

Solicitud CU2 - Ecología

Curriculum Vitae de los miembros de las Comisiones de selección (titular y suplente).

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CURRICULUM VITAE (CVA)

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

Part A. PERSONAL INFORMATION

CV date	10/01/2022
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First name	Regino Jesús		
Family name	Zamora Rodríguez		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	rzamora@ugr.es	URL Web	http://www.reginozamora.es
Open Research and Contributor ID (ORCID)(*)	0000-0002-5049-9968		

(*) Mandatory

A.1. Current position

Position	Full Professor		
Initial date	2/02/2006		
Institution	University of Granada		
Department/Center	Ecology/ Faculty of Sciences		
Country	Spain	Teleph. number	958243242
Key words	<u>Ecology, Plant-animal interactions, global change ecology, community dynamics, Conservation ecology</u>		

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
1991-2006	Associate Professor, Univ. Granada (Spain)
2006-present	Full Professor

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Biology, Licensed	Granada, Spain	1981
Biology, PhD	Granada, Spain	1987

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

Regino Jesús Zamora Rodríguez <http://www.reginozamora.es> is a Doctor in Biological Sciences (1987) and Professor of Ecology at the University of Granada (03/03/2006). His main field of research is the study of the ecological interactions and their consequences on ecosystem processes under global change scenarios. He has published more than 200 research papers, including some highly cited papers, mostly in international journals of general and applied ecology. Regino Zamora is among the most cited Spanish ecologists (H = 62 index, according to Google Scholar (06/01/2022); H = 50 according to WOS, with a total number of citations > 15300 (10/01/2022) and has been included in the *Ranking of the World Scientists: World's Top 2% Scientists* by Stanford University. He has extensive experience in the direction and coordination of human teams both in scientific research and management, supervising 15 doctoral theses. Most of the doctors trained under his direction have

consolidated their academic position and are now university Professors, Seniors researchers and Full Professors at different CSIC centers and half a dozen universities. He is Principal Investigator of more than 30 projects of competitive calls. He recently participates in four European projects HORIZON 2020. He is regular evaluator of more than 55 international journals included in the SCI, and Associate Editor of the journal of General Ecology OIKOS. He has also been President of the Spanish Association of Terrestrial Ecology (AEET). He has been until December 2018 Manager of the Global Change-Biology of Organisms and Systems Program (Biodiversity Area, BDV), of the State Research Agency, MINECO (2015-2018).

Regino Zamora is currently the Scientific coordinator of a LifeWatch-European Research Infrastructure named *Thematic Center on Mountain Ecosystems, Remote Sensing, Deep learning-AI and e-Services, University of Granada-LifeWatch ERIC* <https://obsnev.es/proyecto-ugr-lifewatch/>. This Thematic Center will allow the compilation and open accessibility of all existing sources of information in the field of biodiversity, environmental sciences and global change in Sierra Nevada and other European mountains for their analysis and interpretation in a scientific context. His academic and research activity at the University of Granada is complemented by continued collaboration with the public administrations responsible for environmental management, promoting the transfer and application of scientific knowledge to the conservation, management and restoration of ecosystems. In this sense, he is the scientific coordinator of the Sierra Nevada Global Change Observatory (<http://obsnev.es>).

He has also published a good number of articles on the transfer and dissemination of scientific knowledge, book chapters and books, among which the following stand out: 1) Medel R, Aizen M, & R Zamora R (2009). *Plant Animal and Biodiversity Interactions: Conservation and Restoration*, Publications Service, University of Chile. Santiago de Chile. 2) Zamora R, Oliva M (in press, March 2022) *The Landscape of the Sierra Nevada, a Unique Laboratory of Global Processes in Spain*, Springer nature, <https://link.springer.com/book/9783030942182>. The 24 chapters of this book explain the large number of projects that are being conducted within the umbrella of the Sierra Nevada Global Change Observatory.

Coordination and Evaluation of scientific activity at the national and international level (last 10 years):

- Member of the Scientific Committee of the Autonomous Organization of National Parks (Ministry of Environment) (since 2006-).
- Member of the evaluation committee Scholarship Program for Training of Researchers of the Galician Agency for Quality, Xunta de Galicia (since 2007-).
- Regular member of the expert committees of the BBVA Foundation to evaluate projects and awards. (Since 2004-).
- Deputy in the management team of the National Agency for Evaluation and Prospective (ANEP), Ministry of Science and Innovation, Plant Biology, Animal and Ecology Program (BVAE, Area 3) 2008-2013.
- Vocal advisor to the Nature Sciences Committee (Area 5), National Commission for the Evaluation of Research Activity (CNAI), 2010- 2012.
- Member of the external evaluation panel of the National Agency for Quality Assessment and Accreditation (ANECA), Ministry of Science and Innovation (since 2008-).
- Manager of the Global Change-Biology of Organisms and Systems Program (CGL-BOS), of the State Research Agency, MINECO (2015- 2018).
- Project evaluator of the VI and VII Framework Program of the European Union (Key action 2.2.1 (Ecosystem vulnerability), of the National Science Foundation (USA), and of the Swiss National Science Foundation (Switzerland).

Part C. RELEVANT MERITS

C.1. More relevant Publications (*last 10 years*)

- Lázaro-González A, Gargallo-Garriga A, Hódar JA, Sardans J, Oravec M, Urban O, Peñuelas J, **Zamora R**. 2021. Implications of mistletoe parasitism for the host metabolome: A new plant identity in the forest canopy. *Plant, Cell & Environment* 44(11): 3655–3666. DOI: 10.1111/pce.141793666L.
- Pérez-Luque AJ, Gea-Izquierdo G, **Zamora R**. 2021. Land-use legacies and climate Change as a double challenge to oak forest resilience: mismatches of geographical and ecological rear edges. *Ecosystems*. DOI: 10.1007/s10021-020-00547.
- Mellado A, **Zamora R**. 2020. Ecological consequences of parasite host shifts under changing environments: More than a change of partner. *Journal of Ecology*. DOI: 10.1111/1365-2745.13295.
- **Zamora R**, Mellado A. 2019. Identifying the abiotic and biotic drivers behind the elevational distribution shift of a parasitic plant. *Plant Biology* 21:307–317.
- Mellado A, **Zamora R**. 2017. Parasites structuring ecological communities: The mistletoe footprint in Mediterranean pine forests. *Functional Ecology* 31(11): 2167-2176.
- **Zamora R**, Pérez-Luque A, Bonet FJ. 2017. **Monitoring Global Change in High Mountains**. In: Challenges for high mountain conservation in a changing world. Eds: Catalán J, Ninot JM, Aniz M. Springer Verlag.
- Doblas-Miranda, E. R Alonso, X Arnan, V Bermejo, L Brotons, & **R. Zamora**. (2017). A review of the combination among global change factors in forests, shrublands and pastures of the Mediterranean Region: Beyond drought effects. *Global and Planetary Change* 148:42-54.
- Mellado A, Morillas L, Gallardo A, **Zamora R**. 2016. Temporal dynamic of parasite-mediated linkages between the forest canopy and soil processes and microbial community. *New Phytologist*. doi: 10.1111/nph.13984.
- Valiente-Banuet A, Aizen MA, Alcántara JM, Arroyo J, Cocucci A, Galetti M, García MB, García D, Gómez JM, Jordano P, Medel R, Navarro L, Obeso JR, Oviedo R, Ramírez N, Rey PJ, Traveset A, Verdú M, **Zamora R**. 2015. Beyond species loss: extinction of interactions in a changing world. *Functional Ecology* 29:299–307.
- Matías L, **Zamora R**, Castro J. 2012. Sporadic rainy events are more critical than increasing drought intensity for woody species recruitment in a Mediterranean community. *Oecologia* 169:833-844.

C.3. More relevant Research projects (*last 10 years*)

- 1) LifeWatch-ERIC (N/REF LifeWatch-2019-10-UGR-01). Thematic Center on Mountain Ecosystems, remote sensing, Deep learning-AI and e-Services. 6.052.480,83 €. IP: R. Zamora.
- 2) ECOPOTENTIAL: improving future ecosystem benefits through earth observations (ecopotential) UE H2020 Project <http://www.ecopotential-project.eu>. R Zamora, IP del nodo español.
- 3) European long-term ecosystem and socio-ecological research infrastructure (ELTER) UE-H2020 Project. <http://www.lter-europe.net/lter-eur>. R. Zamora, IP del nodo español.
- 4) Protection of key ecosystem services by adaptive management of climate change endangered mediterranean socioecosystems (LIFE ADAPTAMED) LIFE14/CCA/ES/000612 UE Project. <https://www.lifeadaptamed.eu> (2015-2020). R Zamora, coordinador científico del consorcio.
- 5) Las interacciones bióticas como predictoras del éxito e impacto de las invasiones. Proyecto del Programa Iberoamericano CYTED (2018-2020). Coordinador: Dr. Rodrigo Medel (Chile). R. Zamora, IP del nodo español.
- 6) Creation of an information system to manage data obtained from flux and meteorological towers in the Amazon basin in the context of the LargeScale Biosphere-Atmosphere Experiment (LBA). INPA - Instituto Nac. de Pesquisas da Amazonia, Brasil (2013-2018). IP: R. Zamora.
- 7) EU BON: Building The European Biodiversity Network (Grant agreement ID: 308454, Entidad financiadora: Unión Europea, FP7 (2012-2017). R. Zamora, IP del nodo español.

- 8) Red internacional de inventarios forestales (BIOTREE) para la conservación de la biodiversidad en Centroamérica. Fundación BBVA (2011-2014). IP: R. Zamora.
- 9) Los muérdagos como especies clave en los pinares de montaña: explorando las consecuencias ecológicas de un nuevo cóctel de interacciones (CLAVINOVA). Ministerio de Ciencia e Innovación (2012-2015). IP: R. Zamora.
- 10) Cambio global, MIGRación altitudinal y colonización de hábitats degradados en montañas MEDiterráneas (MIGRAME). Junta de Andalucía (2011-2013). IP: R. Zamora.

C.4. More relevant Contracts, technological or transfer merits *(last 10 years)*

- 1) Servicio de captura, suministro y gestión de datos ecológicos a largo plazo del nodo Sierra Nevada de la red LTER-ESPAÑA en el marco del proyecto LIFE-ENVEUROPE. 30,000 €. 1/2/12- 31/5/13. IP: R. Zamora
- 2) Creation of an information system to manage data obtained from flux and meteorological towers in the Amazon basin in the context of the Large-Scale Biosphere-Atmosphere Experiment (LBA) 261,625 €. 21/6/13-30/6/18. IP: R. Zamora
- 3) Servicio de captura, suministro y gestión de datos ecológicos a largo plazo del nodo Sierra Nevada de la red LTER-ESPAÑA en el marco del proyecto LIFE-ENVEUROPE, (ENV/IT/000399). 17,500 €. 1/1/13-30/6/13. IP: R. Zamora
- 4) Observatorio de Cambio Global de Sierra Nevada en el marco de la Red de Observatorios de Cambio Global de Andalucía. 380,052 €. 30/7/18-29/7/22. IP: R. Zamora



Parte A. DATOS PERSONALES		Fecha del CVA	28/11/2021
Nombre y apellidos	Isabel Reche Cañabate		
DNI/NIE/pasaporte		Edad	
Núm. identificación del/de la investigador/a	WoS Researcher ID (*)	K-7120-2014	
	SCOPUS Author ID(*)	6603791726	
	Open Researcher and Contributor ID (ORCID) **	0000-0003-2908-1724	

(*) Al menos uno de los dos es obligatorio

(**) Obligatorio

A.1. Situación profesional actual

Organismo	Universidad de Granada		
Dpto./Centro	Facultad de Ciencias		
Dirección	Av. Fuente Nueva s/n		
Teléfono	958 241000 Ext 20018	correo electrónico	ireche@ugr.es
Categoría profesional	Catedrática de Universidad	Fecha inicio	7/12/2018
Palabras clave	Limnología, Oceanografía, Ciclos biogeoquímicos carbono y nitrógeno en humedales y embalses, Ecología microbiana		

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciatura Ciencias Biológicas	Granada	1990
Tesis licenciatura (Sobresaliente)	Granada	1991
Tesis Doctorado (<i>Premio extraordinario</i>)	Granada	1995

A.3. Indicadores generales de calidad de la producción científica (véanse instrucciones)

Tengo **4 sexenios de investigación**, el último para el período de 2010 a 2015 y **5 quinquenios docentes** con el último obtenido en 2016. He publicado 72 artículos en revistas JCR (62 en el primer cuartil) que han recibido 3330 citas y un índice h de 33 en Google Scholar.

Más detalles y listado completo de publicaciones en los siguientes enlaces:

https://scholar.google.es/citations?hl=es&user=mEfmVgMAAAAJ&view_op=list_works

http://wpd.ugr.es/~ireche/?page_id=9

He sido **Investigadora Principal de 9 proyectos financiados** por diferentes entidades y Fundaciones (EU, MEC, MCINN, MINECO, MICIU, Parques Nacionales, Fundación BBVA y CEIGranada Biotic, Junta de Andalucía, Universidad de Granada-FEDER).

He dirigido siete tesis doctorales:

- (1) **Elvira Pulido-Villena**. Sobresaliente cum laude con mención internacional y *premio extraordinario*. Fecha de lectura 16/07/2004. Actualmente tiene un puesto permanente como investigadora en el CNRS en Mediterranean Institute of Oceanography (Marseille, France). <https://www.mio.osupytheas.fr/en/elvira-pulido-villena>
- (2) **Eva Ortega-Retuerta**. Sobresaliente cum laude con mención internacional. Fecha de lectura 3/10/2008. Actualmente tiene un puesto permanente como investigadora en Laboratoire d'Océanographie MICrobienne (Banyuls sur mer, France). http://lomic.obs-banyuls.fr/fr/personnel/personnel_lomic/pages_personnelles/ortega.html
- (3) **Teresa S. Catalá**. Sobresaliente cum laude con mención internacional y *premio extraordinario*. Fecha de lectura 4/11/2015. Actualmente tiene un puesto de investigadora postdoctoral en Institute for Chemistry and Biology of the Marine Environment (University Carl Von Ossietzky, Oldenburg, Germany). <https://uol.de/en/icbm/marine-geochemistry/staff/dr-teresa-serrano-catala>



- (4) **Ignacio P. Mazuecos**. Sobresaliente cum laude. Fecha de lectura 14/12/2015. Actualmente tiene un puesto permanente como de profesor de educación secundaria.
- (5) **S Mohammad Sadeghi-Nassaj**. Sobresaliente cum laude. Fecha de lectura 27/07/2018. Pendiente resolución contrato de investigador Universidad de Granada.
- (6) **Gema L. Batanero**. Sobresaliente cum laude con mención internacional. Fecha de lectura 22/07/2019. Actualmente tiene un puesto de técnica de investigación en la Universidad de Granada.
- (7) **Elizabeth León-Palmero**. Sobresaliente cum laude con mención internacional. Fecha de lectura 4 de Febrero de 2021. Actualmente tiene un puesto de investigadora postdoctoral en la Universidad de Granada.

