Date: May 5th 2014

Mobility research project proposal

APPLICATION ID: 449

The Applicant	
Applicant ID	**1958**
Full name	Carlos Calvo Garrido
Institution of last research employment	IRTA (Institut de Recerca en Tecnologies Agroalimentaries; Catalan institute for Food Technologies Research)

The Application	
Application ID	449
Resubmission	☐ Resubmission, AgreenSkills programme ☐ Resubmission, AgreenSkills+ programme ☐ Short-cycle X Not a resubmission
Research Project Proposal Short Title	Bacterial biological control agents against *Botrytis* bunch rot and their effects on berry microbiota
Research Project Proposal Long Title	Development and formulation of bacterial Biological Control Agents (BCAs) to control Botrytis bunch rot of grapes (*Botrytis cinerea*) and their effects on grape berry microbiota
Project acronym	BCAMICROBIOTA
Type of fellowship	**Incoming Fellowship**
Expected dates of mobility	10/01/2015
Duration	24

The Receiving Laboratory	
Host Institution(s)	INRA - Institut National de la Recherche Agronomique (French National Institute on Agronomic Research)
Research Unit	UMR 1065 SAVE (Santé et Agroécologie du Vignoble ; Vineyard Agroecology and Plant Health)
Full address	INRA Centre de recherche Bordeaux-Aquitaine UMR1065 Santé et Agroécologie du Vignoble Zone D, bât. D2 71, avenue Edouard Bourlaux BP 81 33883 Villenave d'Ornon cedex France
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APPLICATION ID: 449
RESEARCHER: Young
PROGRAMME: AgSk

Referent person *It can be the scientific mentor, the head of unit or head of the research team*	Marc Fermaud, Scientific Position in Plant Pathology and Epidemiology
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***Maximum 6 pages** using Times New Roman, 11 pt, single-spacing, excluding any tables and literature references*

The research project proposal	
Full Project title	Development and formulation of bacterial Biological Control Agents (BCAs) to control Botrytis bunch rot of grapes (*Botrytis cinerea*) and their effects on grape berry microbiota
Abstract	The project is based on the study of bacterial Biological Control Agents (BCAs), effective against Botrytis bunch rot of grapes (BBR), their formulation with selected additives and survival under limiting conditions, the optimisation of their application and the effect of their mass field application on grape berry microbiota. The host institution (UMR-SAVE, INRA Bordeaux-Aquitaine) has a strong expertise in the use of disease risk models and molecular tools for microbial ecology studies. Besides, UMR-SAVE is a reference research unit in grapevine pests and diseases. The main objectives of the project will be: 1) to develop new recommendations for vineyard applications of bacterial BCAs based on a BBR disease risk model, 2) to develop specific formulations for field applications of bacterial BCAs, through their combination with natural products as additives, in order to achieve high efficacy and best BCA survival in the field; 3) to examine the effect of BCA applications on berry microbiota. Thus, the project will involve skills from different plant science areas: microbiology, microbial ecology, control of fruit pathogens with biologically-based strategies and epidemiology of BBR in the field. Moreover, this project has the ambition to produce results with direct impact on BCA development programs and will provide transferable skills and knowledge for the wine and viticulture sector. The applicant will be directly involved in the development of a Decision Support System for BCA applications against BBR, the adaptation of molecular techniques to berry microbiota studies and BCA identification and quantification, and the screening of additives for BCA applications. The consecution of the project will introduce new skills in the applicant curriculum and experience, whereas other aspects of his previous expertise will be reinforced. This will provide him with a high skilled multidisciplinary researcher profile for future research career development.
Keywords	abiotic factors, additives, bacterial antagonist, biological control, disease risk model, microbial ecology, natural products, population dynamics, *Vitis vinifera*
Scientific fields and subjects	epidemiology, biological control, microbial ecology
Disciplines	LS8_1 ; LS8_2 ; LS9_5