The AGR-114 Molecular Breeding Group offers a 3-year position to complete a PhD program at the University of Córdoba starting during the first quarter 2022.

Summary

Our ability to feed the world with innovative products depends on new breeding methods and technologies that will require well-trained plant breeders who understand fieldwork, skilled scientists who understand the genetic basis of the traits to improve and data scientists to help geneticists and breeders to make more informed material selections. Flowering time is the major domestication trait defining the adaptation of chickpea to different agro-climatic conditions, and therefore is a major determinant of its productivity. Understanding how individual genetic variants combine to provide adaptation in specific situations is fundamental for efficient introgression of new traits into adapted backgrounds. The objective of the project is to unravel the molecular basis controlling flowering time in chickpea by constructing the highest-density genetic map available using large-scale mapping populations and high-throughput next-generation sequencing. Candidate genes will be characterized using mutant collections and advanced technologies of molecular analysis. Results will be an important resource for geneticists currently investigating legume phenology around the globe. Moreover, the project could have useful applications in agriculture.

Location

Córdoba, Spain

Open & Closing dates

15 Nov - 30 Nov 2021

Contact

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Duties

- Phenotype the population in growth chambers and field trials to obtain agronomic metrics.
- Use high density genotypes to construct linkage maps for a large collection of recombinant inbred populations consisting of approximately 1000 lines.
- Identify and functionally characterize flowering genes from chickpea genome.
- Cooperate with team members to elucidate the molecular basis for flowering time.

Qualifications

- We are looking for applicants with experience managing large datasets.
- Familiarity with any programming language and coding is desirable.
- The position requires a degree in agriculture, biological sciences, or related disciplines appropriate to the position.
- Qualification Grade > 8.0.