

## CURRICULUM VITAE ABREVIADO (CVA)

**IMPORTANT** – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

### Part A. PERSONAL INFORMATION

|                                                |                     |  |  |
|------------------------------------------------|---------------------|--|--|
| First name                                     | Enrique             |  |  |
| Family name                                    | Mateos Naranjo      |  |  |
| Open Researcher and Contributor ID (ORCID) (*) | 0000-0001-6276-5664 |  |  |

(\*) *Mandatory*

#### A.1. Current position

|                   |                                                                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Position          | Full Professor                                                                                                                            |
| Institution       | Universidad de Sevilla                                                                                                                    |
| Department/Center | Biología Vegetal y Ecología   Facultad de Biología                                                                                        |
| Key words         | Ecophysiology, Climatic change, Coastal Ecosystems, Functional traits, Halophytes, Plant-microbial interactions applications, Phyto-tools |

#### A.2. Previous positions (research activity interruptions, indicate total months)

| Period                | Position/Institution/Country/Interruption cause |
|-----------------------|-------------------------------------------------|
| 2017-2020 (30 months) | Lecturer / Universidad de Sevilla / Spain       |
| 2009-2017 (96 months) | Hired teacher / Universidad de Sevilla / Spain  |

#### A.3. Education

| PhD, Licensed, Graduate                          | University/Country             | Year |
|--------------------------------------------------|--------------------------------|------|
| Licensed in Biology                              | Universidad de Sevilla / Spain | 2004 |
| PhD in Biology                                   | Universidad de Sevilla / Spain | 2008 |
| University Expert in Plant Ecophysiology Methods | Universidad Islas Baleares     | 2014 |

### Part B. CV SUMMARY (max. 5000 characters, including spaces)

In the year 2004 I obtained an FPI scholarship (Junta de Andalucía) for the realization of my PhD Thesis, obtaining the University of Seville Award for the Best Doctoral Thesis (2008). From the beginning of my research career, I have developed studies with a multidisciplinary approximation, using eco-physiological techniques focused, and designed to deepen into the knowledge of the ecology of the marshes. Particularly I study the response of saltmarshes plants to environmental synergistic interactions and the role of plant growth promoting bacteria in their modulation to respond to some of the great challenges of society in the 21<sup>st</sup> century, such a coastal ecosystems pollution remediation, restoration and the adaptation of traditional agriculture to climatic change scenarios. Thus, the research lines that I am contributed to developed in my research group, Applied Functional Ecology (RNM035), are: i) Functional ecology of halophytes. ii) Interactions plant-microorganism applications. iii) Conservation Ecophysiology. iv) Phytoremediation. I have published more than 150 research papers, 128 of them in scientific journals with impact indexes included in JCR (84 since 2015), among which are: Bioresource Technology, Environmental and Experimental Botany, Journal of Experimental Botany, Journal of Ecology, New Phytologist, etc. This scientific production has generated indicators of quality of: i) Average n° of publications last five years (2020-2024): 8.4 (94% Q1). ii) Total publications in Q1: 104. iii) Total D1: 27. iv) Total n° of citations / average last five years: 3986/447 (Scopus). v) h-index: 37 and M-index: 1.94. In addition, I have made 105 contributions to scientific congresses (73 international and 32 national), member of the Organizing Committee of “VII Coloquio de Ecofisiología Forestal”. 2017 (El Rocío, Huelva). Furthermore, I have published 15 book chapters. I have participated continuously, in 15 research projects (12 since 2012) obtained in competitive calls, being IP of 7 of them

highlighted the projects PDC2021-120951-I00 NextGenerationEU, CGL2016-75550-R AEI/FEDER, UE, PID2021-124750NB-I00 AEI/FEDER, TED2021-131605B-I00 AEI/FEDER and FEDER US-1262036 (Total funds obtained: 730.000€), 16 research project of teacher innovation, being IP of 5 of them (PPID, US). On the other hand, I am part of 4 international networks, European COST Action FA0901 project, and others formed to apply the project of the European Union, PRIMA, ERA-CAPS, and BiodivERsA. Also, I was member of the University Institute of Studies on Latin America, research line: Biodiversity, Ecosystems and Natural Resources. Reviewer more than 50 times for publications of 40 journals JCR. And I won Young Research Award for Excellence in Research in Biological Sciences (Real Academia Sevillana de Ciencias, 2015). And I won the VII Losada Villasante Award for Excellence in Research in Andalucía (2020).