Actualmente, estoy supervisando a otros cuatro estudiantes de doctorado

- (8) **Ihab Alfadhel**. Contrato Ministerio Ciencia Iraquí. Fecha tentativa de lectura Diciembre 2023.
- (9) **Eva Rodríguez-Velasco**. Contrato predoctoral Formación Profesorado Universitario (FPU). Fecha tentativa de lectura Diciembre 2024
- (10) **Andrés Martínez-García**. Contrato predoctoral Formación Profesorado Universitario (FPU). Fecha tentativa de lectura Diciembre 2025.
- (11) **Silke Martínez-Moreno**. Contrato predoctoral Junta de Andalucía. Fecha tentativa de lectura Diciembre 2025.

He supervisado a dos contratados postdoctorales

- (1) **Natalie Mladenov** (actualmente profesora titular en la University State California San Diego, EEUU) 2007-2008. <https://mladenov.weebly.com>
- (2) **Andrew S. Mehring** (Marie Curie Postdoctoral Fellow, actualmente Profesor ayudante en la University of Louisville, Kentucky, EEUU) 2018-2019. <https://andrewmehring.wixsite.com/home>

Actualmente, estoy supervisando a otros cuatro contratados postdoctorales

- (3) **Ignacio Peralta-Maraver** (Juan de la Cierva Formación 2021-2022)
- (4) **Félix Picazo** (Postdoctoral de la Junta de Andalucía 2021-2023)
- (5) **Elizabeth León-Palmero** (Postdoctoral con cargo a proyecto 2021)
- (6) **Inmaculada Alvarez-Manzaneda Salcedo** (EU Marie Curie Postdoctoral Fellow IF-GFs 2021-2024)

Parte B. RESUMEN LIBRE DEL CURRÍCULUM (*máximo 3500 caracteres, incluyendo espacios en blanco*)

Mi **tesis doctoral** la realicé en 1995 por la **Universidad de Granada** sobre el bucle microbiano y la relación entre bacterias y fitoplancton en lagos alpinos. Recibí el premio de extraordinario de doctorado del año 1995. Posteriormente, realicé un **postdoctorado en el Cary Institute of Ecosystems Studies**, New York, EEUU (<http://www.caryinstitute.org>) durante tres años (1995-1997) en colaboración con los doctores Michael L. Pace and Jon J. Cole. Durante mi postdoctorado, inicié una línea de investigación sobre la caracterización de la materia orgánica disuelta y sus implicaciones en el ciclo del carbono en ecosistemas acuáticos continentales (lagos y humedales).

Tras mi regreso a España en enero de 1998, con un contrato de **reincorporación de doctores y tecnólogos a la Universidad de Granada**, inicié una nueva línea de investigación sobre la importancia de la deposición de aerosoles atmosféricos, particularmente los de procedencia Sahariana, sobre la biogeoquímica en lagos alpinos y en embalses mediterráneos. Particularmente he desarrollado una línea de investigación sobre la dispersión microbiana asociada al aerosol atmosférico. Paralelamente, he participado en diversos proyectos de oceanografía en los que hemos aplicado técnicas espectroscópicas para caracterizar la materia orgánica disuelta del océano Antártico y, durante la expedición de circunnavegación Malaspina 2010, del océano profundo y, así, determinar su importancia en el metabolismo microbiano y en el ciclo global del Carbono. Recientemente, estamos trabajando en humedales salinos de la cuenca mediterránea, caracterizando su diversidad microbiana y función biogeoquímica como fuentes o sumideros de gases de efecto



invernadero. Además estamos determinando los balances de gases de efecto invernadero (CO₂, CH₄ y N₂O) en embalses localizados en diferentes paisajes tanto agrícolas como forestales.

Durante el curso académico 2016/17 realicé una estancia como **profesora invitada en la University of California, Berkeley** (EEUU) en colaboración con el Dr. D. Baldocchi tras la obtención de una ayuda Salvador de Madariaga. Durante esta estancia trabajé en humedales de la bahía de San Francisco y su importancia para el secuestro de carbono y evitar la subsidencia del terreno. Desde el año 2018, soy **catedrática del Departamento de Ecología de la Universidad de Granada**.

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología)

C.1. Publicaciones más relevantes en los últimos 10 años

- Peralta-Maraver, I., Stubbington, R., Arnon, S., Kratina, P., Krause, S., de Mello Cionek, V., ...**Reche I.** & Robertson, A. L. (2021). The riverine bioreactor: An integrative perspective on biological decomposition of organic matter across riverine habitats. *Science of the Total Environment*, 145494.
- Reche, I.** & Perfectti, F. (2020) Promoting Individual and Collective Creativity in Science Students. *Trends in Ecology & Evolution* (Revista nº1/168 Ecology IF= 14.764)
- León-Palmero, E., Contreras-Ruiz, A., Sierra, A., Morales-Baquero, R., **Reche, I.** (2020) Dissolved CH₄ coupled to photosynthetic picoeukaryotes in oxic waters and to cumulative chlorophyll a in anoxic waters of reservoirs. *Biogeosciences*, 17: 3223–3245 (Revista Q1 IF= 3.480)
- Ruiz-González, C., Mestre, M., Estrada, M., Sebastián, M., Salazar, G., Agustí, S., Moreno-Ostos, E., **Reche, I.**, Álvarez-Salgado X.A., Morán, X.A.G., Duarte, C. M., Sala, M.M. & Gasol J.M. (2020). Major imprint of surface plankton on deep ocean prokaryotic structure and activity. *Molecular Ecology*, 29: 1820-1838 (Revista Q1 IF= 5.163)
- León-Palmero, E., Morales-Baquero, R., & **Reche, I.** (2020). Greenhouse gas fluxes from reservoirs determined by watershed lithology, morphometry, and anthropogenic pressure. *Environmental Research Letters* doi.org/10.1088/1748-9326/ab7467 (Revista Q1 IF= 6.192)
- Triadó-Margarit X, Caliz J, **Reche I**, Casamayor EO (2019) High similarity in bacterial bioaerosol compositions between the free troposphere and atmospheric depositions collected at high-elevation mountains *Atmospheric Environment* 203: 79-86 (Q1 IF= 4.012)
- Ortega-Retuerta, E., Mazuecos, I. P., **Reche, I.**, Gasol, J. M., Álvarez-Salgado, X. A., Álvarez, M., Montero M.F. & Arístegui, J. (2019) Transparent exopolymer particle (TEP) distribution and in situ prokaryotic generation across the deep Mediterranean Sea and nearby North East Atlantic Ocean. *Progress in Oceanography* 173: 180- 191 (Q1, IF: 4.27).
- Reche I.**, D'Orta G., Mladenov N., Widge D.M., Suttle C.A. (2018) Deposition rates of viruses and bacteria above the atmospheric boundary layer. *The ISME Journal* 12: 1154-1162. IF: 9.52 (Q1).
- Catalá T, Martínez-Pérez AM, Nieto-Cid M, Álvarez M, Otero J, Emelianov M, **Reche I**, Arístegui J, Álvarez-Salgado XA (2018) Dissolved Organic Matter (DOM) in the open Mediterranean Sea. I. Basin-wide distribution and drivers of chromophoric DOM *Progress in Oceanography* 165: 35–51 (Q1, IF: 4.27).
- Iuculano F., Mazuecos I.P., **Reche I.**, Agustí S. (2017) Prochlorococcus as a possible source for Transparent Exopolymer Particles (TEP) *Frontiers in Microbiology* DOI: 10.3389/fmicb.2017.00709 IF=4.259 (Q1)
- Batanero GL, E León-Palmero, L Li, AJ Green, M Rendón-Martos, CA Suttle, **I. Reche** (2017) Flamingos and drought as drivers of nutrients and microbial dynamics in a saline lake. *Scientific Reports* 7 (1), 12173. IF: 4.259 (Q1).
- Catalá T.S., **I. Reche**, et al. (2016) Chromophoric signatures of microbial by-products in the dark ocean *Geophysical Research Letters* DOI: 10.1002/2016GL069878 IF=4.578
- Catalá TS; **Reche I.**; et al. (2015) Turnover time of fluorescent dissolved organic matter in the dark global ocean. *Nature communications* 6: 5986 DOI:10.1038/ncomms6986. IF =11.329 (Q1).
- Catalá TS, **I. Reche**, et al. (2015) Water mass age and aging driving chromophoric dissolved organic matter in the dark global ocean. *Global Biogeochemical Cycles* DOI:10.1002/2014GB005048. IF= 5.733 (Q1)



Mladenov, N., Sommaruga, R., Morales-Baquero, R., Laurion, I., Camarero, L., Diéguez, M. C., ... & **Reche, I.** (2011). Dust inputs and bacteria influence dissolved organic matter in clear alpine lakes. *Nature Communications*, 2, 405 doi.org/10.1038/ncomms1411 IF =11.329 (Q1).

C.2. Proyectos (últimos 10 años 2010-2019)

Proyecto: Balance del Metano en aguas anóxicas y óxicas de un embalse eutrófico. **Investigadora principal: Isabel Reche Cañabate** Entidad financiadora: Proyectos I+D+i del Programa Operativo FEDER 2020 Universidad de Granada (B-RNM-558-UGR20). Inicio 01/07/2021- fecha fin: 30/06/2023. Financiación: 35 000 €

Proyecto: Holobiontes Equinodermos y Sus Servicios Ecosistémicos en Zonas Costeras (HOLOSYSTEMS) **Investigadora principal: Isabel Reche Cañabate** Entidad financiadora: Junta de Andalucía (PY20_00705) Inicio 04/10/2021- fecha fin 30/06/2023. Financiación: 118 575 €

Proyecto: Variabilidad circadiana, estacional y climática en las emisiones de gases de efecto invernadero en embalses mediterráneos: reguladores físicos y biogeoquímicos (CRONOS). RTI2018-098849-B-I00. Ministerio de Ciencia, Innovación y Universidades. Inicio 01/01/2019- fecha fin 31/12/2022. **Investigadora principal: Isabel Reche Cañabate**. Importe: 102 850 €

Proyecto: Observatorio para el registro en continuo e interpretación de emisiones de gases de efecto invernadero en embalses Mediterráneos (O-GEI). EQC2019-005868-P. Universidad de Granada. Ministerio de Ciencia, Innovación y Universidades. Investigador responsable: Francisco Rueda Valdivia. Importe: 245 156 €

Proyecto: Centro temático sobre ecosistemas de montaña y teledetección, aprendizaje profundo inteligencia artificial, servicios electrónicos de la universidad de Granada Sierra Nevada. European Commission, LifeWatch 2019 10-UGR01-WP2. IP: WP: Manuel Villar Argaz

Proyecto: Unidad Científica de Excelencia “Modeling Nature: From Nano to Macro” UCE.PP2017.03 Universidad de Granada UGR 2017-2020. **Investigadora coordinadora: Isabel Reche Cañabate** Importe total: 40 000 €

Proyecto: Wetlands and reservoirs as drivers of carbon and nitrogen cycles: climatic implications (HERA) CGL2014-52362R. **Principal Investigator: Isabel Reche Cañabate**. Ministry of Economy and Competitiveness. U. Granada. 01/01/2015 to 31/12/2018. Importe: 175 000 €

Proyecto: Integrated multitrophic aquaculture: diversification of marine resources, environmental conservation and technological bioprospective. CEI BioTic P-BS-46. **Principal Investigator: Isabel Reche Cañabate**. Campus de Excelencia Internacional BioTic Universidad de Granada. From 01/06/2014 to 31/12/2014. Economical budget: 21 500 €

Proyecto: Effects of the greater flamingo on microbial metacommunity in saline inland waters: dispersal and guanotrophication (FLAMENCO). CGL2010-15812. **Principal Investigator: Isabel Reche Cañabate**. Ministry of Science and Innovation. From 01/01/2011 to 31/12/2014. Economical budget: 153 670 €

Proyecto: Circumnavigation Expedition Malaspina 2010: Global Change and Biodiversity Exploration of the Global Ocean. CSD2008-00077. Principal Investigator: Carlos M. Duarte Quesada. Ministry of Science and Innovation. 15/12/2008 -15/12/2014. Importe: 4 350 000 €

C.5, C.6, C.7... Others

- 2018-actualidad Associated Editor of the journal *Scientific Reports*
- 2017 Fellow of the Association of the Sciences of Limnology and Oceanography.
- Organization (chairman) along with Dr. Michael Pace of **ASLO 2015 Meeting Aquatic Sciences: Global and regional perspectives- North meets South**. Granada
- Organization of “**Exposición fotográfica y Ciclo de Conferencias. Expedición Malaspina. Un mar de datos**”. Granada, 22 February -30 March 2015
- Organization of “Ciclo de Conferencias sobre Biodiversidad y Conservación” at the Faculty of Sciences of the University of Granada for 12 years.
- Organization (chairman) along with with Dr. Natalie Mladenov of “**International Training Workshop on Organic Matter Characterization Using Spectroscopic Techniques**” 2010 in Granada.
- Organization of “**Seminario Acuicultura: Investigación, Desarrollo e Innovación**”. Campus de Excelencia Internacional del Mar-CEIMAR. Granada 7 to 17 April 2014.



CURRICULUM VITAE (CVA)

AVISO IMPORTANTE – El Curriculum Vitae no podrá exceder de 4 páginas. Para rellenar correctamente este documento, lea detenidamente las instrucciones disponibles en la web de la convocatoria.

