

## CURRICULUM VITAE

### Part A. PERSONAL INFORMATION

CV date

12/03/2024

First name	Carlos		
Family name	Lara Romero		
Gender (*)	Male	Birth date	30/07/1983
Social Security, Passport, ID number	53447757N		
e-mail	carlos.lara@urjc.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-0962-0567	

#### A.1. Current position

Position	Profesor Ayudante Doctor (Lecturer)
Initial date	12/12/2022
Institution	Universidad Rey Juan Carlos (URJC)
Department/Center	Escuela Superior de Ciencias Experimentales y Tecnología
Country	Spain
Key words	Plant Ecology, Evolutionary Ecology, Biodiversity Conservation

#### A.2. Previous positions (research activity interruptions, see call)

Period	Position/Institution/Country/Interruption cause
2015	Postdoctoral researcher/URJC/Spain
2015	Visiting researcher/ETH Zurich/Switzerland
2016	Postdoctoral Fellow/Technical Particular University of Loja (UTPL)/Ecuador
2017-2018	Juan de la Cierva Researcher/ IMEDEA (UIB-CSIC)/Spain
2018	Visiting researcher/INRAE/France
2019-2020	Postdoctoral researcher/URJC/Spain
2020-2021	Postdoctoral researcher/Universidad de Alcalá/Spain
2021-2022	Juan de la Cierva Researcher/URJC/Spain
2022	Profesor Ayudante Doctor (Lecturer)/U. Complutense/Spain

#### A.3. Education

PhD, Licensed, Graduate	University/Country	Year
B.Sc. Environmental Science	URJC/Spain	2008
M.Sc. Science and Environmental Technology	URJC/Spain	2009
Ph.D. in Natural Resources Conservation	URJC/Spain	2010-2014

### Part B. CV SUMMARY

As a Lecturer in Botany at URJC, my primary goal is to advance our understanding of ecological systems and their conservation. I place particular emphasis on the use of data science techniques for research and knowledge transfer, while fostering data literacy in both students and academic colleagues. My academic career is marked by significant research contributions, including **59 publications spanning book chapters, reports, and scientific articles**. Collectively, these works have accumulated 881 citations on Google Scholar (h-index = 19, i10 index = 26). Notably, 23 research articles are published in journals ranked in the top 25%, with 15 publications ranked in the top 25% of the world's most cited according to CiteScore.

My research careers have yielded significant insights across various domains. Through the study of biotic interactions, particularly in plant-pollinator (Morente-López et al 2018 *Sci. Rep.*; Lara-Romero et al 2019 *J. Biogeogr.*; García et al 2024 *Sci. Rep.*) and plant-plant relationships (Lara-Romero et al 2016 *Oikos*, Lara-Romero et al 2016 *Heredity*), I've contributed to our understanding of structural dynamics and its impact in plant fitness, with broad scientific and social impact. Additionally, my investigations into genetic mechanisms underlying organisms' responses to changing environments have provided novel insights into adaptation processes (e.g., Morente-López et al 2020 *Environ. Exp. Bot.*; Morente-López et al 2021 *J. Ecol.*; Morente-López et al 2022 *Glob. Change. Biol.*). My work extends to applied ecology, where I've made significant contributions to the conservation and restoration of pollinators (Lara-Romero et al 2016 *Funct. Ecol.*, Traveset et al 2024 *J. Appl. Ecol.*), understanding the impact of invasive species (Lara-Romero et al 2022 *J. Veg. Sci.*, Lázaro-Lobo et al 2022 *For. Ecol.*



*Manag.*) and advancing assisted evolution techniques in plants (Sacristán et al 2023 *Evol. Appl.*, Torres et al 2023 *Plants*).

**I have demonstrated leadership throughout my research career.** I have taken on leadership roles in research projects funded by the EU programmes and the Spanish National Plan for RD&I. Most of my contracts and research projects as Principal Investigator (PI) received funding through competitive calls, totalling ca. 770 k€. Currently, I serve as the PI of two active research and transfer projects, overseeing a team of over ten researchers. I have supervised students on their undergraduate (10) and masters (3 completed and 2 in progress) final projects, resulting in publications in prestigious journals. I have supervised the completion of a PhD thesis, with one ongoing. Furthermore, I have taken the initiative to organize multiple symposia at scientific conferences and seminars, fostering intellectual discourse and interdisciplinary collaboration, thus contributing to a vibrant academic environment.

**My research has an international dimension,** demonstrated through my participation in several currently active international consortia and working groups: *GrENE-net* (<https://grene-net.org/>), *sINTERVAL* (<https://www.idiv.de/en/sinterval>), *fungreen* (<http://fungreenproject.weebly.com/>), and *COUSIN* (<https://cousinproject.eu/>). Additionally, 50% of my publications have been co-authored by international researchers, and 91% of my citations originate from foreign institutions (Source: WoS). In addition, I have 32 months of experience working in world-renowned research centres, and I serve as subject editor for the international journals *Plant Biology* (IF: 3.9) and *Mediterranean Botany* (IF: 1.0).