In the field of transfer and relationship with companies, I have participated in 11 research contracts with the Public Administration, with Institutions or Companies and 2 collaborations agreements, being PI of one of them (Total funds: 187.822,20€). These activities allowed me to obtain a *Sexenio de Transferencia* of the CNEAI in 2019. I was responsible of the project of the call 'proof of concept', PDC2021-120951-I00 NextGenerationEU, mentioned above, is the direct transfer of the results obtained in a previous project (CGL2016-75550-R) to the companies. Regarding the dissemination of the results of my research, I participate in several activities such as *Noche Europea de los Investigadores*, *Café con Ciencia*, etc.; as well as press releases on newspapers and interviews on television and radio programs (ABC, El País, La Cadena Ser, COPE, etc.).

I have directed 6 Doctoral Theses (3 from 2015), 4 of them with the International Doctorate Mention and two also with Extraordinary Doctorate Award (+3 ongoing). Five of my PhD students continue their scientific careers under various roles in national or international research centers (2 permanent positions in US, 1 PostDoc in UCA, 1 PostDoc UTasmania, Australia; 1 permanent UNiChimborazo, Ecuador). I have also directed 12 master's theses, 1 DEAs and more than 30 degree students. I have supervised 4 postdoctoral contracts (JdC Incorporación; Talento Junta Andalucía). In addition, I have been evaluator of the programs: i) Calls for Excellence and Challenges of the State Plan since 2012, member of the Commission of the Environmental science and technology (CTM-TECNO), 2018. ii) PhD formation FPU call. iii) Research mobility programme Salvador Madrigal and José Castillejo mobility Call. iv) I was Coordinator of PhD Program "Integrative Biology" of the University of Seville (2021-2022). And actually, I am Director of scientific infrastructure Greenhouse Service US, Research, Technology and Innovation Centre (CITIUS II). And, President of Consejo de Participación del Espacio Natural de Doñana (END).

## Part C. RELEVANT MERITS (sorted by typology)

### C.1. Publications

**1-Mateos-Naranjo E (CA)**, Pérez-Romero JA, Puglielli G, López-Jurado J, Mesa-Marín, J, Pajuelo, E., Rodríguez-Llorente ID, Redondo-Gómez S (2024). Soil microorganisms buffer the reduction in plant growth and physiological performance under combined abiotic stress in the halophyte *Salicornia ramosissima*. *Environmental and Experimental Botany* 217:105550.

**2-Valle-Romero P**, Castellanos EM, Luque CJ,... **Mateos-Naranjo E (CA)** (9/9) (2024). Nitrate modulates the physiological tolerance responses of the halophytic species *Sarcocornia fruticosa* to copper excess. *Plant Physiology and Biochemistry* 210:108569.

**3-López-Jurado J (CA)**, Picazo-Aragón J, Alonso C, Balao F, **Mateos-Naranjo E** (2024). Physiology, gene expression, and epigenotype of two *Dianthus broteri* polyploid cytotypes under temperature stress. *Journal of Experimental Botany* 75:1601-1614.

**4-Pérez-Romero JA (CA)**, Barcia-Piedras JM, Redondo-Gómez S, **Mateos-Naranjo E** (2023). *Sarcocornia fruticosa* recovery capacity after exposure to co-existed water and salinity stress. *Plant Stress* 8:100162.

**5-Camacho-Sanchez M (CA)**, Camacho M, Redondo-Gómez S, **Mateos-Naranjo E** (2022). Bacterial assemblage in Mediterranean salt marshes: disentangling the relative importance of seasonality, zonation and halophytes. *Science of The Total Environment* 846:157514.

**6-Mateos-Naranjo E (CA)**, López-Jurado J, Mesa-Marín J, Luque CJ, Castellanos EM, Pérez-Romero JA, Redondo-Gómez S (2021) Understanding the impact of a complex environmental matrix associated with climate change on the European marshes engineer species *Spartina maritima*. *Environmental and Experimental Botany* 182:104304.