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

Fecha del CVA	14/02/2022
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Parte A. DATOS PERSONALES

Nombre	David		
Apellidos	Gutiérrez García		
Sexo (*)		Fecha de nacimiento (dd/mm/yyyy)	
DNI, NIE, pasaporte			
Dirección email	david.gutierrez@urjc.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-8059-1239		

* datos obligatorios

A.1. Situación profesional actual

Puesto	Catedrático de Universidad		
Fecha inicio	07/02/2020		
Organismo/ Institución	Universidad Rey Juan Carlos		
Departamento/ Centro	Biología y Geología, Física y Química Inorgánica		
País	España	Teléfono	914888160
Palabras clave	cambio climático, dispersión y migración, distribución de especies, fenología, límites de distribución, cambios en usos del suelo		

A.2. Situación profesional anterior (incluye interrupciones en la carrera investigadora, de acuerdo con el Art. 14. 2.b)de la convocatoria, indicar meses totales)

Periodo	Puesto/ Institución/ País / Motivo interrupción
2009-2020	Profesor Titular de Universidad/ Univ. Rey Juan Carlos/ España
2002-2009	Profesor Titular de Universidad interino/ Univ. Rey Juan Carlos/ España
2001-2002	Profesor Asociado TC/ Univ. Rey Juan Carlos/ España
1999-2001	Contratado de reincorporación de Doctores y Tecnólogos del Ministerio/ Univ. Córdoba/ España
1997-1999	Investigador Marie Curie/ Univ. Leeds/ Reino Unido
1992-1995	Becario de investigación del Plan Regional de Investigación de Asturias/ Univ. Oviedo/ España
1990, 1992	Becario de investigación/ Univ. Oviedo/ España

(Incorporar todas las filas que sean necesarias)

A.3. Formación Académica

Grado/Master/Tesis	Universidad/Pais	Año
Doctor en Biología	Universidad de Oviedo/ España	1996
Licenciado en Ciencias Biológicas	Universidad de Oviedo/ España	1990

(Incorporar todas las filas que sean necesarias)



Parte B. RESUMEN DEL CV (máx. 5000 caracteres, incluyendo espacios): **MUY IMPORTANTE: se ha modificado el contenido de este apartado para progresar en la adecuación a los principios DORA. Lea atentamente las “Instrucciones para cumplimentar el CVA”**

La investigación de David Gutiérrez se centra en los efectos del **cambio global** sobre la **biodiversidad**, poniendo especial énfasis en el papel de la **alteración de los hábitats** y del **cambio climático** en la distribución y abundancia de las especies. En concreto, estudia la dinámica de las poblaciones de insectos como sistemas modelo para evaluar la persistencia y la conservación de las especies en los ecosistemas actuales dominados por la influencia humana. La actividad investigadora abarca distintos niveles de organización de la Ecología, exceptuando el ecosistema, con gran énfasis en el nivel poblacional. Como consecuencia, la investigación realizada supone un amplio abanico de metodologías, desde trabajo intensivo de campo que implica el seguimiento de individuos, la realización de censos y el desarrollo de experimentos de marcaje y recaptura, hasta análisis espaciales a escala regional para modelizar la distribución de especies que supone la aplicación de modelos de metapoblaciones y de Sistemas de Información Geográfica.

Como producto de todo ello, ha publicado 45 artículos JCR (30 en Q1), la mayor parte de ellos en revistas generales de ecología (tales como Ecology Letters, Global Change Biology, Ecology y Journal of Animal Ecology, entre otras), 4 capítulos de libro y 7 artículos no JCR. Estos trabajos han supuesto un total de 1946 citas en WoS, con un índice H = 24 (3444 citas y H = 29 en Google Scholar) y la consolidación de **cuatro sexenios de investigación** (el último hasta 2016). Ha participado en más de una docena de proyectos de investigación competitivos nacionales, internacionales y regionales, de los que en 7 de ellos ha sido investigador principal. Ha co-dirigido 2 tesis doctorales, con una adicional en fase de redacción en la actualidad, y ha dirigido más de una docena de trabajos fin de grado y máster.

Además, parte de la investigación se ha canalizado como divulgación y transferencia a través de distintas vías, tales como artículos divulgativos, presentaciones en reuniones con gestores y colaboración en programas de ciencia ciudadana como el seguimiento de mariposas BMS España. Como contribución a la comunidad científica, de forma habitual realiza revisiones de artículos para revistas del JCR (<https://publons.com/researcher/1217762/david-gutierrez/>), así como de proyectos y contratos de diversos programas nacionales e internacionales (Plan Nacional del Ministerio, Parques Nacionales, Programas de investigación de Asturias y Andalucía, International Research Fellowship Program de la National Science Foundation de EEUU, Fondo Clemente Estable y Universidad de la República de Uruguay, Programas Ramón y Cajal, Juan de la Cierva, Margarita Salas y María Zambrano).

Durante la última década (2012-2022), su investigación se centra en el grupo de los lepidópteros donde se ha profundizado en varios aspectos relacionados con el **impacto del cambio global** en **gradientes ambientales**: efectos del cambio climático sobre la distribución altitudinal (Wilson et al. 2015 J. Insect Conserv. 19: 205-216; Nieto-Sánchez et al. 2015 Divers. Distrib. 21: 950-961; Stewart et al. 2020 Ecology 101: e02906); modelos de distribución de especies (Gutiérrez et al. 2013 Lands. Ecol. 28: 401-413); dispersión y migración (Gutiérrez & Wilson 2014 Oecologia 175: 861-873); patrones de diversidad de especies y disponibilidad de recursos (Gutiérrez et al. 2016 Glob. Ecol. Biogeogr. 25: 1477-1488); fenología (Gutiérrez Illán et al. 2012 Ecol. Entomol. 37: 134-144; Gutiérrez & Wilson 2021 J. Anim. Ecol. 90: 248-259) y parasitismo (Stefanescu et al. J. Anim. Ecol. revisión menor) (para más detalles, véanse los méritos a continuación).



Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES (últimos 10 años)- Pueden incluir publicaciones, datos, software, contratos o productos industriales, desarrollos clínicos, publicaciones en conferencias, etc. Si estas aportaciones tienen DOI, por favor inclúyalo.

C.1. Publicaciones más importantes en libros y revistas con “peer review” y conferencias (ver instrucciones).

AC: autor de correspondencia; (nº x / nº y): posición / autores totales

Si aplica, indique el número de citaciones y promedio por año

- Gutiérrez, D.**, Wilson, R.J. (2021). Intra- and interspecific variation in the responses of insect phenology to climate. *Journal of Animal Ecology* 90: 248-259. FI (2020): 5,091, Rango, cuartil (Zoology): 3/175, Q1, D1. Citas (WoS): 10.
- Stewart, J.E., Gutiérrez Illán, J., Richards, S.A., **Gutiérrez, D.**, Wilson, R.J. (2020). Linking inter-annual variation in environment, phenology and abundance for a montane butterfly community. *Ecology* 101: e02906. FI (2020): 5,499, Rango, cuartil (Ecology): 22/166, Q1. Citas: 9.
- Fernández, P., Rodríguez, A., **Gutiérrez, D.**, Jordano, D., Fernández-Haeger, J. (2019). Firebreaks as a barrier to movement: the case of a butterfly in a Mediterranean landscape. *Journal of Insect Conservation* 23: 843-856. FI (2019): 1,553, Rango, cuartil (Entomology): 36/101, Q2. Citas: 2.
- Fernández, P., **Gutiérrez, D.**, Jordano, D., Fernández-Haeger, J. (2017). Water availability drives habitat quality for the butterfly *Plebejus argus* in a Mediterranean sand dune landscape. *Journal of Insect Conservation* 21: 873-883. FI (2017): 1,562. Rango, cuartil (Entomology): 33/96, Q2. Citas: 2.
- Gutiérrez, D.**, Vila, R., Wilson, R.J. (2016). Asymmetric constraints on limits to species ranges influence consumer-resource richness over an environmental gradient. *Global Ecology and Biogeography* 25: 1477-1488. FI (2016): 6,045. Rango, cuartil (Ecology): 10/153, Q1, D1. Citas: 8.
- Nieto-Sánchez, S., **Gutiérrez, D.**, Wilson, R.J. (2015). Long-term change and spatial variation in butterfly communities over an elevation gradient: driven by climate, buffered by habitat. *Diversity and Distributions* 21: 950-961. FI (2015): 4,566. Rango, cuartil (Ecology): 21/149, Q1. Citas: 28.
- Wilson, R.J., Bennie, J., Lawson, C.R., Pearson, D., Ortúzar-Ugarte, G., **Gutiérrez, D.** (2015). Population turnover, habitat use and microclimate at the contracting range margin of a butterfly. *Journal of Insect Conservation* 19: 205-216. FI (2015): 1,431. Rango, cuartil (Entomology): 33/94, Q2. Citas: 9.
- Gutiérrez, D.**, Wilson, R.J. (2014). Climate conditions and resource availability drive return elevational migrations in a single-brooded insect. *Oecologia* 175: 861-873. FI (2014): 3,093. Rango, cuartil (Ecology): 40/144, Q2. Citas: 10.
- Gutiérrez, D.**, Harcourt, J., Díez, S.B., Gutiérrez Illán, J., Wilson, R.J. (2013). Models of presence-absence estimate abundance as well as (or even better than) models of abundance: the case of the butterfly *Parnassius apollo*. *Landscape Ecology* 28: 401-413. FI (2013): 3,574. Rango, cuartil (Ecology): 37/140, Q1. Citas: 26.
- Gutiérrez Illán, J., **Gutiérrez, D.**, Díez, S.B., Wilson, R.J. (2012). Elevational trends in butterfly phenology: implications for species responses to climate change. *Ecological Entomology* 37: 134-144. FI (2012): 1,954. Rango, cuartil (Entomology): 17/87, Q1. Citas: 31.

C.2. Congresos, indicando la modalidad de su participación (conferencia invitada, presentación oral, póster)

C.3. Proyectos o líneas de investigación en los que ha participado, indicando su contribución personal. En el caso de investigadores jóvenes, indicar líneas de investigación de las que hayan sido responsables.

-Ayudas para la contratación de investigadores predoctorales (PEJD-2017-PRE/AMB-4075). Comunidad de Madrid. IP: **David Gutiérrez**. Escuela Superior de Ciencias Experimentales y Tecnología. Universidad Rey Juan Carlos. 01/03/2018 a 29/02/2020. 51.250 €. Investigador principal.

- Dinámica poblacional y distribución altitudinal de la mariposa *Aglais urticae* en un gradiente de latitud: implicaciones en un contexto de cambio climático (CGL2014-57784-P). Ministerio de Economía y Competitividad. IP: **David Gutiérrez**. Escuela Superior de Ciencias Experimentales y Tecnología, Universidad Rey Juan Carlos. 01-01-2015 a 31-12-2017 (prorrogado hasta 30-06-2019). 157.300 €. Investigador principal.
- Efectos de la variabilidad climática temporal sobre la abundancia y la fenología de las especies: evaluación a lo largo de un gradiente altitudinal (CGL2011-30259). Ministerio de Economía y Competitividad. IP: **David Gutiérrez**. Escuela Superior de Ciencias Experimentales y Tecnología, Universidad Rey Juan Carlos. 01-01-2012 a 31-12-2014. 106.480 €. Investigador principal.
- Grupo de Cambio global e Impactos sobre los Ecosistemas (CAMGLO). Universidad Rey Juan Carlos-Banco de Santander, Ayudas a la Actividad de Grupos de Excelencia Investigadora. IP: Fernando T. Maestre. Escuela Superior de Ciencias Experimentales y Tecnología, Universidad Rey Juan Carlos. 01-01-2015 a 31-12-2017. 33.503,46 €. Investigador.
- Climate change and metapopulation dynamics at a contracting range margin (JP100522). The Royal Society (International Joint Project). IP: Robert J. Wilson, Univ. de Exeter, Penryn, Reino Unido. 01-01-2011 a 31-12-2012. 11.987 libras (13.843 €). Investigador.

C.4. Participación en actividades de transferencia de tecnología/conocimiento y explotación de resultados

Incluya las patentes y otras actividades de propiedad industrial o intelectual (contratos, licencias, acuerdos, etc.) en los que haya colaborado. Indique: a) el orden de firma de autores; b) referencia; c) título; d) países prioritarios; e) fecha; f) entidad y empresas que explotan la patente o información similar, en su caso.

-**Gutiérrez, D.** Efectos del cambio climático sobre las poblaciones de mariposas en la Sierra de Guadarrama. Conferencia invitada. IX Seminario: Seguimiento a largo plazo en la Red de Parques Nacionales. Lepidópteros diurnos: aprendiendo sobre el cambio global con las mariposas. Valsaín (Segovia). 26-09-2019. Publicado en: **Gutiérrez, D.** 2020. Para estudiar los efectos del cambio climático: el caso de la Sierra de Guadarrama. Boletín de la Red de Parques Nacionales 63: 37-38.

-Monasterio Y., Escobés, R., García, A., López, M., Vicente, J.C., Vila, R., Antón, I., Baquero, A., **Gutiérrez, D.**, López-Munguira, M., Moreno, O., Hernández, J., Voda, R., Parra, B. (2014). Plan nacional para la Conservación de las Mariposas Españolas. Asociación ZERYNTHIA. Logroño.



