Position Offered: UNIVERSITY GRADUATE

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 optimization and implementation of computational tools in a bioinformatics, data analysis and modeling platform, and the digitalization and management of winegrowing omic data (genomics, transcriptomics, proteomics), data from plant phenotypes, wines and musts, terroir and climate, as well as from epidemiology of plagues and phytopathogens. The Model3DBio group has developed computational tools and web servers that have been successfully validated in CASP and CAPRI. The collaboration of the Vitigen group from ICVV and the Genomics and Bioinformatics Platform from CIBIR will be essential.

PROFESSIONAL PROFILE

Minimum requirements:

- Any of these degrees: Master or grade in Bioinformatics, Mathematis, Physics, Biotechnology or similar. Informatics Engineering.
- High level of English (spoken and written)

Merits to be considered:

- Knowledge of several programming languages: bash, R, Python.
- Experience in the development and/or implementation of biocomputing tools.

WHAT IS OFFERED

The contract will allow the candidate to acquire specialized digital skills, with the goal of improving the interoperability of the biocomputing tools developed in the center, their optimization by the new AI-based technologies, centralization of the applications of interest for the groups of the institute and for other groups from CSIC and external, as well as the building of accessible repositories with relevant data in vitiviniculture. A total of 280 ECTS are expected to complete in the 4 years of the contract, through a robust training plan, which includes a Master in Data Science, postgrade in Cloud Computing, and courses in programming and in the integration and visualization of multi-omic data. The plan includes training stays in research groups at national and international level for learning AI-based methods for the design and optimization of biomolecules for industrial applications, including the oenologic sector, and the acquisition of competences in the administration of high-performance computing, and the implementation and optimization of computational tools, servers and databases.

Contract conditions:

Indefinite contract for a University Graduate associated with the Momentum Project of 4 years' duration according to Spanish science law. Gross annual salary (37.000 € - 41.000 €).

Start of contract: before 31 December 2024

PRINCIPAL INVESTIGATOR CONTACT

Email: juan.fernandezrecio@icvv.es

Phone: 941053081

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