**I am deeply committed to advancing open science, dissemination, and technology transfer.** I have taken a proactive role in shaping national strategies for plant conservation, while simultaneously establishing repositories focused on plant conservation and genetic resources. These efforts have significantly enriched our understanding of the conservation status of vascular plant species in both Spain and Europe. I have also contributed to the Spanish Red Book of Threatened Species. Furthermore, through organizing specialized courses in statistics and programming and serving as the Coordinator of the Biological Big Data Laboratory at URJC, I foster interdisciplinary collaboration and promote data-driven use in biodiversity and conservation, emphasizing the importance of data literacy in these fields.

## Part C. RELEVANT MERITS

### C.1. Publications

Ten most relevant contributions. Complete list can be found at <https://orcid.org/0000-0003-0962-0567>.

Traveset, A; **Lara-Romero, C (CA)**; Santamaría, S; Cousins, SAO (2/12) (2024). Effect of green infrastructure on restoration of pollination networks and plant performance in semi-natural dry grasslands across Europe. *J. Appl. Ecol.*, 00-00: 1–14. [10.1111/1365-2664.14592](https://doi.org/10.1111/1365-2664.14592)

Morente-López, J (CA); Kass, J; **Lara-Romero, C**; Serra-Díaz, P; Soto-Correa, JC; Anderson, R; Iriondo, JM (2022). Linking ecological niche models and common garden experiments to predict phenotypic differentiation in stressful environments: assessing the adaptive value of marginal populations in an alpine plant. *Glob. Change Biol.*, 28: 4143-4162. [10.1111/gcb.16181](https://doi.org/10.1111/gcb.16181)

Morente-López, J (CA); **Lara-Romero, C**; García-Fernández, A; Rubio-Teso, ML; Prieto-Benítez, S; Iriondo, JM. (2021). Gene flow effects on populations inhabiting marginal areas: origin matters. *J. Ecol.*, 109: 139-153. [10.1111/1365-2745.13455](https://doi.org/10.1111/1365-2745.13455)

Morente-López, J (CA); Scheepens, J.F; **Lara-Romero, C**; Ruiz-Checa, R; Tabarés, P; Iriondo JM. (2020). Past selection shaped phenological differentiation among populations at contrasting elevations in a Mediterranean alpine plant. *Environ. Exp. Bot.*, 170: 103894. [10.1016/j.envexpbot.2019.103894](https://doi.org/10.1016/j.envexpbot.2019.103894)

Naranjo, C; Iriondo, JM; Riofrío, M; **Lara-Romero, C (CA)**. (2019). Evaluating the structure of commensalistic epiphyte–phorophyte networks. A comparative perspective of biotic interactions. *AoB Plants*, 11, plz011. [10.1093/aobpla/plz011](https://doi.org/10.1093/aobpla/plz011)

Morente-López, J; **Lara-Romero, C (CA)**; Ormosa, C; Iriondo, JM. (2018). Phenology drives species interactions and modularity in a plant - flower visitor network. *Sci. Rep.*, 8, 9386. [10.1038/s41598-018-27725-2](https://doi.org/10.1038/s41598-018-27725-2)

**Lara-Romero, C (CA)**; Seguí J; Pérez A; Nogales M; Traveset, A. (2019). Beta diversity and specialization in plant-pollinator networks along an elevational gradient. *J. Biogeogr.* 46:1598-1610. [10.1111/jbi.13615](https://doi.org/10.1111/jbi.13615)

**Lara-Romero, C (CA)**; García, C; Morente-López, J; Iriondo, J.M. (2016). Direct and indirect effects of shrub encroachment on alpine grasslands mediated by plant-pollinator interactions. *Funct. Ecol.*, 30: 1521–1530. [10.1111/1365-2435.12637](https://doi.org/10.1111/1365-2435.12637)



**Lara-Romero, C (CA)**; de la Cruz, M; Escribano-Ávila, G; García-Fernández, A; Iriondo, JM. (2016). What causes conspecific plant aggregation? Disentangling the role of dispersal, habitat heterogeneity and plant–plant interactions. *Oikos*, 125: 1304–1313. [10.1111/oik.03099](https://doi.org/10.1111/oik.03099)

**Lara-Romero, C (CA)**; García-Fernández, A; Robledo-Arnuncio, J.J.; Roumet, M; Morente-López, J; López-Gil, A; Iriondo, J.M. (2016). Individual spatial aggregation correlates with between-population variation in fine-scale genetic structure of *Silene ciliata* (Caryophyllaceae). *Heredity*, 116: 417-423. [doi.org/10.1038/hdy.2015.102](https://doi.org/10.1038/hdy.2015.102)