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CURRICULUM VITAE (CVA)

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

CV date

15/01/2022

Part A. PERSONAL INFORMATION

First name	PEDRO JOSÉ		
Family name	REY ZAMORA		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	prey@ujaen.es	URL Web	
Open Research and Contributor ID (ORCID)(*)	0000-0001-5550-0393		

(*) Mandatory

A.1. Current position

Position	Full Professor (Catedrático de Universidad)		
Initial date	21/11/2011		
Institution	Universidad de Jaén		
Departament/Center	Biología Animal, Biología Vegetal y Ecología		
Country	Spain	Teleph. number	953212145
Key words	Biodiversity, biotic interactions, agroecology, habitat fragmentation, plant evolution and plant community dynamics, stress tolerance		

A.2. Previous positions (research activity interruptions, art. 45.2.c)

Period	Position/Institution/Country/Interruption cause
11/11/1993 to 30/09/1998	Profesor Asociado/Universidad de Jaén/Spain
01/10/1998 to 22/05/2000	Titular de Universidad Interino/ Universidad de Jaén/Spain
23/05/2000 to 20/11/2011	Titular de Universidad / Universidad de Jaén/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Graduate in Biology	Universidad de Granada	1987
Doctor en Ciencias Biológicas	Doctor en Ciencias Biológicas	1992

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

Dr. Rey is since 2011 Professor of Ecology at the University of Jaén (UJA), where he was previously Associate and Assistant Professor. He achieved his Graduate (1987) and Ph. D (1992) degrees at the University of Granada (after 4-year predoc FPI) fellowship, and was postdoc at the University of Florida. He is the responsible researcher (PI) of the team RNM-354 “Ecología, Evolución y Conservación de la Vegetación Mediterránea” (Andalusia Regional Plan of R+D+I) since 2007 and of its associate research structure (UJA Research Plan). Dr. Rey’s research interest is on the ecology, evolution and dynamics of natural populations and communities in Mediterranean terrestrial ecosystems, as well as on biodiversity

conservation and restoration in agroforest systems (with special attention to olive groves where he has coordinated the studies of biodiversity assessment and recovery in two projects of the LIFE program of the European Commission). His major study subject is biotic interactions (plant-plant, herbivory, seed dispersal and pollination), attending to their implications for the natural regeneration of plant communities and how they are impacted by human land use (agriculture, habitat fragmentation). He has explored also how biotic interactions shape some plant adaptive traits relevant for reproduction and natural regeneration, and how the balance between competition and facilitation contributes to plant diversity across broad environmental gradients. Since 2010, he was PI of 7 highly competitive projects (3 from the National Plan of R+D+i, 2 of the Andalucía Regional Government, 1 Marie-Curie Action, 2 project of EC LIFE program), 1 UJA project y 1 consultant contract for Operative Groups of FEADER. He took part of the research team of other 12 projects (including 1 Horizon 2020 and 2 the European Research Infrastructure LIFEWATCH). Over his career he has participated in international Programs of Research and Teaching (ALFA, VII Framework Program, CYTED) and Nature Conservation (LIFE program of European Commission). He collaborated with researchers from US, Latin-America and Europe, as well as from Spanish Universities (Granada, Sevilla, Oviedo, S. de Compostela, Zaragoza, etc), CSIC (EBD, EEZA, EEZ, CIDE, IMEDEA, o IPE) and conservationist organizations (SEO BirdLife). He is author of 140 publications of which 102 are in JCR journals (most of them in Q1) in Ecology, Plant Sciences, Evolutionary Biology and Biodiversity and Conservation areas. His papers has been cited around 5000 times (Google Scholar). His h-index is 29 in WOS and 34 in Google Scholar. He has reviewed articles for more than 50 scientific journals and evaluated projects for ANEP, CYTED, FONCYT, EPPN2020, among others. He was member of the Organization and Scientific Committees of the de IX AEET Meeting.

Dr. Rey performs an intense activity of researcher formation. In the last 10 years was n President of the Doctorate Commission at his department (5 years), Secretary of the Academic Commission of the doctorate Program in Renewable Energies (7 years), and member of the Earth Sciences doctorate Program at UJA. In the last ten years Dr. Rey has supervised 2 postdoctoral, 7 Ph. D. students (FPI/FPU fellowships), 7 TFG, 6 TFM, 6 juvenile guarantees contracts and 2 ICARO-Research team grants for student in practices. Currently he is co-advising 4 more Ph. D. students (2 FPI and 1 FPU among them). In last years he received graduate and postgraduate exchange students in practices (ERASMUS, CAPES) from France, Netherlands Brazil and México. His doctorate students published their doctoral thesis in high impact journals and most of them still continue his/her academic/ research careers, with 4 of them being already in permanent positions at CSIC or in Universities.

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

C.1. Publications (*see instructions*)

1. **Rey, PJ**; FM Camacho, R Tarifa, C Martínez-Núñez, T Salido, AJ Pérez and D. García 2021. Persistence of seed dispersal in agroecosystems: effects of landscape modification and intensive soil management practices in avian frugivores, frugivory and seed deposition in olive croplands. *Frontiers in Ecology and Evolution*, 9: 782462. **Q1 Ecology**
2. González-Robles, A., García, C., Salido, T., Manzaneda, A.J., & **Rey, P.J.** 2021. Extensive pollen-mediated gene flow across intensively managed landscapes in an insect-pollinated shrub native to semiarid habitats. *Molecular Ecology*. 10.1111/mec.15950. **Q1 Ecology**
3. Martínez-Núñez, C., Manzaneda, AJ,... **Rey, PJ.** 2020. Low-intensity management benefits solitary bees in olive groves. *Journal of Applied Ecology* 57:11-120. **Q1 Ecology**.
4. **Rey, P.J.**, et al. 2019, Landscape-moderated biodiversity effects of ground herb cover in olive groves: Implications for regional biodiversity conservation. *Agriculture, Ecosystems & Environment* 277: 61-73. **Q1 Ecology**

5. Martínez-Núñez, C., Manzaneda, AJ,... **Rey, PJ**. 2019. Interacting effects of landscape and management on plant–solitary bee networks in olive orchards. *Func. Ecol.* 33: 2316-2326. **Q1 Ecology**
6. **Rey, PJ**; Manzaneda, AJ; Alcántara, JM. 2017. The interplay between aridity and competition determines colonization ability, exclusion and ecological segregation in the heteroploid *Brachypodium distachyon* species complex. *New Phytologist* 215: 85-96. **Q1 Plant Sci**
7. **Rey, PJ**; Alcántara, JM; Manzaneda, A; Sánchez-Lafuente, AM. 2016. Facilitation contributes to Mediterranean woody plant diversity but does not shape the diversity–productivity relationship along aridity gradients. *New Phytologist* 211:464-476. **Q1 Plant Sci**
8. **Rey, PJ**; Alcantara, JM. 2014. Effects of habitat alteration on the effectiveness of plant-avian seed dispersal mutualisms: Consequences for plant regeneration. *Perspectives in Plant Ecology, Evolution and Systematics*, 16: 21-31 **Q1 Plant Sci**.
9. Alcantara, JM; **Rey, PJ**. 2012. Linking Topological Structure and Dynamics in Ecological Networks. *American Naturalist*, 180: 186-199. **Q1 Ecology**
10. **Rey, PJ**. 2011. Preserving frugivorous birds in agro-ecosystems: lessons from Spanish olive orchards. *Journal of Applied Ecology*, 48: 228-237. 2011. **Q1 Ecology**

C.2. Congress

1. **Rey, P.J.** Aplicaciones de la captura, manipulación y anillamiento científico de aves en la ciencia agroecológica: enseñanzas desde el olivar andaluz. XXI Congreso de Anillamiento Científico de Aves. Jaén, 3 a 7 December 3th to 7th 2021. Type of contribution. Invited Plenary talk. Opening Talk.

C.3. Research projects

1. LIFE Olivares VIVOS + Increasing the impact of Olivares Vivos in the EU. Reference. LIFE20 NAT/ES/001087. Funding Institution: LIFE PROGRAM EUROPEAN COMMISSION). Funds for the beneficiary partner UJA-Ecología: 1.205.129€ of which 729.337€ are from the EC. PI: **Pedro J. Rey** Zamora. Duration: September 1st 2021 – August 31th 2026.
2. Evaluando la deuda de recuperacion de servicios ecosistemicos provistos por la fauna en cultivos permanentes: efecto de la intensificacion agricola y el paisaje en olivares. Funding Institution: Ministerio de Ciencia e Innovación. Gobierno de España. National Plan of R+D+I. Reference: PID2019-108332GB-I00. Funds: 199.650€. PI: **Pedro J. Rey**. Duration: June 1st 2020 - May 31th 2024.
3. Desarrollo de métodos de identificación de especies clave usando análisis de redes ecológicas. Aplicación al hábitat prioritario de Matorrales arborescentes con *Ziziphus*. Reference. FEDER-UJA 2018/1261180 Funding Program: Programa operativo FEDER Andalucía 2014-2020, 2018 Call. Participant Institutions UJA, EEZA-CSIC and EEZ-CSIC. Funds: 70.792,18 €. PI: **Pedro J. Rey Zamora**. N. of participant researchers: 5. Duration January 1st 2020 to December 31th 2021.
4. Olive Alive: Towards The Design And Certification Of Biodiversity Friendly Olive Groves) Reference. LIFE14 NAT/ES/001094. (LIFE PROGRAM EUROPEAN COMMISSION). Funds for the beneficiary partner UJA-Ecología: 516.070€. PI: **Pedro J. Rey** Zamora. Duration: October 2015 – September 2020
5. Efectos de gradientes de complejidad del paisaje y de manejo agrícola sobre la biodiversidad animal y sus servicios ecosistemicos en el agroecosistema del olivar andaluz”. Funding Institution: Ministerio de Economía y Competitividad. Gobierno de España. National Plan of R+D+I. Reference: CGL2015-68963-C2-1-R. Funds: 140.360€. PI: **Pedro J. Rey** / Antonio J. Manzaneda. Duration: January 1st 2016 to December 31th 2018.

6. Disrupción de los mutualismos de polinización y dispersión de semillas por fragmentación de hábitat: consecuencias para la conservación de poblaciones vegetales y hábitats en el sureste semiárido. Reference: RNM766. Funding Institution. Junta de Andalucía. Participants: Universidad de Jaén. EEZA (CSIC). Duration, from: January 30th 2014 to: January 20th 2017. Funding: 102.894,95 €. PI: **Pedro J. Rey**. N. of participants: 5

7. Balance facilitación-competencia: efectos sobre el ensamble y la Diversidad ecológica y filogenética de las comunidades de plantas mediterráneas. Referencia: CGL2009-08130. Funding Organism: Ministerio de Ciencia en Innovación. Participant Institution: Universidad de Jaén. Duration, from: January 2010 to: December 2012. Funds: 107.690€. PI: **Pedro J. Rey**. N. of participant researchers: 4.

8. Natural Variation for drought tolerance in the grass *Brachypodium distachyon*, a new model species for ecological genomics. Ref. PEOF-GA-2008-220983. Funding Institution: European Commission. Marie Curie Actions. International Outgoing Fellowships. Participant Institutions: Universidad de Jaén and Duke University (USA). Duration, June 1st 2008 to: December 31st 2011. Funds: 234.204 €. PI: **Pedro J. Rey** and Antonio J. Manzaneda. N. of participant researchers: 3.

C.4. Contracts, technological or transfer merits

1. Title of the contract: Asesoramiento científico técnico en evaluación y análisis de biodiversidad animal en el GO Cubiertas Vegetales de Especies Nativas en Olivar (CUVrEN; ref. GOP3I-CO-16-0006). Type of contract: Convenio SEO-BirdLife-Univ. Jaén. Funds: 6.064€. Funding organizations: SEO-BirdLife. Participant Institutions: Universidad de Jaén. Duration, April 2019 to December 2019. PI: Pedro J. Rey. N. of participant researchers: 4.

2. Inclusión en el registro de variedades vegetales protegidas de la Dirección General de Producciones y Mercados agrarios, Subdirección General de medios de producción agrícolas y Oficina española de variedades vegetales, de 2 variedades de la especie *Brachypodium hybridum*: Variedad BHJCM; NRVP: 20195514; y Variedad BHJHIN; NRVP: 20195515.

C.5. Ph. D. thesis supervising (last 5 years)

1. Title: Efectos del paisaje y manejo agrícola sobre la biodiversidad y sus servicios ecosistémicos en el agroecosistema del olivar andaluz. Ph. D. student: Carlos Martínez-Núñez. Univ. Jaén. April 2021.

2. Title: Análisis de la variación genética, respuesta funcional y expresión génica frente a diferentes tipos de estrés en el complejo de ploidía *Brachypodium distachyon* (Poaceae). Ph. D. student: Maria Luisa Martínez Martínez. Universidad de Jaén. May 2020.

3. Title: Disrupción de los mutualismos planta-polinizador de *Ziziphus lotus* por pérdida de hábitat y degradación del paisaje: Consecuencias para el flujo génico y la conservación de sus poblaciones en el sureste semiárido de España. Ph. D. student: Ana González Robles. Univ. Jaén, July de 2019.

4. Title: Redes de reemplazamiento entre plantas: avances teóricos, metodológicos y empíricos. Ph. D. student: Manuel Pulgar Ramírez. Universidad de Jaén, May 2017.

5. Title: Efecto de la pérdida y degradación de hábitat en el servicio de dispersión y regeneración de *Ziziphus lotus*, especie clave en los ecosistemas semiáridos de la península Ibérica. Ph. D. student: Inma Cancio Guillén. Universidad de Jaén, September 2017.

Parte A. DATOS PERSONALES

Fecha del CVA	14-05-2021
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Nombre y apellidos	MARIA CARMEN PEREZ MARTINEZ		
DNI/NIE/pasaporte			
Núm. identificación del investigador	Researcher ID	ResearcherID: K-1219-2014	
	Código Orcid	http://orcid.org/0000-0001-8777-4487	

A.1. Situación profesional actual

Organismo	Universidad de Granada		
Dpto./Centro	Ecología		
Dirección	Facultad de Ciencias , Avda. Fuentenueva . 18071 Granada		
Teléfono	640129145	correo electrónico	cperezm@ugr.es
Categoría profesional	Catedrática universidad	Fecha inicio	20-12-2019
Espec. cód. UNESCO	250805, 250808		
Palabras clave	Ecología, Limnología, Paleolimnología, lagos alpinos		

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciada en Ciencias Biológicas	Universidad Granada	1987
Doctora en Ciencias Biológicas	Universidad Granada	1992

Docente en la Universidad de Granada desde 1995
Número de sexenios de investigación = 5
RESUMEN LIBRE DEL CURRÍCULUM

Mi formación académica ha tenido lugar en la Universidad de Granada principalmente con varios años de estancias en otros centros en el extranjero. En 1995 obtuve mi primer contrato como profesora en el Dpto. de Ecología, en el que he permanecido hasta la actualidad. Mi actividad docente se ha centrado fundamentalmente en las materias de Ecología como Ecología de Sistemas, Limnología y Paleolimnología en el Grado en Biología y diversos másteres.

Durante los primeros años mi investigación se centró en el análisis de los efectos de la fertilización y presión de herbivoría sobre comunidad fitoplanctónica mediante técnicas experimentales in situ. Posteriormente me formé en el cultivo de laboratorio de especies algales y microinvertebrados y la experimentación en laboratorio durante mi estancia posdoctoral en Holanda. Estas técnicas las apliqué a la vuelta a España montando los laboratorios de cultivos que aún hoy persisten y me han permitido abordar diferentes trabajos de investigación centrados en la depuración de aguas residuales y ciclos de vida de especies cladóceros. Este último aspecto ha ocupado una parte importante de mi investigación en los últimos años y me condujo, mediante el estudio de formas de resistencia, a la investigación del sedimento lacustre

Además, durante los últimos 15 años he trabajado en varios proyectos centrados en la diversidad de organismos en distintos ecosistemas acuáticos

Recientemente he comenzado una nueva línea de investigación dedicada a la Paleolimnología y centrada en los estudios en el Antropoceno, para lo cual realicé una estancia en el PEARL (Canadá).

