Oferta 2019 de Prácticas en el Marco de los Convenios UAM-CERU, UAM-CERFA y UAM-CEBE y Erasmus+ Prácticas

Novedades 22 de Abril de 2019

Se extiende el plazo de presentación de solicitudes hasta el 26 de Abril de 2019 para las prácticas a realizar en los destinos siguientes.

Prácticas en el Reino Unido bajo el amparo del Convenio UAM-CERU

UK4	Carolina Mayoral	Biology/Plant Physiology/ Environmental Sciences	University of Bradford
UK 5	Estrella Luna	Biology/Biotechnology/ Plant Physiology/Microbiology/ Environmental Sciences	University of Birmingham
UK 7	Dolores González	Chemical Engineering / Biology/ Environmental Sciences	University of Bath
UK 8 y 9	Carlos Fresneda Portillo (2 estudiantes para el mismo proyecto)	Mathematics	Oxford Brookes University
UK10	Agnes Ardanuy	Biology/Microbiology/Plant Physiology	Manchester Univeristy

Según las últimas informaciones disponibles, todas las estancias en el Reino Unido durante el verano de 2019 podrán realizarse en el marco del programa Erasmus+ Prácticas.

Prácticas en Alemania bajo el amparo del Convenio UAM-CERFA

AL 1	Eva Blasco	Chemistry/ Chemical Engineering	Institute for Technical Chemistry and Polymer Chemistry, KIT

La documentación deberá ser entregada en ORI-Ciencias siguiendo las instrucciones recogidas en la convocatoria.

Vicedecanato de Relaciones Internacionales y Movilidad

Facultad de Ciencias – UAM

Todos los detalles de las ofertas se encuentran en el pdf presentado en el primer plazo de convocatoria, a excepción de UK10, cuyos detalles aparecen a continuación:

Detalles nueva oferta UK10. Supervisora: Agnes Ardanuy

1. Traineeship title: Do mycorrhizal fungi influence tree growth-defence trade-offs?

2. Detailed programme of the traineeship period (Max 250 words):

In nature, 80% of plant species form beneficial (i.e. mutualistic) interactions with mycorrhizal fungi. These millenary interactions are based on a carbon exchange for nutrients: the plant contributes the products of photosynthesis to the fungus and in exchange the fungus allows it to access additional sources of nutrients by lengthening its hyphae as extensions of the root. While historically the nutritional perspective of tree-mycorrhiza interactions has dominated research due to their important contribution to growth and CNP cycling at the global scale, recent research points out that this mutualistic relationship could be key in shaping tree tolerance to biotic stress. The aim of this project is to evaluate the effects of a stress by simulated herbivory in growth and defence of mycorrhizal *Pinus sylvestris* seedlings. Seedlings will be established late march and they will be allocated to the following treatments: forest soil, sterilized forest soil and forest soil+fungicide treatment. The student will monitor tree productivity before and after a simulated herbivory event on half of the trees. The student will harvest the trees and measure:

- Net primary productivity
- Biomass
- Foliar stoichiometry
- Foliar phenolics as a plant defence proxy
- Foliarsugars as a nutritional content proxy
- Mycorrhizal colonization

Harvest will take place in July-August so it is important that that the traineeship overlaps with these months. The trainee will integrate in the Soil and Ecosystem Ecology group and will be able to learn other techniques as soil analyses, isotope labelling and mycorrhizal pure culture techniques.

3. Knowledge, **skills and competences to be acquired by the trainee at the end of the traineeship (expected Learning Outcomes)** (Max 100 words):

The expected learning outcomes are: (1) day-to-day experiment monitoring in greenhouse conditions, (2) measurement of whole tree-system traits (biomass, above-belowground biomass allocation, net primary productivity), foliar traits (stoichiometry, total phenolics and sugars) and root traits (fine root investment, mycorrhizal colonization) and (3) the basics on data collection, preparation and processing. As for experimental techniques, the student will learn to measure CO2 fluxes, use a spectrophotometer for measuring phenolic compounds and sugars, produce estimate root architecture with root scanning program and to establish mycorrhizal colonization of pine roots.

4. Monitoring plan (Max 50 words):

This work will be performed in collaboration with me. I will be running other experiments at the same time in the polytunnel/university with a similar scope and it will be crucial to unify tree trait measurements. We'll have weekly meetings, and we will perform the experiment harvest as a group.

5. Evaluation plan (Max 50 words):

I expect continuous communication with the trainee. We will evaluate the progress of the experiment set-up and harvest through weekly meetings. Ideally a basic dataset will be available at the end of the traineeship (depending of trainee visit dates) and the trainee will be able to explore the data generated.

6. Benefits of the traineeship to the applicant (host) (Max 200 words):

The main benefits will be two-fold: first it will allow us to use the data of this project in new experiments in the pipeline (we will determine best time for harvest and which traits to focus on), and second it will allow me to acquire experience in supervising undergrad/master students. If the experiment is successful it could be the first experiment of the first research paper while pursuing my Ramon Areces fellowship. In my experience experiments involving the measurement of plant traits and ecosystem function involve the processing of a high number of samples and measurements which are better dealt in a team formed by collaborators.