Position Offered: PREDOCTORAL RESEARCHER

Project: *Bioinformatics, data analysis and modeling for the advancement of vitiviniculture*

Technological and scientific fields: Computational biology; Climate change and biodiversity; Digital tools for agriculture; Artificial Intelligence

Location: Logroño, La Rioja, ICVV, www.icvv.es/english

Research Group/PI: Structural Bioinformatics, Modeling and Biological Mechanisms (Model3DBio), Juan Fernández Recio, www.icvv.es/english/3dbiowine

PROJECT SUMMARY

The general goal is to develop and implement digital technologies of interest for the advancement of vitiviniculture towards its sustainability under the important challenges that the sector is facing. The tasks will include the application and interpretation of methods for the analysis of next generation sequencing (NGS) data, as well as genomic, metagenomic, transcriptomic and proteomic data from plants and microorganisms of interest for the winegrowing sector. One of the goals is to analyze the Iberian grapevine germplasm, using the collections at ICVV, as well as those from partner wineries and plant nurseries. These activities will be co-supervised by the Vitigen group from ICVV and the Genomics and Bioinformatics Platform from CIBIR.

PROFESSIONAL PROFILE

Minimum requirements:

- Any of these degrees: Master or grade (at least 300 ECTS) in Bioinformatics, Biology, Biochemistry, Biotechnology or similar.
- High level of English (spoken and written)

Merits to be considered:

- Knowledge of several programming languages: bash, R, Python.
- Master or grade on Bioinformatics will valuated over other subjects.

WHAT IS OFFERED

The contract will allow the candidate to acquire specialized digital tools in the study and improval of grapevine and microorganism in fermentation, biocontrol, pathogens or plagues, as well as methods for the assembly and analysis of grapevine genomic variation, metagenomics analysis and multi-omic integrative methods and systems biology. Data obtained by NGS methods will be used (Illumina, Oxford Nanopore Technologies, PacBio). A total of 240 ECTS are expected to be completed in the 4 years of the contract, through a robust training plan, which includes a Master in Bioinformatics and Computational Biology, and courses in programming in bash, python, shell scripting, or R, as well as on population genomics, and the integration and visualization of multi-omic data. Several training stays are expected in research groups at national and international level, to learn and develop next-generation bioinformatics methods in pangenomics and metagenomics, and methods for data integration and systems biology. The candidate will be expected to supervise students in training and grade theses in Bioinformatics and similar subjects, as well as the attendance and communication of results in seminars, workshops, and national and international meetings.

Contract conditions:

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

Start of contract: before 31 December 2024

PRINCIPAL INVESTIGATOR CONTACT

Email: juan.fernandezrecio@icvv.es
Phone: 941053081