MÉRITOS MÁS RELEVANTES

Puestos de gestión desempeñados

Coordinadora de la Comisión PAT (Plan de Acción Tutorial) de la Comisión Docente del Grado en Biología. Curso 2008-09, 2009-10 y 2013-14.

Miembro de la Comisión TFG (Trabajo Fin de Grado) en la Comisión Docente del Grado en Biología. Curso 2012-13 a 2018-19.

Secretaria de la Comisión Docente del Grado en Biología. 20 enero 2017 a 31 agosto 2018. Miembro de la Comisión Permanente y de la Comisión Interna de Garantía de la Calidad.

Miembro electo de la Junta de Centro de la Facultad de Ciencias de la UGR. 1 abril 2004 hasta 24 abril 2016.

Miembro electo del Claustro de la Universidad de Granada. 1 julio de 2008 a 10 junio de 2010.

Coordinadora del Grado en Biología . 6 febrero 2020-actualidad.

Publicaciones

1. Conde-Porcuna, J. M., Veiga, J., Moreno, E., Jiménez, L., Ramos-Rodríguez, E. & **Pérez-Martínez**, C. (2021) Phylogeny and spatiotemporal genetic patterns in the *Daphnia pulex* complex from Sierra Nevada lakes (Spain): first record of North American *D. pulex* in a European high mountain lake. *Journal of Plankton Research* <https://doi.org/10.1093/plankt/fbab024>
2. López-Rodríguez, M. J., Paz-Moreno, I., Peralta-Maraver, I., **Pérez-Martínez**, C. & Tierno de Figueroa, J. M. (2021) Experimental evaluation of biodiversity response to dispersal barriers and patch productivity in Mediterranean streams. *Aquatic Sciences* 83(1), 1-10 <https://doi.org/10.1007/s00027-020-00757-5>
3. Del Arco, A., Álvarez-Manzaneda, I., Funes, A., **Pérez-Martínez**, C. & de Vicente, I. (2021) Assessing the toxic effects of magnetic particles used for lake restoration on phytoplankton: a community-based approach. *Ecotoxicology and Environmental Safety* 207, 111288 <https://doi.org/10.1016/j.ecoenv.2020.111288>
4. **Pérez-Martínez**, C., Rühland, K. M., Smol, J. P., Jones, V. J., & Conde-Porcuna, J. M. (2020). Long-term ecological changes in Mediterranean mountain lakes linked to recent climate change and Saharan dust deposition revealed by diatom analyses. *Science of The Total Environment*, 138519. <https://doi.org/10.1016/j.scitotenv.2020.138519>
5. García-Alix, A., Toney, J. L., Jiménez-Moreno, G., **Pérez-Martínez**, C., Jiménez, L., Rodrigo-Gámiz, M., Anderson, R. S., Camuera, J., Jiménez-Espejo, F. J., Peña-Angulo, D. & Ramos-Román, M. J. (2020) Extreme warming rates affecting alpine areas in SW Europe deduced from algal lipids, *Climate of the Past* 16, 245–263. <https://doi.org/10.5194/cp-2019-98>.
6. **Pérez-Martínez**, C., Conde-Porcuna, J. M., Moreno, E., Ramos-Rodríguez, E. & Jiménez, L. (2020) Cladoceran assemblage distribution in shallow alpine lakes of Sierra Nevada (Spain) and its relationship with environmental variables. *Aquatic Sciences* 82:4. <https://doi.org/10.1007/s00027-019-0677-5>
7. Burillo, J. P., Jiménez, L. & **Pérez-Martínez**, C. (2019) Identifying invasive *Daphnia* species by morphological analysis of postabdominal claws in Sierra Nevada alpine lakes. *Journal of Paleolimnology* 62: 121-135. <https://doi.org/10.1007/s10933-019-00078-0>
8. Jiménez, L., Conde-Porcuna, J. M., Heiri, O., Anderson, R. S., Toney, J. L., García-Alix, A. & **Pérez-Martínez**, C. (2019) Ecosystem responses to climate-related changes in a Mediterranean alpine environment over the last ~180 years. *Ecosystems* 22: 563-577. <https://doi.org/10.1007/s10021-018-0286-5>
9. Jiménez L., Rühland, K.M., Jeziorski, A., Smol, J. P. & **Pérez-Martínez**, C. (2018) Climate change and Saharan dust drive recent cladoceran and primary production changes in remote alpine lakes of Sierra Nevada, Spain. *Global Change Biology* 24:e139–e158. <https://doi.org/10.1111/gcb.13878>

10. Morales-Baquero, R. and **Pérez-Martínez, C.** (2016). Saharan versus local influence on atmospheric aerosol deposition in the Southern Iberian Peninsula: significance for N and P inputs. *Global Biogeochem. Cycles*, 30, <https://doi:10.1002/2015GB005254>.

Proyectos

TÍTULO DEL PROYECTO: Efectos del cambio climático en los ecosistemas acuáticos y terrestres de alta montaña de Sierra Nevada mediante el análisis del registro fósil en los sedimentos 2007-2011

Entidad financiadora: MMA, Organismo Autónomo Red Parques Nacionales
Entidades participantes: Univ. Granada, Univ. Almería, Univ. Valencia, // Utrecht University (Países Bajos), Northern Arizona University (USA).
Investigadora responsable: Carmen Pérez Martínez
Número de investigadores participantes: 9
IMPORTE TOTAL DEL PROYECTO: 59.840,25 €

TÍTULO DEL PROYECTO: Patrones temporales en la biogeoquímica y biota de las lagunas de Sierra Nevada: aproximación desde la Paleolimnología (BIOPAL) 2012-2014

Entidad financiadora: MICINN CGL2011-23483
Entidades participantes: Univ. Granada y Queen's University (Kingston, Ontario, Canadá)
Investigador responsable: Carmen Pérez Martínez
Investigadores participantes: 7
IMPORTE TOTAL DEL PROYECTO: 84.700 €

TÍTULO DEL PROYECTO: Evaluación y seguimiento del cambio global en tres lagos de alta montaña de Parques Nacionales (Enol, Marboré y La Caldera): indicadores biológicos (CLAM 1) 2012-2015

Entidad financiadora: OAPN Organismo Autónomo Red Parques Nacionales Ref 623S/2012
Entidades participantes: Univ. Barcelona, Univ. Granada, CSIC (Instituto Pirenaico Ecología)
Investigador responsable: María Rieradevall Sants (Universidad Barcelona)
Investigadores participantes: 10
IMPORTE TOTAL DEL PROYECTO: 106.000 €

TÍTULO DEL PROYECTO: El cambio climático en el sur de la península ibérica: reconstrucción basada en sedimentos lacustres del Parque Nacional de Sierra Nevada

Entidad financiadora: Junta de Andalucía 30BB230301
Entidades participantes: Univ. Granada, CSIC (Instituto Andaluz de Ciencias de la Tierra)
Duración: 27 junio 2013 - 1 septiembre 2017
Investigador principal: Gonzalo Jiménez Moreno (Universidad Granada)
Investigadores participantes: 10
Importe total del proyecto: 150.000 €

TÍTULO DEL PROYECTO: H2020 ECOPOTENTIAL: Improving future ecosystem benefits through earth observations

Referencia: 641762.
Investigador principal: Antonello Provenzale (CNR-Italia).
Entidades participantes: 47
Duración: junio 2015- junio 2019.
Presupuesto: 15.9 millones € (UGR tiene 300.000 €)

TÍTULO DEL PROYECTO: Lagos centinelas de cambio global en los Parques Nacionales: análisis multidisciplinar de los últimos 6000 años. 2020-2022

OAPN Ref: 2403-S/2017
Duración: 2020-2022
IP: Dra. Carmen Pérez Martínez (Subproyecto Limnología)

Patentes

oepm: p200202728 ES 2 217 945

Procedimiento para la depuración de aguas residuales (retirada de nitrógeno y fósforo) por microalgas bentónicas inmovilizadas

Titular/es: PIGCHAMP PRO EUROPA S.A. Almira, 28, 40001 Segovia, ES

Inventor/es: Jiménez Pérez, María del Valle; Pérez Martínez, Carmen y Sánchez Castillo, Pedro

Fecha de la concesión: 08.09.2005

Estancias en Centros extranjeros de investigación:

PEARL -Paleoecological Environmental Assessment and Research Laboratory, [Department of Biology, Queen's University](#), Kingston Ontario, Canada, K7L 3N6. Kingston, Ontario, Canada. 1 abril -1 diciembre 2010. Tema: Análisis de muestras y tratamiento de datos paleolimnológicos

Investigadora visitante- Ayuda del Ministerio de Ciencia e Innovación- Programa Nacional de Movilidad de Recursos Humanos de Investigación.

Recent Environmental Change and Biodiversity (RECB), Environmental Change Research Centre, **Dept. of Geography, University College of London (UK).**

1 enero 2019- 30 junio 2019. 10 meses

Ayuda del Plan Propio de la Universidad de Granada (Programa Sabáticos)



CURRICULUM VITAE

Part A. PERSONAL INFORMATION

CV date Feb 2022

First name	Adrián		
Family name	Escudero		
Gender		Birth date	
ID number			
e-mail	adrian.escudero@urjc.es	biodiversos.org	
ORCID		0000-0002-1427-5465	

A.1. Current position

Position	Full Professor/Catedrático		
Initial date	3/03/2007		
Institution	URJC		
Department/Center	ESCET	Biología, Geología, Física y Química	
Country	Spain	Tel	34914887070
Key words	Ecology		

A.2. Previous positions

I have developed all my professional positions in public Universities in Madrid. Prior to my current position, I was Associate Professor in the URJC from 2001 to 2007. Before joining URJC, from 1994 to 2001, I was an Associate Professor in the Dep. of Plant Biology of the Faculty of Agronomy (UPM). Previously, I had junior positions in the UCM.

A.3. Education

PhD, Licensed	University/Country	Year
Biologist	UCM/Spain	1987
Doctor	UCM/Spain	1992

Part B. CV SUMMARY

Google Academic (<https://scholar.google.es/citations?user=OHEKRk4AAAAJ&hl=es&oi=ao>)
Cites 15139; H index 63, i10 index 226 Feb 2022
Researchgate (https://www.researchgate.net/profile/Adrian_Escudero)
RG score 45,55; H index 57; 11804 citations, y 952 followers

I am an ecologist interested in theoretical questions related to Community Ecology. In this context I works with plant communities in very stressful habitats, such as high mountains, drylands, gypsum soils and seasonal dry forests. I am also concerned with global problems related to the biodiversity loss and the climate change crisis. To help to mitigate this crisis, we are currently working in restoration ecology.

I have published 308 articles in international, peer-reviewed, scientific journals with more than 93 % included in the JCR database including five articles in *Science/Nature* and many others in top journals in Ecology and Plant Sciences (for instance 8 in *Journal of Ecology*; 8 *Ecography*; 4 *Ecology*; 12 *American J Botany*, and 5 *New Phytologist*).

I held a Research Fellowship from the Spanish Ministry of Education, 1990-1992 and a Research fellowship from the UCM in 1989. I also obtained a "Salvador de Madariaga" *Fellowship*, from the Spanish Ministry of Education for a six-months stay in USA to collaborate with Prof. Belnap from the USGS, in 2010. Lately, I received fellowships both



from the Universidad the Concepcion for a six-months stay in 2016 and from the UTPL in Ecuador for three months in 2018.

Convinced that the highest impact in our Society is achieved through training and mentoring new researchers, I have invested a critical part of my work to the supervision of graduate students. I have supervised 25 PhD students from very diverse nationalities. I am especially proud of the fact that most of them are well-known researchers, conducting their own ecological labs in permanent posts in very different institutions. I have also hosted not only more than 15 post docs, but also 6 foreign senior scientists who have conducted research stays of more than one month in my lab.

My most relevant achievement so far has been the commissioning and structural design of the '**Biodiversity and Conservation Unit**' (<http://biodiversos.org>). I was hired in 2001 to launch a teaching and research unit in Biodiversity and Ecology. What was a tiny embryo at the turn of the century with two senior researchers has become one of the most important research units in Ecology at the global scale and the first institution in Ecology and Evolution in Spain (see the Global Ranking of Shanghai 2020). I was Head of a very productive department for more than 8 years. Nowadays, the Biodiversity and Conservation Unit has 28 permanent posts, 30 predoctoral fellows, 14 postdocs and 12 technicians. We have created a very friendly environment able to attract international researchers. The ability of the Unit to obtain funds is outstanding, with more than 4 million euros and more than 140 publications per year.

Member of the Editorial Boards of *Oikos* (since 2017), *Mediterranean Botany* (since 2015); *Pirineos* (since 2010) and *Ecosistemas* (since 2004). I am actively involved in the Spanish Research Agency, but also in some regional agencies such as those from Catalonia, Galicia and Andalusia

I have been the principal investigator (PI) of 15 research projects in competitive calls, totaling over 3.48 M€ de last 10 projects. These included funds from the EU such as the GYPWORLD project (270.000 €).

Part C. MERITS

C.1. Publications

- Escudero, A., Matesanz, S., Pescador, D.S., de la Cruz, M., Valladares, F. & Cavieres, L. 2021. Every little helps: the functional role of individuals in assembling any plant community from the richest to monospecific ones. **Journal of Vegetation Science** 32: e13059
- Calatayud, J., Andivia, E., Escudero, A., et al. 2020 Positive associations among rare species and their persistence in ecological assemblages. **Nature Ecology and Evolution** 4: 40-45. Fac. Imp. 10, 969
- Madrigal-González, J., Calatayud, J., Ballesteros-Cánovas, JA., Escudero, A., et al. 2020. Climate reverses directionality in the richness-abundance relationship across the World's main forest biomes. **Nature Communications** 11: 5635 (2020) <https://doi.org/10.1038/s41467-020-19460-y> . Fac. Imp. 12,121
- Cruz, M. de la, Quintana-Ascencio, P.F., Cayuela, L., Espinosa, C.I. & Escudero, A. Comment on "the extent of forest in drylands by Bastin et al. **Science** doi: 10.1126/science.aao0369.
- Escudero, A., Palacio, S., Maestre, F. & Luzuriaga, A.L. 2014. Plant life on gypsum: a review of its multiple facets. **Biological Reviews** 90(1): 1-18
- Delgado-Baquerizo, M, Maestre, F., Gallardo, A. Bowkers, M, Escudero, A. et al. 2013. Decoupling of soil C, N and P cycles with increasing aridity in drylands worldwide. **Nature** 502: 672-676.
- Lloret, F., Escudero, A., Iriondo, J.M., Martínez-Vilalta, J.. & Valladares, F. 2012. Extreme climatic events and vegetation: the role of stabilizing processes. **Global Change Biology** 18: 797–805.
- Matesanz, S., Gimeno, T., de la Cruz, M., Escudero, A. & Valladares, F. 2011. Coexistence with a congener influences the fine-scale spatial genetic structure of a semiarid plant. **Journal of Ecology** 99: 838-848.
- Giménez-Benavides, L., Albert, MJ., Iriondo, JM. & Escudero, A. 2011. Demographic processes of upward range contraction in a long-lived Mediterranean high mountain plant. **Ecography** 34: 85_93



- Maestre, F., Bowker, M., Hinojosa, M., Martínez, I., García-Palacios, P., Castillo, A., Soliveres, S., Luzuriaga, A., Sánchez, A. & Escudero, A. 2009. Shrub encroachment can reverse desertification in semi-arid Mediterranean grassland. **Ecology Letters** 12: 930-941
- Milla, R, Escudero, A. & Iriondo, J.M. 2009 Growing with siblings: a common ground for cooperation or fiercer competition among plants? **Proceedings of the Royal Society B** 276:2531-2540
- Maestre, F.T & Escudero, A. 2009 Is the patch-size distribution of vegetation a suitable indicator of desertification processes?" **Ecology** 90: 1729-1735.