- 7-Mateos-Naranjo E (CA)**, López-Jurado J, Redondo-Gómez S,...,Mesa-Marín J (1/9) (2020). Uncovering PGPB *Vibrio spartinae* inoculation-triggered physiological mechanisms involved in the tolerance of *Halimione portulacoides* to NaCl excess. *Plant Physiology and Biochemistry* 154:151-159.
- 8-Mesa-Marín J**, Redondo-Gómez S, Rodríguez-Llorente ID, Pajuelo E, **Mateos-Naranjo E** (2020). Microbial strategies in non-target invasive *Spartina densiflora* for heavy metal clean up in polluted saltmarshes. *Estuarine Coastal and Shelf Science* 238:106730.
- 9-López-Jurado J (CA)**, **Mateos-Naranjo E**, Balao F (2019). Niche divergence and limits to expansion in the high polyploid *Dianthus broteri* complex. *New Phytologist* 222, 1076-1087.
- 10-Mateos-Naranjo E (CA)**, Pérez-Romero JA, Redondo-Gómez S, Mesa-Marín J, Castellanos EM, Davy AJ (2018). Salinity alleviates zinc toxicity in the saltmarsh zinc-accumulator *Juncus acutus*. *Ecotoxicology and Environmental Safety* 163:478-48.
- 11-Mateos-Naranjo E (CA)**, Mesa J, Pajuelo E, Pérez-Martín A, Caviedes MA, Rodríguez-Llorente ID (2015). Deciphering the role of plant growth-promoting rhizobacteria in the tolerance of the invasive cordgrass *Spartina densiflora* to physicochemical properties of salt-marsh soils. *Plant and Soil*, 394:45-44.

## C.2. Congress.

- 1-Duarte B, Lemos M, **Mateos-Naranjo** (2024). Ecophysiological challenges in the anthropocene. XX International Botanical Congress (IBC). Madrid (Spain). 2024 (Symposium organizer).
- 2-Mesa-Marín J, **Mateos-Naranjo E**, Rodríguez-Llorente ID, Redondo Gómez S (2018) Halophyte – rhizobacteria for crop adaptation to Climate Change. 10th Symposium of the International Society of Root Research (ISRR10). 8-12 July 2018, Israel (oral communication).
- 3-Duarte B, **Mateos Naranjo E**, Redondo Gómez S, Marques JC, Caçador I. The tale continues: ecophysiological fitness of non-indigenous versus native *Spartina* species in Mediterranean salt marshes. XIV MEDECOS & XIII AEET meeting. Human driven scenarios for evolutionary and ecological changes. Sevilla (Spain). 2017 (oral communication).

## C.3. Research projects.

- 1-TITLE:** Desarrollo de una bioherramienta basada en inoculantes bacterianos para la restauración de habitats de humedales de interés comunitario (TED2021-131605B-I00). FINANCIAL ENTITY AND CALL: Plan de Recuperación, Transformación y Resiliencia. Proyectos Estratégicos Orientados a la Transición Ecológica y a la Transición Digital. Ministerio de Ciencia e Innovación MAIN RESEARCHER AND AFFILIATION: **Enrique Mateos Naranjo** and Susana Redondo Gómez, Univ. Sevilla. DURATION: 01/12/2022–30/11/2024. BUDGET: 111.552€. TYPE OF PARTICIPACION: Principal researcher.
- 2-TITLE:** Análisis de la contribución de las bacterias endófitas a los mecanismos de tolerancia de las halófitas frente a la salinidad y el cambio climático (Ref. PID2021-124750NB-I00). FINANCIAL ENTITY AND CALL: Plan Estatal de Investigación Científica, Técnica y de Innovación 2021-2023. Ministerio de Ciencia e Innovación. MAIN RESEARCHER AND AFFILIATION: **Enrique Mateos Naranjo** and Susana Redondo Gómez, Univ. Sevilla. DURATION: 01/09/2022–31/08/2025. BUDGET: 217.800€ (+PhD contract). TYPE OF PARTICIPACION: Principal researcher.
- 3-TITLE:** Proof of concept, with end users, of a bio-tool (generated in CGL2016-75550-R AEI/FEDER, EU) for the improvement of intensive agricultural practices (BIOFERSA) (PDC2021-120951-I00) Funded by the European Union. FINANCIAL ENTITY AND CALL: R+D+i Projects, Proof of Concept within the framework of the State R+D+i Program oriented to the Challenges of Society, the State Plan for Scientific and Technical Research and Innovation. Call 2021. MAIN RESEARCHER AND AFFILIATION: **Enrique Mateos Naranjo** and Susana Redondo Gómez, Univ. Sevilla. DURATION: 01/12/2021–30/11/2023. BUDGET: 92.000€. TYPE OF PARTICIPACION: Principal researcher.
- 4-TITLE:** promoting Art-Science-Technology-Engineering Research by using collaborative methodologies and tools (ASTER) (US-1381015). FINANCIAL ENTITY AND CALL: Andalusian

Government (Department of Economy, Knowledge, Business and University). MAIN RESEARCHER AND AFFILIATION: Rocío García Robles and Áurea Muñoz del Amo, Univ. Sevilla. DURATION: 01/01/2022–31/12/2022. BUDGET: 55.000 €. TYPE OF PARTICIPACION: Researcher.

