



POLITÉCNICA



CENTRO DE BIOTECNOLOGÍA Y GENÓMICA DE PLANTAS  
UPM-INIA (CBGP)

Parque Científico y Tecnológico de la UPM  
Campus de Montegancedo, Autopista M-40, Km 38  
Pozuelo de Alarcón, 28223 Madrid

## **POSTDOCTORAL POSITION IN GENOMIC ASSISTED BREEDING**

College/Management Unit	<b>CBGP-UPM (SPAIN)</b>
School/Unit	Biotecnología-Biología Vegetal
Post Title & Subject Area (if relevant)	<b>CBGP Postdoctoral Researcher</b>
Project	H2020: Next generation variety testing for improved cropping on European farmland (InnoVar).
Post Duration	<b>30 months</b>
Application Deadline:	<b>12-February-2021</b>
Start new Job:	<b>March-April depending on applicant.</b>
Send CV, cover letter and at least 3 possible contacts for reference letters to:	<b><a href="mailto:j.isidro@upm.es">j.isidro@upm.es</a></b>

### **Position Summary**

The position is in the **Center of biotechnology and Genomic of plants and is part of H2020 European Grant** to develop and deliver methods and tools to achieve greater efficiency in the distinctness, uniformity and stability (DUS) and value for cultivation and use (VCU) varieties to allow farmers to maximise the potential of their land. This is a multidisciplinary project 10 European countries involved.

Our lab works with several crop species (wheat, oat, barley, teff), to develop genomic prediction methods for optimal implementation on breeding schemes. We source tools from genomics, quantitative, statistical, and population genetics, and from machine learning approaches. Wheat will be the target crop on this research position. Primary tasks for the postdoc include the analysis and classification of VCU multi-trials by using statistical approaches to identify main constrains and risks across EU, bioinformatics analysis of large wheat panel and handling of large datasets. **The postdoc will analyse data from multi experiments for multi-trait selection, GxE and genome wide association studies between variants and multiple phenotypes, for the training of genomic prediction models.**

We are looking for an enthusiastic researcher, with a clear interest in quantitative genetics, plant breeding, application of new genomic technology, *with excellent programming skills with a minimum of 2 years' experience after doctoral fellowship or a recent PhD with great publications in the plant genomics area.* Experience with handling large phenotypic and genomic data and an interest in quantitative genetic concepts is a prerequisite. The successful candidate is expected to contribute to ongoing genomics-related projects in our young interdisciplinary research group.

The position role also aims to develop new or advanced research skills and competences, on the processes of publication in peer-reviewed academic publications and scholarly dissemination, the development of funding proposals, and the supervision and mentorship of graduate students along with the opportunity to develop your skills in research led teaching.

This is a research focused role, where you will conduct a specified programme of research supported by research training and development under the supervision and direction of a Principal Investigator.



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The primary purpose of the role is to further develop your research skills and competences, including the processes of publication in peer-reviewed academic publications, the development of funding proposals, the mentorship of graduate students along with the opportunity to develop your skills in research led teaching.

**Salary:**

€30,874-38,418 per annum

Appointment on the above range will be dependent on qualifications and experience

**Principal Duties and Responsibilities**

- Multi-trait, multi environmental genomic predictions modelling.
- Conduct a specified programme of research and scholarship under the supervision and direction of your Principal Investigator.
- Engage in appropriate training and professional development opportunities as required by your Principal Investigator, your School or Institute, or the University.
- Support your Principal Investigator and research group in the design and development of the research programme.
- Support if required, the development of proposals for research funding.
- Engage in the dissemination of the results of the research in which you are engaged as directed by and with the support of and under the supervision of your Principal Investigator.
- Engage in the wider research and scholarly activities of your research group, School and Institute.
- Take responsibility as requested for day-to-day advice and support of graduate research students associated with your research group.
- Mentor and assist, as appropriate and as directed, the research graduate students in your group, School and Institute.
- Carry out administrative and management work associated with your programme of research.



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## Selection Criteria

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

### *Mandatory*

- PhD in one of the following subjects: statistics, plant breeding, plant science, human genetics, statistical genetics or evolutionary genetics.
- Excellent programming in R, python or other languages.
- Ability to identify and fulfil the academic writing requirements for target publications.
- Proven record of working with team members and PhD students to help build their research skill and knowledge and to support and guide their professional development.
- Evidence of research activity (publications, conference presentations, awards) and future scholarly output (working papers, research proposals, and ability to outline a research project).
- The candidate should have a strong track record as a PhD student and show a keen and independent intellect.
- Be able to handle large data sets.
- A demonstrated commitment to research and publications
- An understanding of the operational requirements for a successful research project
- Excellent Communication Skills (Oral, Written, Presentation etc).
- Excellent Organizational and Administrative skills including a proven ability to work to deadlines.
- Candidates must demonstrate an awareness of equality, diversity and inclusion agenda.

### *Desirable*

- Experience on genomic prediction or selection approaches.
- Demonstrated understanding of the value of academic and commercial information e.g., Non-disclosure agreements
- Knowledge and application of the principles underpinning successful grant application.