C.3. Research projects (10 years)

- Ministerio de Economía y Competitividad. Plan Nacional I+D+I. **MOUNTAINS CGL2012-38427 Título: Reglas ecológicas de ensamblaje en comunidades de plantas de alta montaña una aproximación espacial multiescalar.** 2013-2015. 120.000 euros.
Proyecto financiado por la Com. Madrid denominado **REMEDINAL-3CM** "Programa de I+D para la conservación y restauración de los ecosistemas madrileños" (S2013/MAE-2719). Fecha 2014-2017. 600.300 euros
- Ministerio de Economía y Competitividad. Plan Nacional I+D+I. **ROOTS CGL2015-66809-P Título: Raíces: integrando las interacciones subterráneas para avanzar en una teoría unificadora de coexistencia de plantas.** 2016-2018. 111.700 euros.
- European Union. RISE Program. **Gypworld.** Fecha: 2018-2011. Importe del nodo URJC: 270.000 euros.
- Ministerio de Ciencia, Innovación y Universidades. Plan Nacional de I+D+i. **Phenotypes.** Fecha: ene. 2019 a dic. 2021. Phenotype-based community ecology: a synthetic approach to unveil the functional role of each individual in the assembly of plant communities. 167.000 euros
- Proyecto financiado por la Com. Madrid denominado, **Ecología translacional” REMEDINAL TE-CM** (S2018/EMT-4338). De 1 de enero de 2019 a 31 de dic. De 2022. 800.000 euros

C.4. Contracts

- International University cooperation agreement between the Swiss Federal Institute of Technology (Switzerland) and the URJC. II. IP A. Escudero y C. Schöb. 2021. 15000 euros.
- International University cooperation agreement between the Swiss Federal Institute of Technology (Switzerland) and the URJC. IP A. Escudero y C. Schöb. Importe 30000 euros, 2019 y extensión para 2020 de 15000 euros.
- Elaboración de directrices y orientaciones para la integración de la adaptación al cambio climático en las iniciativas de restauración ecológica y conectividad de ecosistemas en España.** Oficina Española de Cambio Climático. Jun 2015 a dic 2016. 21780 euros.
- CDTI y OHL. **“Conexión de flujos ecológicos mediante infraestructuras lineales de transporte terrestre ECONECT.** Abril 2012. 36 meses. 172.222.22 euros”



CURRICULUM VITAE (CVA)

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

Part A. PERSONAL INFORMATION		CV date	10/01/2022
First name	Inmaculada		
Family name	de Vicente Álvarez-Manzaneda		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	ivicente@ugr.es	URL Web	https://ecologia.ugr.es/pages/personal/profesorado/i_de_vicente
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-1449-5740		

(*) Mandatory

A.1. Current position

Position	Professor		
Initial date	July 23rd, 2021		
Institution	University of Granada		
Department/Center	Ecology	Faculty of Sciences	
Country	Spain	Teleph. number	+34958249768
Key words	Limnology, eutrophication, restoration ecology, biogeochemistry, sediments		

A.2. Previous positions (research activity interruptions, art. 14.2.b)

Period	Position/Institution/Country/Interruption cause
2000-2004	Ph D student/ University of Granada/ Spain
2005-2007	Hired/ University of Granada/ Spain
2007-2011	Hired/ University of Granada/ Spain
2011-2021	Associate Professor/ University of Granada/ Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Graduate in Environmental Sciences	University of Granada/ Spain	1999
PhD	University of Granada/ Spain	2004

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

Dra. Inmaculada de Vicente is Professor in the Department of Ecology at the University of Granada. She has 56 publications (WoS), among them 53 are JCR articles (56.6% in the first quartile), 11 national and international book chapters and 74 conference papers. She has supervised 4 PhD, 20 End-of-Degree Projects and 13 Master Projects. Currently, her research is mainly focused on the use of novel adsorbents such as magnetic and non magnetic particles for improving water quality of both natural aquatic ecosystems and also of treated wastewaters. More specifically, the next goals has been achieved: (i) to identify the best working conditions for adsorbing phosphorus in natural waters (de Vicente et al., 2010, *Journal of Hazardous Materials*; Merino-Martos et al., 2011, *Journal of Hazardous Materials*); (ii) to test the effect of chemical interferences in phosphorus adsorption onto magnetic

particles (de Vicente et al., 2011, *Journal of Hazardous Materials*; Merino-Martos et al., 2015, *Limnetica*); (iii) to investigate the effect of pH on manganese removal efficiency in the absence and in the presence of magnetic microparticles (Funes et al., 2014, *Water Research*); (iv) to assess the effect of adding magnetic particles on phosphorus fluxes across the sediment-water interface and on the sedimentary mobile phosphorus concentration by using sediment cores (Funes et al., 2016, *Water Research*) and microcosms (Funes et al., 2017, *Science of the Total Environment*) from a hypertrophic wetland; (v) to synthesize magnetic chitosan microparticles which are characterized by a low density and a lower potential toxicity (due to their larger size) than conventional iron/iron oxide (Funes et al., 2017, *Chemosphere*); (vi) to assess the toxicity of magnetic and non magnetic phosphorus adsorbents used for lake restoration on aquatic biota by using a multi-methodological approach based on standardized laboratory tests (Álvarez-Manzaneda et al., 2017, *Journal of Hazardous Materials*; Álvarez-Manzaneda and de Vicente, 2017, *Chemosphere*; del Arco et al., 2018, *Ecotoxicology and Environmental Safety*; Álvarez-Manzaneda et al., 2019, *Chemosphere*) and microcosms experiments (Álvarez-Manzaneda et al., 2019, *Science of the Total Environment*; del Arco et al., 2021, *Ecotoxicology and Environmental Safety*); (vii) to achieve the efficiency of magnetic particles for trapping phosphorus in secondary municipal effluents (Álvarez-Manzaneda et al., 2021, *Chemosphere*) and (viii) to evaluate the viability of recovered phosphorus from a natural eutrophicated ecosystem as a liquid fertilizer (Álvarez-Manzaneda et al., 2021, *Journal of Environmental Management*).

It is therefore clear that the PI has a wide experience in two key issues related to the present proposal: (i) characterization and functionalization of magnetic and non magnetic phosphorus adsorbents and in (ii) assessing the effect of adding magnetic adsorbents on water quality. Considering the high efficiency of magnetic particles for trapping phosphorus in natural eutrophicated waters (which has been widely proved by our research group), in this proposal, we aim to extend our experience to treated wastewaters where nutrients and emergent pollutants are present making this technique especially promising.

It is interesting to remark the extensive experience of the PI in both national and international collaborations (up to 77 co-authors, SCOPUS database). As an illustration, she has collaborated with members from the *Istituto Italiano di Idrobiologia* (de Vicente et al., 2006, *Journal of Paleolimnology*), *Florida Atlantic University* (Jensen et al., 2009, *Limnology and Oceanography*); *University of Copenhagen* (de Vicente et al., 2010a, *Hydrobiologia*) and *Department of Environmental Sciences and Cary Institute of Ecosystem Studies* (de Vicente et al., 2010b, *Hydrobiologia*).

Considering her contributions to society, she has also been enrolled in outreach activities such as “*Proyecto de Iniciación a la Investigación e Innovación en Secundaria en Andalucía*” (<https://piiisa.es/>) by showing to bachelor students the negative effects of eutrophication in inland aquatic ecosystem through the experimentation. In addition, she has collaborated in two chapters of the Andalusia-Ecology Project which includes a study on the ecology of the Andalusian Community (Hércules Ediciones; ISBN: 978-84-936736-5-9). She has also closely collaborated with different companies focused on the management of water resources (EMASESA, <https://www.emasesa.com/> and Freshwater Research, <http://fwr.ca/>) by different projects and by giving seminars.

Finally, she also has participated in the training of PhD students (Azahara Merino Martos, Ana Inmaculada Funes Cabrerizo, Juan Diego Gilbert Rus and Inmaculada Álvarez-Manzaneda Salcedo as well as doctors (Dra. Ana Isabel del Arco Ochoa), Dra. Ingrid Fanes Treviño and Dr. Kouassi, N'Guessan from University of Peleforo Gon Coulibaly, Korhogo (Côte d'Ivoire).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. Funes, A., J. de Vicente, L. Cruz-Pizarro & **I. de Vicente**. 2014. The influence of pH on manganese removal by magnetic microparticles in solution. *Water Research*, 53: 110-122.
2. Funes, A., J. de Vicente, L. Cruz-Pizarro, I. Álvarez-Manzaneda & **I. de Vicente**. 2016. Magnetic microparticles as a new tool for lake restoration: a microcosm experiment for evaluating the impact on Phosphorus fluxes and sedimentary Phosphorus pools. *Water Research*, 89: 366-374.
3. Funes, A., A.I. del Arco, I. Álvarez-Manzaneda, J. de Vicente & **I. de Vicente**. 2017. A microcosm experiment to determine the consequences of magnetic microparticles application on water quality and sediment phosphorus pools. *Science of the Total Environment*, 579: 245-253.
4. del Arco, A., G. Parra & **I. de Vicente**. 2018. Going deeper into phosphorus adsorbents for lake restoration: Combined effects of magnetic particles, intraspecific competition and habitat heterogeneity pressure on *Daphnia magna*. *Ecotoxicology and Environmental Safety*, 148: 513-519.
5. Álvarez-Manzaneda, I., F. Guerrero, A.I. del Arco, A. Funes, L. Cruz-Pizarro & **I. de Vicente**. 2018. Do magnetic phosphorus adsorbents used for lake restoration impact on zooplankton community? *Science of the Total Environment*, 656: 598-607.
6. Álvarez-Manzaneda, I., A. Baun, L. Cruz-Pizarro & **I. de Vicente**. 2019. Ecotoxicity screening of novel phosphorus adsorbents used for lake restoration. *Chemosphere*, 222: 469-478.
7. del Arco, A., I. Álvarez-Manzaneda, A. Funes, C. Pérez-Martínez & **I. de Vicente**. 2021. Assessing the toxic effects of magnetic particles used for lake restoration on phytoplankton: a community-based approach. *Ecotoxicology and Environmental Safety*, 207: 111288
8. Álvarez-Manzaneda, I., F. Guerrero, L. Cruz-Pizarro, M. Rendón & **I. de Vicente**. 2021. Magnetic particles as new adsorbents for the reduction of phosphate inputs from a wastewater treatment plant to a Mediterranean Ramsar wetland (Southern Spain). *Chemosphere*, 270: 128640
9. Funes, A., I. Álvarez-Manzaneda, A. del Arco, J. de Vicente & **I. de Vicente**. 2021. Evaluating the effect of CFH-12® and Phoslock® on phosphorus dynamics during anoxia and resuspension in shallow eutrophic lakes. *Environmental Pollution*, 269: 116093
10. Álvarez-Manzaneda, I., N. Laza, F. B. Navarro, E. M. Suárez-Rey, M. L. Segura & **I. de Vicente**. 2021. Assessing the viability of recovered Phosphorus from eutrophicated aquatic ecosystems as a liquid fertilizer. *Journal of Environmental Management*, 285: 112156

C.2. Congress

- Participation in the organizing committee of international and national Congresses such the *Aquatic Sciences Meeting (ASLO)*. Granada (Spain). 2015
- Attendance to 74 congress since 2000, 25 in the last 10 years.

C.3. Research projects

Title: *Restauración de ecosistemas acuáticos mediante nanopartículas magnéticas: efectos ecotoxicológicos y recuperación del fósforo como fertilizante*

Financial institution: *Ministerio de Economía y Competitividad (CTM2013-46951-R)*

Participants: *University of Granada and University of Jaén*

Date: 2015-2018

Quantity: 120.000€

PI: Dra. Inmaculada de Vicente Álvarez-Manzaneda

2.- Title: *Nuevas metodologías para la restauración de ecosistemas acuáticos: aplicación de partículas magnéticas*

Financial institution: *Proyectos de Excelencia, Junta de Andalucía (P10-RNM-6630)*

Participants: University of Granada and University of Jaén

Date: 2011-2014

Quantity: 117.233 €

PI: Dra. Inmaculada de Vicente Álvarez-Manzaneda

3.- Title: *Rutas de distribución de nutrientes en embalses estratificados del mediterráneo: bases científicas para la gestión de la calidad del agua*

Financial institution: *Ministerio de Ciencia y Tecnología. Proyecto CGL2008-06101/BOS*

Participants: University of Granada; University of Jaén and University of Málaga

Date: 2009-2011

Quantity: 170.700€

PI: Dr. Francisco Rueda Valdivia

C.4. Contracts, technological or transfer merits

- Secretary of the Department of Ecology of the University of Granada: May 2013-present
- Representative of the Department of Ecology in the Environmental Sciences Teaching Commission: 2011-present
- Experience as a referee in more than 10 international magazines and national books

Parte A. DATOS PERSONALES

Fecha del CVA 19/10/2021

Nombre y apellidos	JULIO MANUEL ALCÁNTARA GÁMEZ		
DNI/NIE/pasaporte		Edad	
Núm. identificación del investigador	Researcher ID	O-4400-2017	
	Código Orcid	0000-0002-8003-7844	

A.1. Situación profesional actual

Organismo	Universidad de Jaén		
Dpto./Centro	Biología Animal, Biología Vegetal y Ecología		
Dirección	Jaén, Andalucía, España		
Teléfono	953212795	Correo electrónico	jmalcan@ujaen.es
Categoría profesional	Catedrático de universidad	Fecha inicio	2019
Espec. cód. UNESCO			
Palabras clave			

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
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A.3. Indicadores generales de calidad de la producción científica (véanse instrucciones)

Indicador	Medida
Sexenios de investigación	3.0
Número de citas	3040.0
Publicaciones	52.0
Publicaciones en primer cuartil	33.0
Índice H	23.0
Fecha del último sexenio	31/12/2016

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

Cursé Biología en la Universidad de Granada, entre 1988 y 1993 y finalicé mi tesis doctoral en 1998, bajo la dirección del profesor Pedro J. Rey, en la Universidad de Jaén. En mayo de 1999 obtuve un contrato postdoctoral de investigación por dos años en el Departamento de Ecología Vegetal de la Universidad de Uppsala (Suecia), bajo la dirección del profesor Jon Ågren. En mayo de 2001 conseguí una beca Marie Curie que disfruté hasta octubre de 2001 al incorporarme como Profesor Asociado en la Universidad de Jaén, donde en la actualidad ocupo el puesto de Catedrático de Universidad en el área de Ecología.