## C.2. Congress

### *Most relevant contributions to congress*

- **Lara-Romero, C.** Evaluación de la tolerancia a la sequía en poblaciones silvestres de *Lupinus angustifolius*. 1<sup>st</sup> Webinar Spanish Legumes Network (RELEG). 2024. Online. [Invited conference](#)
- **Lara-Romero, C.** Búsqueda, descarga y limpieza de datos de biodiversidad desde GBIF. Una odisea ecoinformática. I Cycle of seminars on ecoinformatics. Spanish Association of Terrestrial Ecology (AEET). 31/01/2022. [Invited conference](#).
- **Lara-Romero, C.** Cambio climático en la alta montaña mediterránea. Conference series on Climate Change. University of the Balearic Islands, Spain. 20/05/2018. [Invited conference](#).
- **Lara-Romero, C.** Avances conceptuales y metodológicos en ecología evolutiva. 16<sup>th</sup> AEET Congress. Almeria, Spain, 16/10/2023 - 20/10/2023. [Symposium organiser](#)
- **Lara-Romero, C.** Evolutionary responses to climate change. Evidence from Mediterranean plant populations. 14<sup>th</sup> MEDECOS Congress. International Society of Mediterranean Ecology Almeria, Spain, 16/10/2023 - 20/10/2023. [Symposium organiser](#)
- García-Fernández, A; **Lara-Romero, C (CA)**; Iriondo JM (2/6). Facilitated adaptation as a conservation tool for plant adaptation to climate change. 18th OPTIMA Meeting. Erice, Italy. 20/09/2023 - 23/09/2023. [Oral presentation](#).
- **Lara-Romero, C (CA)**; Morente-López, J; Iriondo M (2/6). Adaptive potential of marginal populations: Beyond the genetic depauperation paradigm. 15<sup>th</sup> AEET Congress. Plasencia, Spain. 18/10/2021 - 22/10/2022. [Oral presentation](#).
- **Lara-Romero, C (CA)**; Tabarés, P; Iriondo M (1/11). Phenotypic and genomic data reveal adaptive genetic variation in flowering phenology in a Mediterranean alpine plant. 1st Meeting of the Iberian Ecological Society. 2019. Barcelona, Spain. [Oral presentation](#).
- **Lara-Romero, C (CA)**; Zemp, N; Iriondo M (1/7). Transcriptomic and phenotypic data from common gardens reveal adaptive genetic variation in a Mediterranean alpine plant. 13<sup>th</sup> EEF Congress. 2015. Rome, Italy. [Oral presentation](#).

\*Plus a total of 14 oral contributions at national (6) and international (8) meetings.

## C.3. Research projects

### *Most outstanding research projects from competitive calls:*

- Crop Wild Relatives utilisation and conservation for sustainable agriculture (COUSIN: 101135314). European commission Programme HORIZON-CL6-2023-BIODIV-01. PI: Christian Schöb (URJC). 2024-2029 (675.192 €). Role as researcher: Data Gathering and Data Analysis
- Drought adaptation in Crop Wild Relatives: an integrative approach (DACWIRE: PID2021-127841OA). Spanish National R&D&I Plan. PIs: **Carlos Lara-Romero**, Alfredo García. 2022-2026 (176.600 €). Role: Principal Investigator.
- Diversity of biotic interactions and their role in the ecosystem functioning of forest restorations. (TED2021-132053B-I00). Spanish National R&D&I Plan. PI: Ana García-Cervigón, Isabel Martínez. 2022-2024 (225.300 €). Role as researcher: Research Design, Data Gathering and Data Analysis.
- Translocations of flora and fauna for conservation and restoration: ecological, evolutionary, and socio-economic impacts at multiple scales (TRANSLOC: PCI2022-132977). BiodivERsA-plus (European Biodiversity Partnership). PI: Alfredo García-Fernández. 2022-2025 (55.999 €). Role as researcher: Data Gathering and Data Analysis.
- INTERaction Variation along ALtitudinal gradients (sINTERVAL). German Research Society. PI: Tiffany Knight. 2021-2023 (44.230 €). Role as researcher: Data Gathering and Data Analysis.
- Determinants of the success of exotic trees across different invasion stages (EXARBIN: RTI2018-093504-B-100). Spanish National R&D&I Plan. PI: Pilar Castro. 2019 – 2021 (102.805 €). Role as researcher: Data Gathering, Data Analysis and Manuscript Writing.



