR thermocyclers, transilluminators for gel visualization, autoclaves for sterilization
- Greenhouses facilities

Labs in Mycology Unit

- Laboratory of biostatistics
- Laboratory of mycology

Experimental fields

- None

Accomodation

- None at IVIA but high offer near in Valencia

Funded by the European Union

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

Main activities on *Xylella fastidiosa* in Agricultural Engineering Centre

Projects

- **POnTE:**
  - **No Activities on *Xf***

- **XF-ACTORS**
  - **Task 3B**
    - **Investigate detectability of *Xf* from leaf level up to the plant level in the lab using spectrometry**
    - **Build and deploy ground vehicles in field sites to repeatedly scan plants whose *Xf* infection levels are monitored with remote sensing technology (image and laser scanning)**
    - **Analyse the data for an integrated analysis of the detectability of physiological effects of *Xf* at the plant level under real field conditions**
  - **Task 4A**
    - **Collaborate in the implantation in Spain of the application XylApp developed by IAMB**

Funded by the European Union

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

Main activities on *Xylella fastidiosa* in Plant Protection Centre (Bacteriology)

Projects

- **POnTE:**
  - **No Activities on *Xf***

- **XF-ACTORS**
  - **Task 6**
    - ***Xf* control by newly selected and existing phage cocktails**

Funded by the European Union

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

Main activities on *Xylella fastidiosa* in Plant Protection Centre (Mycology Unit)

Projects

- **POnTE:**
  - **WP8 Plant disease risk assessment and support for plant health decision-making**
  - **Task 8a: Development of quantitative pathway models for assessment of the risk of plant pest and disease introduction with plant trade**
  - **Task 8b: Development of quantitative models for assessing pest/disease spread over the European territory**

- **XF-ACTORS**
  - **Lead WP8 Regional risk assessment to anticipate the threat and impacts of *Xf* diseases**
  - **Task 8.3 Modelling of *Xf* subsp. pauca *spread*, surveillance and management**
  - **Task 8.4 Risk management and optimal strategies for *Xf* eradication**

Main activities on Xylella fastidiosa. Research activities

Agricultural Engineering Centre

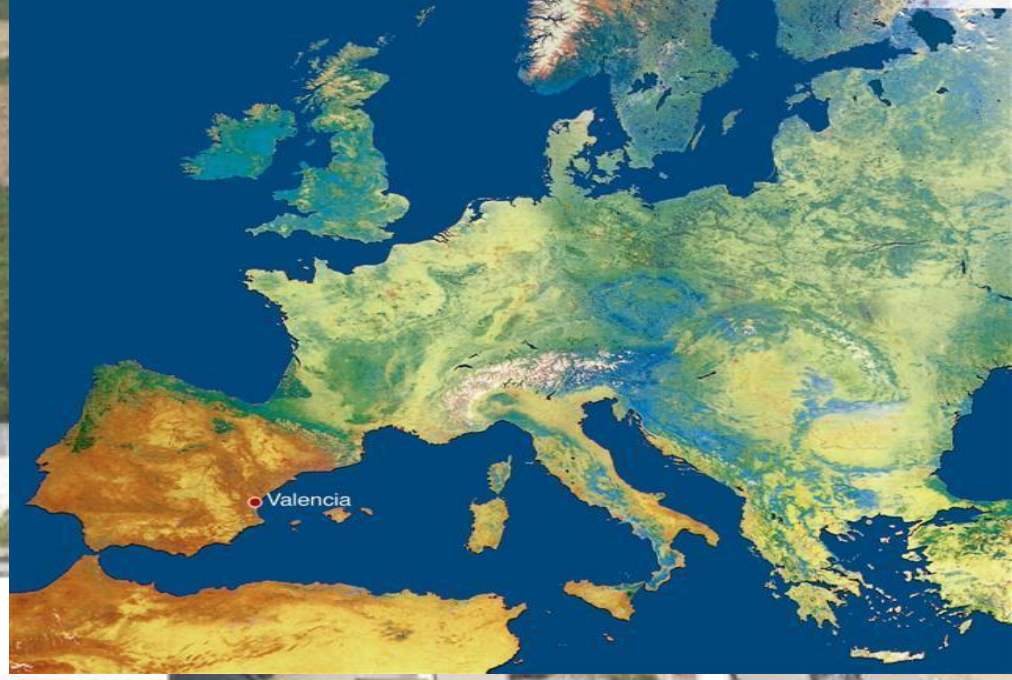
- Sensorised ground vehicles for automated field monitoring
- On board remote sensing systems for early detection of *Xf*
- Crop structure analysis through 2D laser scanning

Centro de Protección Vegetal y Biotecnología (Bacteriology Unit)

- Isolation of bacteriophages against *Xf* from different sources

Centro de Protección Vegetal y Biotecnología (Mycology Unit)

- Disease mapping
- Crop and climatic maps
- Hierarchical Bayesian models including spatial components
- Network and epidemiological networks of potential plant disease introductions



WELCOME!