Mi carrera científica se centra en dos campos de investigación: ecología evolutiva de plantas y ecología poblacional y de comunidades de plantas. Mis trabajos en ecología evolutiva de plantas exploran el resultado de múltiples agentes de selección natural, la variación espacial de las presiones selectivas y como ésta se relaciona con patrones geográficos de diversificación. Los trabajos que considero más representativos de mis intereses en esta línea son: (1) Alcántara y Rey (2003) Conflicting selection pressures on seed size: evolutionary ecology of fruit size in a bird-dispersed tree, *Olea europea* (*Journal of Evolutionary Biology* 16:1168-1176) y (2) Alcántara et al. (2010) Linking divergent selection on vegetative traits to environmental variation and phenotypic diversification in the Iberian columbines (*Aquilegia*) (*Journal of Evolutionary Biology* 23: 1218-1233).

En el campo de ecología poblacional y de comunidades de plantas, mis primeros trabajos abordaban el papel de distintos filtros bióticos y abióticos en el reclutamiento de plantas dispersadas por animales (p.ej. Alcántara et al. 2000 en *Ecology*; Rey y Alcántara 2000 en *Journal of Ecology*). En los últimos años lidero una línea de investigación sobre las redes de interacción planta-planta durante el reclutamiento, sus mecanismos de ensamblado y su papel en la dinámica de comunidades forestales. Los resultados de esta línea se están plasmando en publicaciones en revistas de Ecología (Alcántara y Rey 2012 en *American Naturalist*; Alcántara et al. 2017 en *Theoretical Ecology*; Alcántara et al. 2018 en *Functional Ecology*; Perea et al. 2020 en *Fungal Ecology*; Perea et al. 2021 en *Journal of Ecology*) y de

Plant Sciences (Alcántara et al. 2015, 2019, Pulgar et al. 2017 y Perea et al. 2021 en Journal of Vegetation Science; Alcántara et al. 2019 en New Phytologist).

Por lo que respecta a tareas de transferencia de resultados de investigación, actualmente dirijo la puesta en marcha de una red de monitoreo de procesos de cambio global en las Sierras Subbéticas. Se trata de un proyecto financiado por el ERIC LifeWatch de la UE para establecer estaciones de seguimiento a largo plazo de la biodiversidad, de las variables micro-ambientales que le afectan y de las funciones ecosistémicas en las que participan. La piedra angular del proyecto es la puesta a libre disposición de los datos recibidos de estas estaciones, para que puedan ser empleados por las administraciones públicas responsables de la gestión de este territorio, entidades científicas nacionales e internacionales, empresas y ciudadanos.

Parte C. MÉRITOS MÁS RELEVANTES (*ordenados por tipología*)

C.1. Publicaciones

Publicación en Revista. Perea, Antonio Jesus; Garrido Sánchez, José Luis; Alcántara-Gámez, Julio Manuel. 2021. Plant functional traits involved in the assembly of canopy recruit interactions. Journal of Vegetation Science. 32,

Publicación en Revista. Perea, Antonio Jesus; Wiegand-, Thorsten; Garrido Sánchez, José Luis; Rey-Zamora, Pedro José; Alcántara-Gámez, Julio Manuel. 2021. Legacy effects of seed dispersal mechanisms shape the spatial interaction network of plant species in Mediterranean forests. Journal of Ecology. 109, pp. 3670-3684.

Publicación en Revista. Perea, Antonio Jesus; Garrido Sánchez, José Luis; Fedriani-Laffitte, José M^a; Rey-Zamora, Pedro José; Alcántara-Gámez, Julio Manuel. 2020. Pathogen life-cycle leaves footprint on the spatial distribution of recruitment of their host plants. Fungal Ecology. 47,

Publicación en Revista. Alcántara-Gámez, Julio Manuel; Garrido Sánchez, José Luis; Rey-Zamora, Pedro José. 2019. Plant species abundance and phylogeny explain the structure of recruitment networks. New Phytologist. 223, pp. 366-376.

Publicación en Revista. Alcántara-Gámez, Julio Manuel; Garrido Sánchez, José Luis; Montesinos-navarro, Alicia; Rey-Zamora, Pedro José; Valiente-Banuet, Alfonso; Verdú, Miguel. 2019. Unifying facilitation and recruitment networks(. Journal of Vegetation Science. 30, pp. 1239-1249.

Publicación en Revista. Alcántara-Gámez, Julio Manuel; Pulgar-Ramírez, Manuel; Trøjelsgaard, Kristian; Garrido Sánchez, José Luis; Rey-Zamora, Pedro José. 2018. Stochastic and deterministic effects on interactions between canopy and recruiting species in forest communities. Functional Ecology. 32, pp. 2264-2274.

Publicación en Revista. Pulgar-Ramírez, Manuel; Alcántara-Gámez, Julio Manuel; Rey-Zamora, Pedro José. 2017. Effects of sampling effort on estimates of the structure of replacement networks. Journal of Vegetation Science. 28, pp. 445-457.

Publicación en Revista. Alcántara-Gámez, Julio Manuel; Pulgar-Ramírez, Manuel; Rey-Zamora, Pedro José. 2017. Dissecting the role of transitivity and intransitivity on coexistence in competing species networks. Theoretical Ecology. 10, pp. 207-215.

Publicación en Revista. Rey-Zamora, Pedro José; Alcántara-Gámez, Julio Manuel; Manzaneda-Ávila, Antonio José; Martínez-Sánchez-Lafuente, Alfonso. 2016. Facilitation contributes to Mediterranean woody plant diversity but does not shape the diversity-productivity relationship along aridity gradients. New Phytologist. 211, pp. 464-476.

Publicación en Revista. Jordano-Barbudo, Pedro D; Alcántara-Gámez, Julio Manuel; Arroyo-Marin, Juan; Garcia-Gonzalez, M^a Begoña; Rey-Zamora, Pedro José. 2015. Beyond species loss: the extinction of ecological interactions in a changing world. *Functional Ecology*. 29, pp. 299-307.

Publicación en Revista. Alcántara-Gámez, Julio Manuel; Rey-Zamora, Pedro José; Manzaneda-Ávila, Antonio José. 2015. A model of plant community dynamics based on replacement networks. *Journal of Vegetation Science*.

Publicación en Revista. Alcántara-Gámez, Julio Manuel; Rey-Zamora, Pedro José. 2012. Linking topological structure and dynamics in ecological networks.. *The American Naturalist*. 180, pp. 186-199.

Publicación en Revista. Verdú-, Miguel; Rey-Zamora, Pedro José; Alcántara-Gámez, Julio Manuel; Siles-Colmenero, Gemma; Valiente-Banuet, Alfonso. 2009. PHYLOGENETIC SIGNATURES OF FACILITATION AND COMPETITION IN SUCCESSIONAL COMMUNITIES. *Journal of Ecology*. 97, pp. 1171-1180.

C.2. Proyectos

PGC2018-100966-B-I00. Redes de Reemplazamiento en bosques: variación ecogeográfica e influencia de las comunidades de hongos de la filosfera y de las interacciones planta-suelo. (REPNETS).. Ministerio de Ciencia, Innovación y Universidades. 2019-2021. Investigador Principal Consolidado.

2016/00070. Especificidad de las relaciones adulto-juvenil durante el reclutamiento de plantas leñosas: complementariedad de caracteres funcionales e interacciones planta-antagonistas.. Ministerio De Economía Y Competitividad. Alcántara-Gámez, Julio Manuel (Universidad de Jaén). 2016-2018. 116160 EUR. Responsable.

2013/00003. Coexistencia de especies leñosas en bosques secundarios mediterráneos: interacciones intransitivas y dependencia negativa de la densidad en la dinámica de reclutamiento. MINISTERIO DE CIENCIA E INNOVACION. Alcántara-Gámez, Julio Manuel (Universidad de Jaén). 2013-2015. 76050,00 EUR. Responsable.

2010/00093. Balance facilitación-competencia: efectos sobre el esamble y la diversidad ecológica y filogenética de las comunidades de plantas mediterráneas. MINISTERIO DE CIENCIA E INNOVACION. 2010-2012. 107690,00 EUR. Investigador/a.

C.3. Contratos, méritos tecnológicos o de transferencia

C.4. Patentes



Part A. PERSONAL INFORMATION

CV date

22/11/2021

First name	María Leonor		
Family name	Calvo Galván	Birth date	
Gender (*)		URL WEB: https://leonor.calvo.unileon.es/	
ID			
e-mail	leonor.calvo@unileon.es		
Open Researcher and Contributor ID (ORCID) (*)	0000-0003-3710-0817		

A.1. Current position

Position	Full Professor in Ecology		
Initial date	22/12/2020		
Institution	University of León (ULE)		
Department/Center	Biodiversity and Environmental Management/Faculty of Biological and Environmental Sciences		
Country	Spain	Phone number	+34 651148813
Key words	Wildfire effects, fire severity, fire recurrence, secondary succession, forest-shrubland resilience, prescribed fires, perturbations.		

A.2. Previous positions (research activity interruptions, art. 14.2.b)

Period	Position/Institution/Country/Interruption cause
1989-1992	Pre-doctoral scholarship from the Ministry of Education and Science (FPU), ULE, Spain
1992-1994	Associated Teacher of University School, UVA, Spain
1994-1995	Assistant Professor interim of University School, UVA, Spain
1995-2001	Assistant Professor of University School, ULE, Spain
2001- 2020	Associate Professor in Ecology, ULE, Spain
2020-	Full Professor in Ecology, ULE, Spain

A.3. Education

	PhD, Licensed, Graduate	University/Country	Year
	Licensed with Degree in Biological Sciences	University of León, Spain	1987
	PhD in Biology	University of León, Spain	1993

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

Professor of Ecology at the University of León and leader of the Research Consolidated Unit 210 (UIC) of Applied Ecology and Remote Sensing (GEAT). Her research interest focuses on the analysis of effects of fire regime parameters on structure, function and provision of ecosystems services of terrestrial ecosystems at different spatial scales under global change. She is also interested in the use of prescribed fires as a management tool to conserve heathlands (priority habitat 2000). Her contributions to generating knowledge are summarized in (i) identification of long-term secondary succession patterns after fire in oak and pine forests, and in shrublands as key bases to design post-fire management strategies, (ii) proposal of a novel widely-applicable accurate fire severity spectral index and field severity indicators, (iii) identifying critical post-fire recovery scenarios in *Pinus pinaster* forests according to recurrence and fire severity, where post-fire reforestation strategies should be applied, (iv) defining horizontal and vertical fuel continuity and landscape heterogeneity as some conditioners to fire severity, key knowledge to establish pre-fire management decisions, (V) developing spatial models from Worldview satellite imagery to evaluate post-fire regeneration after megafires, and from imagery obtained with DRONES (very high resolution) to answer ecological questions such as competition between pine seedlings and understory shrub communities. In *Calluna vulgaris* heathlands she has demonstrated the value of prescribed fires as the management tool to conserve their biodiversity and ecosystem services. These findings have led her to become one of the two



representatives of Spain in the elaboration of the EU HABITAT ACTION PLAN (4030 European dry heaths) and in the elaboration of protocols to conserve shrubland habitats in Spain. The scientific relevance is based on 95 articles published in JCR journals (24=D1, 38=Q1), 27 book chapters and 44 abstracts, achieving more than 1780 references and $H'=26$. She has 4 positively evaluated research periods. Her leadership capacity is demonstrated by her degree of responsibility in 2 projects of the Ministry of Economy and Competitiveness (PI+Coordinator), 4 regional projects of the Junta de Castilla y León (PI), 3 in competitive programs of the Universities of Valladolid and León (PI). The international projection is valued by her collaborations as (i) "External Expert" in the RUBICODE project "Rationalising biodiversity conservation for ecosystem service provision in a changing world", funded by the European Commission, (ii) Researcher in 2 FPS COST ACTIONS (FP0701, CA18135), (iii) participation in the Project (DYNAMIC), (iv) member of international networks PHOENIX, FUEGORED and European Heathlands. The scientific-technical transference is demonstrated through the contracts with different companies (TAXUS, CESEFOR, OPTIMASOIL, VEXIZA) and Regional Administrations, as well as the transference projects, with the proposal of the FIREMAP program. Her impact in society is evidenced by invitations to give keynotes and talks in more than 20 international or national Workshops, as well as participation in diffusion activities (i) International Day of Women and Girls in Science, (ii) Science Week of Castilla y León, (iii) VII Workshop of Female Researchers in Castilla y León: The Adventure of Science and Technology and (iv) Expociencia 2020. She has supervised 78 final degree projects and theses and Master Theses and 9 PhD theses plus 3 in progress, with outstanding contributions of the students' professional careers. She is editor of two journals and member of three editorial boards, reviewer in 46 JCR journals, and expert evaluator in 11 national and international agencies (CYTED, STW-NOW, ANEP, MYES, DEVA-AAC, OEI, etc). She also regularly participates in national TV media, radio and written press to disseminate her research activities and knowledge.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications

