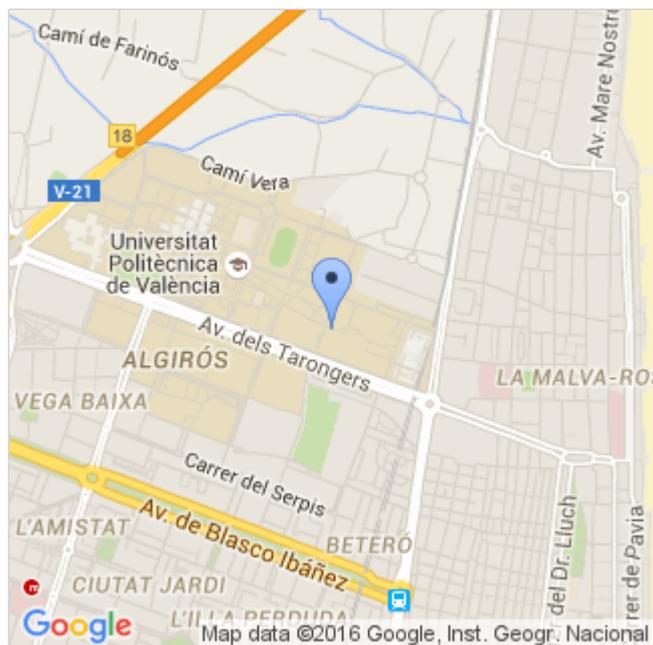


## Expression of Interest



### Contact Person/Scientist in Charge

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### Universitat Politècnica de València (UPV)

#### Department / Institute / Centre

- **Name:** Instituto de Conservación y Mejora de la Agrodiversidad Valenciana - Universitat Politècnica de València
- **Address:** Campus de Vera; Camino de Vera, s/n; Valencia (46022)
- **Province:** Valencia

#### Research Area

- Life Sciences (LIF)

### Brief description of the institution:

Universitat Politècnica de València (UPV) is the single Spanish Technical University that features in the main University world rankings. It is within the top 5 Spanish Universities with the highest revenue from both public research and knowledge transfer activities, and a national leader in patent license income and start up creation. Constituted in 1971, it comprises nearly 30.000 students, over 2500 academics, and 17 university research centres of excellence.

UPV has a relevant experience in the participation in international research programmes, with over 100 FP7 projects and 40 H2020 projects in the period 2014-2015. UPV researchers are also actively involved all H2020 life program stages, from workprogramme drafting discussions, to project coordination. It is also taking part in several major partnering initiatives (JTIs, PPPs, KICs...).

### Brief description of the Centre/Research Group (including URL if applicable):

The Solanaceae Breeding Group of the COMAV Institute is devoted to the genetic improvement of tomato, pepper, eggplant and minor Solanaceous crops. We use an integrated approach consisting in the combination of conventional and genomic-derived tools in genetics and breeding research and development of plant material in Solanaceous crops. The main research lines in the group involve a) the use of wild relatives for broadening the genetic base of crops and adapting them to the challenges posed by climate change, b) breeding for functional quality, and c) diversity studies and enhancement of genetic resources. The use of diversity, creation of populations of interest for breeders (introgression lines, MAGIC populations, etc.) and development of genomic tools (genetic maps, transcriptomes, etc.) are common activities in the group. The research group is highly reputed at the international level, with a high record of publications and several European H2020 projects, as well as other international and national projects and contracts with companies, and has many collaborations with international groups from all around the world. The research group is composed by five permanent staff researchers, as well as several postdoctoral researcher, PhD students and technicians, totaling 20 people. The group has available state-of-the-art labs, greenhouse and other research facilities at the campus of the UPV.

### **Project description:**

#### Use of introgressiomics for improvement of eggplant (*Solanum melongena*) and adaptation to climate change challenges

Introgressiomics is an approach, based in the use of a large variation of wild species, interspecific hybridization and genomic tools, to create multiple materials of crops carrying introgressions from wild relatives. One of the most promising target crops for introgressiomics is eggplant (*Solanum melongena*), as it is related to a large number of very diverse wild species. The objective of the research line is to develop highly diverse pre-breeding materials of eggplant that contain introgressions from different wild species using an introgressiomics approach. The project will involve the use of multiple materials developed after interspecific hybridization with wild species from different genepools for obtaining materials of eggplant with improved productive (increased yield) and/or quality properties (fruit quality, in particular high content in bioactive phenolics), as well as adapted to climate change challenges (i.e., increased efficiency of water use and tolerance to drought). The specific objectives of the project involve: a) obtaining and characterizing introgression lines (ILs) and subILs from different donor species, b) construction and characterizing a MAGIC population starting from double hybrids obtained between eight different parents, c) detection of genes and QTLs for traits of interest and marker assisted selection for introgression in the genetic background of cultivated eggplant. The project will involve the use of the newly developed introgressiomics approach for the development of a generation of new plant materials and tools for eggplant breeding.

### **Applications**

Curriculum vitae; deadline 15/08/2016