

MIGUEL CAMPOS CACERES

PH.D AT UNIVERSIDAD DE ZARAGOZA

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SUMMARY

I am a dedicated researcher with a strong background in evolutionary biology, plant genomics, and pangenomics. My expertise lies in studying the evolution of plant species, particularly polyploid systems, using cutting-edge genomic techniques. I have contributed to high-impact research projects and publications, with a focus on unraveling complex genomic architectures and evolutionary dynamics. My work is driven by a commitment to advancing scientific understanding through the application of modern genomic technologies and collaborative research.

EDUCATION

Biology degree	2013-2017 Seville University
Master degree in Evolutionary Biology	2017-2018 Seville University
Ph.D in Agrarian Sciences and Natural Environment	2021-2025 Zaragoza University

PUBLICATIONS

2024 - MOLECULAR ECOLOGY - IF=4.5 - Q1

Campos, M., Pérez-Collazos, E., Díaz-Pérez, A., López-Alvarez, D., Oumouloud, A., Mur, L. A., ... & Catalán, P. Repeated migration, interbreeding and bottlenecking shaped the phylogeography of the selfing grass *Brachypodium stacei*. *Molecular ecology*, e17513.

2023 - ANNALS OF BOTANY - IF=3.6 - Q1

Campos, M., Kelley, E., Gravendeel, B., Médail, F., Maarten Christenhusz, J. M., Fay, M. F., ... & Viruel, J. (2023). Genomic, spatial and morphometric data for discrimination of four species in the Mediterranean *Tamus* clade of yams (*Dioscorea*, *Dioscoreaceae*). *Annals of Botany*, 131(4), 635-654.

IN PREP:

- **Campos M.**, Pérez-Collazos E., Vogel J., Catalán P. Unravelling the plastome complexity of the *Brachypodium distachyon* grass complex.
- **Campos M.**, Pérez-Collazos E., Vogel J., Catalán P. Life-history traits and environmental niche genomics of recurrently originated allotetraploid *B. hybridum* lineages and its progenitor species.
- **Campos M.**, Sancho R, Malymon Y, Ben-Menni S, Pérez-Collazos E., Vogel J., Corke F., Doonan J., Catalán P. 2024. Tolerance to drought and nutrient stresses vary among species and ecotypes of the *Brachypodium* polyploid model system.
- **Campos M.**, Li L., Pérez-Collazos E., Vogel J., Catalán P. Pangenomics of the hybrid allopolyploid *Brachypodium* model complex.
- Duran-Lázaro M., **Campos M.**, San-Emeterio L., Sotomayor A., Ben-Menni S., Catalán P., Canals RM. Diversity of the reproductive system and genomic characterization of the tallgrass *Brachypodium rupestre* along an invasion gradient in high mountain grasslands.
- Chen C., Sancho R., **Campos M.**, Li L., Vogel J., Des Marais D., Catalán P. 2024. Pangenomics and expansion and contractions of diploid and polyploid genomes of model *Brachypodium* grasses.
- Zhai Y, **Campos M.**, Vogel J., Catalán P. Different metabolomic responses of annual *Brachypodium* species to microbiome cocktails in the EcoFab ecosystem.

CONGRESS

TALKS

- Campus Iberus **2022**. “Multiple origins and functional genomics of plant allopolyploids: The *Brachypodium* model system”.
- XI National Conference BIFI **2023**. “Unveiling the origins of the overlooked model grasses *Brachypodium stacei* and *Brachypodium hybridum*”.
- V International Brachypodium Conference **2023**. “Recent radiation, repeated migration, interbreeding, and niche adaptation shaped the phylogeography of the ancestral selfing Mediterranean grass *Brachypodium stacei*”.
- Botany **2023**. “The elusive chloroplast puzzle of *Brachypodium distachyon* complex”.
- BIFI talks **2024**. “Comparative and functional genomics: a comprehensive approach to understanding the evolution of the annual Brachypodium complex”.
- XX International Botanical Congress **2024**. “Evolutionary dynamics of the allotetraploid *Brachypodium hybridum* and its progenitor species”.

POSTER

- 9th Biennial Conference International Biogeography Society **2019**. “Taxonomical implications of the phylogeography of *Sonchus bulbosus*”.
- 3rd UK Plant Evolution Meeting **2020**. “Cryptic taxa using a target-capture method”.
- II Simposio Anual de Botánica Española **2021**. “Phylogeography and climatic niche modeling of the circum Mediterranean grass *Brachypodium stacei*”.
- Campus Iberus **2022**. “Multiple origins and functional genomics of plant allopolyploids: The *Brachypodium* model system”.
- XX International Botanical Congress **2024**. “Migration and interbreeding shaped the phylogeography and niche adaptation of the ancestral grass *Brachypodium stacei*”.

PROJECTS

PREDOCTORAL RESEARCHER

- Integrative Evolutionary Genomics of the *Brachypodium* Polyploid Model: Unraveling the Basis of Polyploid Success in Angiosperms (Brachyploids) (PID2019-108195GB-I00). Ministry of Science and Innovation. Predoctoral Researcher under FPI Training Contract Assigned to Project. 2020-2023 (extended to 2024).
- Integrative Genomic Characterization of the *Brachypodium* Polyploid Model to Unravel the Bases of Polyploidy Success in Flowering Plants. Community Science Program (CSP) Project 50350. Joint Genome Institute. Department of Energy. Government of the United States of America. Predoctoral Researcher Assigned to Project. 2018-2023 (extended to 2027).
- Bioflora (Reference Research Group in Aragon). A01-20R and A01-23R. Government of Aragon – Department of Innovation, Research and University. Team Member. 2020-2022, 2023-2025.

TEACHING

- 2021-2022 Biology Course (Laboratory Practices). Degree in Agri-Food and Rural Environment Engineering. University of Zaragoza. **60 hours**.
- 2022-2023 Biology Course (Laboratory Practices). Degree in Agri-Food and Rural Environment Engineering. University of Zaragoza. **60 hours**.
- 2023-2024 Biology Course (Laboratory Practices). Degree in Agri-Food and Rural Environment Engineering. University of Zaragoza. **60 hours**.