**5-TITLE:** MESEM-BOLOMA Valorization of the halophyte from the Andalusian coasts *Mesembryanthemum crystallinum* as a source of bioproducts of pharmaceutical and nutraceutical interest. From the microbiome to the metabolome (Ref. P20\_00682). FINANCIAL ENTITY AND CALL: R+D+i projects, Andalusian Research, Development and Innovation Plan (PAIDI 2020). Junta de Andalucía. MAIN RESEARCHER AND AFFILIATION: Eloisa Pajuelo Domínguez, Univ. Sevilla. DURATION: 04/10/2021–31/12/2022. BUDGET: 80.000€. TYPE OF PARTICIPACION: Researcher.

**6-TITLE:** Improving the sustainability of strawberry cultivation using bio-tools (FEDER US-1262036). FINANCIAL ENTITY AND CALL: Competitive participation in R+D+i projects within the framework of the FEDER Andalusia Operational Program 2014-2020. MAIN RESEARCHER AND AFFILIATION: **Enrique Mateos Naranjo** and Ignacio D. Rodríguez Llorente, Univ. Sevilla. DURATION: 01/02/2020–31/01/2022. BUDGET: 79.701€. TYPE OF PARTICIPACION: Researcher.

**7-TITLE:** The halophytes and their rhizospheric relationships: tools for the adaptation of traditional agriculture to Climate Change (CGL2016-75550-R AEI/FEDER, UE). FINANCIAL ENTITY AND CALL: Ministry of Economy and Competitiveness/Call Challenges, National Plan. MAIN RESEARCHER AND AFFILIATION: **Enrique Mateos Naranjo** and Susana Redondo Gómez, Univ. Sevilla. DURATION: 30/12/2016–29/12/2019. BUDGET: 215.380€. TYPE OF PARTICIPACION: Principal researcher.

**8-TITLE:** Improvement of the tools for the conservation and management of the Patagonia marshes, Argentina: Scientific-technical strengthening of the Soil Laboratory of the Patagonian Institute for the Study of Continental Ecosystems (IPEEC-CCT CENPAT-CONICET) in the field of ecophysiology. FINANCIAL ENTITY AND CALL: International Cooperation Research Projects (Development Cooperation Office-US). MAIN RESEARCHER AND AFFILIATION: **Enrique Mateos Naranjo** Univ. Sevilla. DURATION: 01/01/2015-30/10/2017. BUDGET: 12.079,02 €. TYPE OF PARTICIPACION: Principal researcher.

**9-TITLE:** Low-cost ecological strategies for the recovery of Andalusian estuaries contaminated with heavy metals. Rhizostabilization with native plants and inoculants (P11-RNM-7274). FINANCIAL ENTITY AND CALL: Counseling of Innovation, Science and Business, Junta de Andalucía / Projects of Excellence. MAIN RESEARCHER AND AFFILIATION: Eloísa Pajuelo Domínguez, Univ. Sevilla. DURATION: 16/05/2013-15/05/2016. BUDGET: 185.847€. TYPE OF PARTICIPACION: Researcher.

**10-TITLE:** Evaluation of the desalination capacity of *Arthrocnemum macrostachyum* (RTA2012-00006 C03-02). FINANCIAL ENTITY AND CALL: Ministry of Economy and Competitiveness / Subprogram of Fundamental Research Projects Oriented to Agricultural Resources and Technologies in Coordination with the Autonomous Communities. MAIN RESEARCHER AND AFFILIATION: Susana Redondo Gómez, Univ. Sevilla. DURATION: 13/05/2013-12/05/2016 BUDGET: 31.000,8€ TYPE OF PARTICIPACION: Principal researcher.

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

**1-Contract 68/83:** Determinación del balance de carbono en *Vitis vinifera* var. *Zalema*, para la revalorización de este cultivo ante los Mercados de Carbono. Financial entity: Sdt. Duration: 01/01/2025-12/12/2025. Main researcher: **Enrique Mateos Naranjo**. Budget: 27.822,20 €.

**2-Contract 68/83:** Role of the MOO Consortium against osmotic and water stresses. Financial entity: Timac Agro España, S.A. Duration: 01/09/2024-28/02/2025. Main researcher: **Susana Redondo Gómez**. Budget: 47.801,53 €.

**3-Contract 68/83:** ALBEDO, agreement for the realization of a scientific application. Financial entity: Company Esasur Energía Eficiencia e Instalaciones, S.L. Duration: 01/07/2021-01/06/2023. Main researcher: **Susana Redondo Gómez**. Budget: 25.000 €.