



Departamento de
Ciencias Agrarias
y del Medio Natural
Universidad Zaragoza

Postdoc position for 2 years: Comparative genomics of plant-endophyte holobionts and lateral gene transfers in *Festuca*, *Brachypodium*, and temperate grasses

2-years postdoctoral contract available at the Bioflora lab, Head Prof. Pilar Catalán (<http://bioflora.web.bifi.es/new-page.html>; <http://bioflora.web.bifi.es/research-team/profile1.html>), at the High Polytechnic School of Huesca, University of Zaragoza, in Huesca, Spain.

Available from March 1st, 2023 (negotiable).

We are seeking a highly motivated candidate to join us on a wide project within the frame of a grant entitled “Grasses-endophytes-microbiome: evolution, ecology and sustainable development of grasslands” funded by the Spanish Ministry of Science and Innovation.

Unraveling the co-evolution of grasses and their fungal endophytes, the extent of lateral gene transfer (LGT) in temperate grasses, and the role of the microbiome in the adaptation of grasses to the environment is challenging. We have been working for more than 20 years on the evolution, speciation processes, and adaptive mechanisms of model grass systems (*Brachypodium*, *Loliinae*). We want to expand our current research to investigate plant-endophyte interactions through comparative genomics that may explain a shared evolutionary history of holobionts and the adaptive success of grasses to their habitats. We will produce reference genomes for red and sheep fescues and perennial *Brachypodium* species to analyze LGT in temperate pooids. We will resequence the genomes of species and ecotypes and their endophytes to search for holobiont co-evolution and generate transcriptome atlases and metabolomic data to test the role of fungal and bacterial communities in plant tolerance to abiotic stress.

Salary: 37,536 €/year (University of Zaragoza N2 contract for junior postdocs)

Interested candidates with proven experience in plant and microbiome genomics (genome assembly and annotation) and bioinformatics programming please send a letter of motivation outlining interest in our project along with a full CV. Contact by e-mail Prof. Pilar Catalán, e-mail: pcatalan@unizar.es