

Position Offered: PREDOCTORAL RESEARCHER

Project: *Bioinformatics training for genomics and breeding data analysis, data integration and software development.*

Technological and scientific fields: Digital tools for agriculture, Computational biology, Data analysis and integration, Artificial Intelligence

Location: Málaga, Adalucía. IHSM. <https://www.ihsm.uma-csic.es/>

Research Group/PI: Breeding and developmental biology of subtropical fruit. Noé Fernández Pozo. <https://www.ihsm.uma-csic.es/grupos/13>

PROJECT SUMMARY

Recent advancements in omics technologies and the availability for the exploitation of thousands of genotypes hold unique opportunities to accelerate precision crop breeding. However, a major bottleneck lies in integrating those data using the appropriate software tools, artificial intelligence, systems modelling, and bioinformatics. IHSM research lines are focused in subtropical and Mediterranean plant species such as tomato, strawberry, mango, avocado, and cherimoya. Using the unique germplasm collections available at the IHSM, the institute is generating a large amount of omics data. The bioinformatic team of the institute has contributed several genomic portals of different crop species that are becoming reference tools at the international level. The aim of this proposal is to enhance the value of the data available to the center by generating a team of experts in integrative biology, incorporating Artificial intelligence as the foundations for new research lines in our institute. We propose a program to train a team of experts in Plant and Computer science, capable to (1) analyze omics data of the species studied in our institute and integrate them in our platforms; (2) implement and develop new bioinformatics tools in our platforms to manage pangenomics and multi-omics data; (3) apply computational biology algorithms and AI to study the genetic variations of thousands of accessions and their association with traits agricultural interest, and (4) apply AI to study emerging knowledge in multi-omics data.

PROFESSIONAL PROFILE

Minimum requirements:

Grade related to life science. Proficiency in Spanish and English. Basic bioinformatics skills. Knowledge about biology and genomics.

Merits to be considered:

Experience with AI, programming languages, and data analysis. Knowledge about plant science.

WHAT IS OFFERED

We offer a four years contract with intensive training in bioinformatics and artificial intelligence aiming to obtain a PhD with expertise in bioinformatics and artificial intelligence applied to plant science. It will include international stays and collaborations with researchers worldwide in countries such as USA or Australia. The candidate will learn to develop bioinformatics tools and will work with subtropical and Mediterranean species, for which we maintain a unique germplasm collection of subtropical species in Europe.

Contract conditions:

Predocctoral Researcher contract of 4 years' duration. Gross annual salary of 23,871.33 €.

Start of contract: before 31 December 2024

PRINCIPAL INVESTIGATOR CONTACT

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Financiado por
la Unión Europea
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