

## POSTDOCTORAL POSITION OFFER FORM

1. Job Position title: Molecular basis of multitrophic relationships between entomopathogenic fungi and other biological control agents

2. Keywords:

3. Researcher in charge in DAUCO:

- Title: Prof.
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4. Research Group description (max. 2.000 characters)

The research group AGR 163 "Agricultural Entomology" has played a key role in the development of invertebrate pathology and microbial pest control in Spain since its foundation in 1978. At the XXI century, the group's activity has focused on the use of entomopathogenic fungi and their insecticidal molecules for pest control, as well as the integration of these fungal biological control agents with other strategies for Integrated Pest Control, in definitively, new pest control methods that conform to the sustainability criteria set out in current regulations. The group's recent discoveries on the role of entomopathogenic fungi as endophytes of plants and their impact on crop protection and plant production stand out. To achieve these goals, the group has had the help of numerous R + D + i projects in regional, national and international calls, as well as agreements and contracts with companies. Since its creation, the group has raised more than 8 million euros through these channels and has focused on the transfer of technology with several intervention patents.

The result of this long history has been numerous scientific publications in JCR journals (more than 110), 90% in Q1, and publications in non-indexed and popular journals, many books and book chapters. Furthermore, more than 26 new doctors have been trained within the group, many of whom have achieved scientific and academic dignity at other Spanish and European universities.

Recently, the group has been awarded three national and international awards for the development of an effective control method for the olive fly, the main biotic factor that reduces the quality of olive oil, based on the soil application of an autochthonous entomopathogenic fungus: the III Castillo de Canena Olive Oil Research Award "Luis Vañó" (2016), awarded by this olive company, the University of Jaén

(UJA) and the University of California Davis (United States). 2) The Baena 2016 PDO recognition on the 45th anniversary of its creation. 3) The I Innovagro award for innovation in agriculture 2016. The group had an outstanding position among the Andalusian PAI AGR university groups in the last DEVA evaluation.

#### 5. Job position description (max. 2.000 characters)

The researcher selected for this position will integrate with the research team to develop the tasks of this position. Mainly, the study of multitrophic relationships between entomopathogenic fungi and other biological control agents like parasitoids and predators. From other hand, the possible multitrophic effects mediated by endophytic entomopathogenic fungi on the population dynamics and behavior of insect's pests and their natural enemies. Furthermore, the study of the possible induced systemic resistance (ISR) related to entomopathogenic fungi colonization which can also contribute not only to endophytic colonization related mortality, but also to the better response of the plant to other biotic and abiotic stresses.

We are looking for candidates that hold an MSc degree in the field of Agriculture, Forestry or Environmental Engineering.

Have experience in multitrophic interactions and molecular ecology and molecular studies of insect-plant-natural enemy interactions

Experience in agricultural entomology and molecular techniques