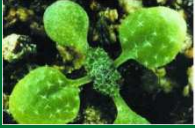




## Centro de Biotecnología y Genómica de Plantas Departamento de Biotecnología - UPM



### Predocctoral Position Available

A Fellowship/Contract within the Spanish Programme of Formación de Personal

Investigador is available for the research grant

#### “PLANT-VIRUS COEVOLUTION: PATHOGENESIS AND VIRULENCE ”

The evolution of pathogenicity and virulence in parasite populations is a major determinant in the failure of control strategies for infectious diseases, and in the emergence of new diseases. During the last 30 years theoretical analyses of pathogenicity and virulence evolution have been extensive. Similarly, the molecular genetics of pathogenicity and resistance (but not of virulence and tolerance) have been extensively analysed in plant-parasite systems. However, there has been little connection between these two fields of research. The major objective of this proposal is to bridge this gap for virus-plant interactions, and to test experimentally theoretical predictions of host-parasite co-evolution under different models of virus-plant interaction.

The student will work on one of the following topics:

1. Analysis of the impact of virus infection on the genetic structure and dynamics of wild populations of *Arabidopsis thaliana*
2. Pathogenicity and resistance evolution under a gene-for-gene model in wild populations of *Arabidopsis* and of *Turnip crinkle* (TCV), Turnip mosaic (TuMV) and *Cucumber mosaic* (CMV) viruses.
3. Pathogenicity and resistance evolution under a allelic compatibility model in wild populations of *Capsicum* sp. and viruses in the genus *Potyvirus*.
4. Analysis of the genetic determinants of plant tolerance to virus infection.

Applicants should have a degree (B. Sc. or similar) with interests in genetics, molecular biology and /or ecology and should send their application and CV to **Fernando García-Arenal**, Profesor of Plant Pathology, Centro de Biotecnología y Genómica de Plantas and E.T.S. de Ingenieros Agrónomos, Universidad Politécnica de Madrid ([fernando.garciaarenal@upm.es](mailto:fernando.garciaarenal@upm.es))

For further information: [www.cbgp.upm.es](http://www.cbgp.upm.es)