



Dr. MIRIAM LÓPEZ HINOJOSA

Details



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Miriam López

Skills

- ★★★★☆ Computer Skills
- ★★★★☆ Microsoft Office
- ★★★★☆ Adaptability
- ★★★★★ Effective Time Management
- ★★★★☆ Communication
- ★★★★☆ Leadership Skills
- ★★★★★ Critical thinking and problem solving

Languages

- ★★★★★ Spanish
- ★★★★☆ English

Professional Profile

My research career has focused on the characterization and study of the adaptive response of woody species to abiotic stress. In 2014, I finished my degree in **Biotechnology** at the University Francisco de Vitoria of Pozuelo (Madrid), with an own title of Expert in Scientific Research Methodology. During the course of it, I made a 6-month stay at Boston University (Boston, USA), in the Department of Biochemistry and Molecular Biology.

Afterwards, I did my Master's degree in **Molecular Biology, Biochemistry and Biomedicine** at the Complutense University of Madrid, where I spent 4 months in the Plant Genetics laboratory of Dr. Díaz-Sala Galeano, a group where I developed my Master's thesis and which made me fall in love with the world of forest genomics and transcriptomics.

After this period, in 2017, I started my **PhD Thesis studies** in the research groups of Forest Genomics and Organic Chemistry of the National Institute for Agricultural and Food Research (INIA-CSIC), under the tutelage of my thesis supervisors, Dr. María Teresa Cervera Goy and Dr. María Brígida Fernández de Simón. The doctoral thesis was developed within the doctoral program of the University of Alcalá de Henares, with a grant for predoctoral contracts for the training of doctors (FPI-2016, BES-2016-076833). The thesis work consisted of the study of *Pinus pinaster* rootstock response to drought using a multidisciplinary approach, within the research projects AGL2015-66048-C2-1-R and RTI2018-098015-B-I00, and ended in October 2021 with Cum Laude qualification. These studies resulted in the publication of 4 scientific articles, one of them as first autor (doi: 10.1038/s41598-021-90672-y). During the same, I performed basic laboratory techniques, and transcriptomic and metabolic studies and analyses, awakening a special interest in the treatment and interpretation of bioinformatics data.

For this reason, I am currently studying a Master in **Computational Biology** at the Polytechnic University of Madrid, in order to complete my research profile in the field of bioinformatics analysis of plant genomic, transcriptomic, metabolomic and epigenomic data, as well as developing multiple complementary courses in **Python** and **R** programming.

PUBLICATIONS

López-Hinojosa, M., de María, N., Guevara, M. A., Vélez, M. D., Cabezas, J. A., Díaz, L. M., Mancha, J. A., Pizarro, A., Manjarrez, L. F., Collada, C., Díaz-Sala, C., & Cervera Goy, M. T. (2021). Rootstock effects on scion gene expression in maritime pine. *Scientific Reports*, 11(1), 11582. <https://doi.org/10.1038/s41598-021-90672-y>

Fernández de Simón, B., Aranda, I., López-Hinojosa, M., Miguel, L., & Cervera, M. T. (2021). Scion-rootstock interaction and drought systemic effect modulate the organ-specific terpene profiles in grafted *Pinus pinaster* Ait. *Environmental and Experimental Botany*, 186, 104437. <https://doi.org/10.1016/j.envexpbot.2021.104437>

de María, N., Guevara, M. Á., Perdiguero, P., Vélez, M. D., Cabezas, J. A., López-Hinojosa, M., Li, Z., Díaz, L. M., Pizarro, A., Mancha, J. A., Sterck, L., Sánchez-Gómez, D., Miguel, C., Collada, C., Díaz-Sala, M. C., & Cervera, M. T. (2020). Molecular study of drought response in the Mediterranean conifer *Pinus pinaster* Ait.: Differential transcriptomic profiling reveals constitutive water deficit-independent drought tolerance mechanisms. *Ecology and Evolution*, 10(18), 9788-9807. <https://doi.org/10.1002/ece3.6613>

Lasa, A. V., Guevara, M. Á., Villadas, P. J., Vélez, M. D., Fernández-González, A. J., de María, N., López-Hinojosa, M., Díaz, L., Cervera, M. T., & Fernández-López, M. (2022). Correlating the above- and belowground genotype of *Pinus pinaster* trees and rhizosphere bacterial communities under drought conditions. *Science of The Total Environment*, 155007. <https://doi.org/10.1016/j.scitotenv.2022.155007>