- Networking, partnerships and tools to enhance in situ conservation of European plant genetic resources (Farmer's Pride: 774271). European Commission. H2020-EU programme. PI: Iriondo JM. 2017 – 2020 (202.050 €). Role as researcher: Data Gathering, Data Analysis and Manuscript Writing.
- Assisted evolution of flowering time as a response to climate change (EVA: CGL2016-77377). Spanish National R&D&I Plan. PI: Jose Iriondo (URJC). 2017-2021 (165.000€). Role as researcher: Proposal Writing, Data Gathering, Data Analysis and Manuscript Writing.
- Functional connectivity and Green Infrastructure (FunGreen: PCIN-2016-077). European Commission (Biodiversa Program). PI: Anna Traveset (CSIC). 2016-2019 (148.500 €). Role as researcher: Research Design, Data Gathering, Data Analysis and Manuscript Writing.
- Local adaptation in high-mountain plants: an integrated perspective (AdAptA-CGL2012-44528). Spanish National R&D&I Plan. PI: Jose Iriondo (URJC). 2013-2016 (112.000 €). Role: Proposal Writing, Data Gathering, Data Analysis and Manuscript Writing. PhD thesis supervision.
- Determinants of distribution limits of high-mountain plants and expected responses to global change (LIMITES-CGL2009-07229). Spanish National R&D&I Plan. PI: Jose Iriondo (URJC). 2010-2014 (95.000 €). Role as researcher: Data Gathering, Data Analysis, Manuscript Writing.
- An Integrated European In Situ Management Workplan: Implementing Genetic Reserves and On Farm Concepts (AEGRO: AGRI-GENRES 057). European Commission. PI: Nigel Maxted (Univ. of Birmingham). 2007-2010 (829.625 €). Role as researcher Data Analysis, Manuscript Writing.

\* Plus a total of 19 research projects at national (11) and international (8) level.

Additionally, I am **coordinator** of one experiment within consortium GrENE-net ([www.grene-net.org](http://www.grene-net.org)).

#### C.4. Contracts, technological or transfer merits

##### Transfer contracts

- Realización de trabajos de desarrollo de la Estrategia Nacional de Conservación de Parientes Silvestres de Especies Cultivadas y Plantas Silvestres de Uso Alimentario (Expediente: 202205000049). Ministerio De Agricultura Pesca y Alimentación. PIs: **Carlos Lara-Romero**, José Iriondo (URJC). 2023-2026 (175.618 €, competitive call). Key transfer outcomes so far: <https://doi.org/10.15470/5ja7j3>
- Extension of EURISCO for Crop Wild Relatives (CWR) in situ data and preparation of pilot countries' data sets (L21ROM198). International Plant Genetic Resources Institute. PIs: **Carlos Lara-Romero**, José Iriondo (URJC). 2022-2023 (15.000 €). Key transfer outcomes: <https://www.ecpgr.cgiar.org/working-groups/crop-wild-relatives/cwr-in-eurisco>
- Acuerdo de colaboración entre la Universidad Rey Juan Carlos y la Sociedad Española de Biología de la Conservación de Plantas (SEBICOP). PIs: Alfredo García-Fernández, José Iriondo (URJC). 2016-2017 (10.409 €). Key transfer outcomes: [Flora vascular. Adenda 2017 \(miteco.gob.es\)](http://Flora%20vascular.%20Adenda%202017%20(miteco.gob.es))

##### Other relevant merits of transference

- Trans-Planta: database on plant conservation translocations ([www.conservacionvegetal.org/bdtcpe/](http://www.conservacionvegetal.org/bdtcpe/))
- Databases cataloguing the *in situ* plant genetic resources of Crop Wild Relatives populations across Europe (as a part of Farmer's Pride project) <https://hdl.handle.net/10568/110921>.
- Database of Iberian bee occurrences <https://doi.org/10.5281/zenodo.6354502>.
- Analyses to ascertain the potential of the Natura 2000 network to conserve crop wild relatives (as a part of Farmer's Pride project) <https://hdl.handle.net/10568/110717>
- Development of quality standards for the conservation of wild relatives of crop plants in genetic reserves (as part of the AEGRO project) <https://doi.org/10.1079/9781845938512.0072>
- Organizing specialized courses spanning Next Generation Sequencing, Network Analysis, Statistical Analysis, and Data Management with R, totalling 250 hours of instruction.
- Promotion of open science: I actively contribute to open science by publishing 14 datasets in recognised repositories (Dryad, Zenodo, Figshare) with over 1,000 downloads (<https://lararomero.weebly.com/datasets.html>). I have also open-sourced my R code, promoting transparency and reproducibility of research (<https://lararomero.weebly.com/r-code.html>).
- Sequencing and data deposition in GenBank: *Armeria Caespitosa*: 19 DNA sequences; *Silene ciliata*: Transcriptome (PRJNA528948) and Exome of 96 accessions (PRJNA851086).