1. Fernández-Guisuraga J.M., Suárez-Seoane S., **Calvo L.** 2021. Radiative transfer modeling to measure fire impact and forest engineering resilience at short-term. *ISPRS J. Photogramm. Remote Sens.* 176, 30-41. **IF (2020): 8.979. Q1, D1 (Remote Sensing).** <https://doi.org/10.1016/j.isprsjprs.2021.04.002>
2. Fernández-Guisuraga J.M., Suárez-Seoane S., García-Llamas P., **Calvo L.** 2021. Vegetation structure parameters determine high burn severity likelihood in different ecosystem types: a case study in a burned mediterranean landscape. *J. Envi. Manage.* 288, 112462. **IF (2020): 6.789. Q1 (Environmental Sciences).** <https://doi.org/10.1016/j.jenvman.2021.112462>
3. Taboada A., García-Llamas P., Fernández-Guisuraga J.M., **Calvo L.** 2021. Extreme wildfires impact on the ecosystem service delivery chain: Capacity, flow and demand in fire-prone maritime pine forests. *Ecosyst. Serv.* 50. 101334. **IF (2020): 5.454. Q1, D1. (Environmental Sciences).** <https://doi.org/10.1016/j.ecoser.2021.101334>
4. Fernández-Guisuraga J.M., Verrelst J., **Calvo L.**, Suárez-Seoane S. 2021. Hybrid inversion of radiative transfer models based on high spatial resolution satellite reflectance data improves fractional vegetation cover retrieval in heterogeneous ecological systems after fire. *Remote Sens. Environ.* 255, 112304. **IF (2020): 10.164. Q1, D1 (Remote Sensing).** <https://doi.org/10.1016/j.rse.2021.112304>
5. Fernández-García V., Marcos E., Fulé P.Z., Reyes O., Santana V., **Calvo L.** 2020. Fire regime shape diversity and traits of vegetation under different climatic conditions. *Sci.Total Environ.* 716: 137137. **IF (2020): 6.551. Q1, D1 (Environmental Sciences).** <https://doi.org/10.1016/j.scitotenv.2020.137137>
6. Garcia-Llamas, P., Suárez Seoane, S., Fernández-Manso, A., Quintano, C., **Calvo, L.** 2020. Evaluation of fire severity in fire prone-ecosystems of Spain under two different environmental conditions. *J. Envi. Manage.* 271, 110706. **IF (2020): 6.789. Q1 (Environmental Sciences).** <https://doi.org/10.1016/j.jenvman.2020.110706>
7. Fernández-Guisuraga J.M., **Calvo L.**, Suárez-Seoane S. 2020. Comparison of pixel unmixing models in the evaluation of post-fire forest resilience based on temporal series of satellite imagery at moderate and very high spatial resolution. *ISPRS J. Photogramm. Remote Sens.* 164, 217-228. **IF: 8.979. Q1, D1 (Remote Sensing).** <https://doi.org/10.1016/j.isprsjprs.2020.05.004>
8. García Llama, P., Suarez-Seoane S., Taboada A.,..., **Calvo L.** (9/9) 2019. Environmental drivers of fire severity in extreme fire events that affect Mediterranean pine forest ecosystems. *For. Ecol. Manage.* 433: 24-32. **IF: 3.170. Q1, D1 (Forestry).** <https://doi.org/10.1016/j.foreco.2018.10.051>



9. Fernández-García V., Santamarta M., Fernández-Manso A., Quintano C., Marcos E., **Calvo L.** 2018. Burn severity metrics in fire-prone pine ecosystems along a climatic gradient using Landsat imagery. *Remote Sens. Environ.* 206: 205-217. *IF (2018): 8.218. Q1, D1 (Remote Sensing)*. <https://doi.org/10.1016/j.rse.2017.12.029>
- 10 Taboada A., Tarrega R., Marcos E., Valbuena L., Suárez-Seoane S., **Calvo L.** 2017. Fire recurrence and emergency post-fire management influence seedling recruitment and growth by altering plant interactions in fire-prone landscapes. *For. Ecol. Manage.* 402, 63-75. *IF: 3.169. Q1, D1 (Forestry)*. <https://doi.org/10.1016/j.foreco.2017.07.029>

C.2. Congress

1. **Calvo L.**, Fernández-Guisuraga J.M., Fernández-García V.,..., Suárez-Seoane S. (1/15). Burn severity: dealing with this fire regime parameter in the framework of post-fire restoration. *12th SERE European Conference on Ecological Restoration*, Valencia (Spain), 2021. Oral comm. by **L. Calvo**
2. Fernández-García V., Marcos E., **Calvo L.** Recurrent wildfires cause soil phosphorus impoverishment in Mediterranean forests. *FESP8 2021 International Meeting on Fire Effects on Soil Properties*. Parana (Brasil), 2021. Oral poster by V. Fernández-García.
3. **Calvo L.** Megafires: fire ecology knowledge to better-informed decision-making. *19th International Conference in Civil Protection 2020*, Ostrava (Czech Republic), 2020. Plenary comm. by **L. Calvo**
4. **Calvo L.**, Tárrega R., Suárez-Seoane S., Valbuena L., Taboada A., Marcos E. From wildfires to prescribed fires: resilience of heathlands under different fire regime parameters. *16th European heathlands Workshop*. Dorset (UK), 2019. Oral comm. by **L. Calvo**.
5. **Calvo L.**, Marcos E. Heathlands in the Cantabrian Mountains as a scenario to analyse the effects of atmospheric nitrogen deposition. *35th ICP M&M Task Force Meeting*. Madrid (Spain), 2019. Plenary comm. by **L. Calvo**
6. **Calvo L.**, Tárrega R., Valbuena L.,..., Suárez-Seoane S. (1/13). Climatic conditions and fire regime affect vegetation recovery after large wildfires in Pinus forest ecosystems. *VIII International Conference on Forest Fire Research*. Coimbra (Portugal), 2018. Oral comm. by **L. Calvo**.
7. **Calvo L.** Organization of Forest Fire Control in Spain: the Castilla and León region case. *17th International Conference in Civil Protection. Medial Rescue Work in protection of Population 2018*. Ostrava (Czech Republic), 2018. Plenary comm. by **L. Calvo**
8. **Calvo L.**, Marcos E., Fernández-García V., Fernández-Guisuraga J.M., Suárez-Seoane S. Resilience in Mediterranean pine forest after recurrent wildfires: new tools to identify the role of restoration. *IUFRO 2017: Sustainable restoration of Mediterranean forests. Analysis and perspective within the context of bio-based economy development under global changes*, Palermo (Italia), 2017. Plenary Comm. by **L. Calvo**
9. **Calvo L.**, Fernández-García V., Fernández-Guisuraga J.M.,..., Suárez-Seoane S. (1/14) New tools to study the resilience of Pinus forests after different recurrence-severity wildfires. *VIII Jornadas internacionales FUEGORED*, León (Spain), 2017. Plenary Comm. by **L. Calvo**
10. **Calvo L.**, Marcos E., Valbuena, L., Tárrega R., Luis E. Prescribed fire as a tool to conserve heathlands in NW of Spain. *International Congress on Prescribed Fires ICoPFires*. Barcelona (Spain), 2017. Oral comm. by **L. Calvo**.

C.3. Research projects

1. **WUIFIRECYL**. Vulnerability of the urban-forest interface and effectiveness of fire restoration measures in fire-prone areas. Applications to pre- and post-fire management. Castilla-León Regional Government (LE005P20), 2020-2023. Amount: 172,000€. IP-Leader: **L. Calvo**.
2. **FIRElinks**. Fire in the Earth System: Science & Society. FPS COST Action European Commission (CA 18135), 2020-2023. Amount: 1,863,465€. Leader: Dr. Cerdá. Participation: Researcher
3. **DYNAMIC**. Reducing fire disaster risk through dynamic risk assessment and management. Research Council of Norway (RCN). CA18135. 2019-2024. Amount: 1,000,000€. Leader: M. Metallinou Log Participation: Member of the scientific advisory board.
4. **FIRESEVES**. Severity of large fires in forest systems prone to fire: conditioning factors, effects on the provision of services and pre- and post-fire management solutions. Coordinated project (Universities of León and Santiago). Spanish Ministry of Economy and Competitiveness. Program for the



- Promotion of Scientific and Technical Research oriented to the challenges of society (AGL2017-86075-C2-1-R), 2018-2021. Amount: 193,600€. Coordinators of the global project and IP-leaders of the ULE subproject: **L. Calvo** and S. Suárez-Seoane.
5. **GEAT** (Group of Applied Ecology and Remote Sensing). Grant to Consolidate Research Unit (UCI 210). University of León. (BB236), 2019-2021. Amount: 10,228€. ULE. IP-Leader: **L. Calvo**
 6. **SEFIRECYL**. Identification of forest structures related to the severity of large fires and their effects on the provision of ecosystem services with socio-economic importance. Castilla-León Regional Government (LE001P17), 2017-2019. Amount: 119,900€. IP-Leader: **L. Calvo**.
 7. **FIRECYL**. Tools for post-fire management of fire-prone ecosystems in Castilla-León. The particular case of the Sierra del Teleno. Castilla-León Regional Government (LE033U14), 2015-2017. Amount: 28,383€. IP-Leader: **L. Calvo**.
 8. **GESFIRE**. Multi-scale tools for post-fire management of fire-prone forest ecosystems in a context of global change. Project coordinated universities of León and Santiago. Spanish Ministry of Economy and Competitiveness. Program for the Promotion of Scientific and Technical Research oriented to the challenges of society (AGL2013-48189-C2-1-R), 2014-2017. Amount: 205,700€. IP-Coordinator: **L. Calvo** and IP-Leaders of the ULE subproject: **L. Calvo** and S. Suárez-Seoane.
 9. **PHOENIX**. Post-Fire Forest Management in Southern Europe. FPS COST Action European Commission FP0701. 2008-2012. Amount: 100.000€. Leader: Dr. Moreira. Participation: Researcher
 10. **HEATHLAND**. The heaths of *Calluna vulgaris* in the Cantabrian Mountains as an observatory for the analysis of the effects of global change. Castilla-León Regional Government (LE021A08), 2008- 2011. Amount: 11,700€. IP-Leader: **L. Calvo**.

C.4. Contracts, technological or transfer merits

1. Transference project: Concept tests of the University of León **FIREMAP** – Integrated system for identification of the burn perimeter, burn severity and the recovery of vegetation after large forest fires. FEGULEM-University of León. 17/05-30/10/2021. 8000€. IP-Leaders: A. Fernández-Manso and **L. Calvo**
2. Transference project: **FECYT-FCT-18-12934** “Expociencia Unileon 2020”, event of knowledge transfer to society: promotion of scientific, technological culture and innovation. Participation of 34 research groups. Group GEAT (Applied ecology and Remote Sensing) leader of action 10: *Is there life after a fire?. Answers from Ecology*. Spanish Ministry of Science, Innovation and Universities (CNU/250/2019). 01/09/2019-1/09/2020. 142,855€. **L. Calvo** leader of action 10.
3. Transference Project: Itinerary for the transfer of results (**ITR**) of the University of León, (TCUE Plan 2018-2020), operational program co-financed by the European Regional Development Fund (ERDF) and the Junta de Castilla y León. IP Leader **L. Calvo**.
4. Contract: Evaluation of the effects of the product Zytonic on soil stabilization and post-fire regeneration. Company: OPTIMASOIL S.L. 08/10/2021-30/01/2023. 17,545€. IP-Leader: **L. Calvo**
5. Contract: Technical advice on ecology, ecosystem impact and project compatibility measures. Company: TAXUS Gestión Ambiental Ecología y Calidad S.L. 22/12/2020-21/12/2021. 1058.75€. IP-Leader: **L. Calvo**
6. Contract: Evaluation of the importance of transhumance in the conservation of plant biodiversity and endemic species in priority habitats, within the framework of Grupo Operativo OVINNOVA. Company: Fundación Centro de Servicios y Promoción Forestal y de su Industria de Castilla y León (CESEFOR) 28/05/2020-31/07/2021. 45,000€. IP-Leader: **L. Calvo**
7. Participation in "International day of women and girls in science", 2020. **L. Calvo** Talk "The role of women in the study of forest fires", Secondary School Veguellina de Orbigo (León, Spain).
8. Participation in “Science Week of Castilla y León”, 2020. **L. Calvo** Talk "The problem of forest fires". Univ. of León (Spain).
9. Participation in “VII Workshop of female researches in Castilla y Leon: The adventure of science and technology”, 2021. **L. Calvo** Talk “Eyes in space to study sixth-generation fires”. Univ. Burgos (Spain).
10. Suárez-Seoane S., Fernández-Guisuraga J.M., García-Llamas P., **Calvo L.** 2019. Report commissioned by the company Deimos Imaging S.L. for evaluation the potential use of Deimos I and II satellite imagery in the studies of forest fires.

Part A. PERSONAL INFORMATION		CV date	January 2022
First and Family name	Presentación Carrillo Lechuga		
Social Security, Passport, ID number		Age	
Researcher numbers	Researcher ID	I-1601-2015	
	WoS Researcher ID (*)	0000-0003-3794-4294	

A.1. Current position

Name of University/Institution	GRANADA UNIVERSITY		
Department	Instituto Universitario de Investigación del Agua.Ecology		
Address and Country	C/ Ramón y Cajal, nº 4SPAIN		
Phone number	958 243093	E-mail	pcl@ugr.es
Current position	Full professor	From	15/12/2011
Espec. cód. UNESCO	2508.05,2508.08		
Key words	UVR, CO ₂ , Warming, Dust deposition Phytoplankton, Primary Production, Mixotrophy, multiple stressors interaction, Global Change		

PhD	University	Year
PhD Biology	Granada	1989

A.3. JCR articles, h Index, thesis supervised...

a) total number of citations, 22415; number of citations during the last five years, 840, average: 169 per year.
 b) total number of publications in the first quartile in the five years 29 (Q1:20) and (D1:9)
 c) h-index, 29; Índice i10 66. d) thesis supervised 8 and 3 in course e) other indicators that you may consider relevant. 5/5 positive evaluations of six-year research periods; last year 2015.6/6 positive five-year teaching periods

PartB. CV SUMMARY (max. 3500 characters, including spaces)

I am interested in understanding the links between functional diversity and biogeochemical cycles in aquatic ecosystems, as well as the resilience of ecosystems to global change. My PhD was the first study in Spain that used experimental mesocosms in situ to study algae-zooplankton relationship in High Mountain, which reached a Cum laude score and the Excellent Doctorate Award. Later, I obtained Postdoctoral fellowships (1990 and 1991) and I did my postdoctoral stay in the Istituto Italiano de Idrobiologia (in Pallanza, Italy) under supervision of Dr de Bernardi working within the European project (Ecosystem Research in Freshwater Environment Recovery (ERIFER) (CNR- CEE EV4V-0129)). The contact with researchers from the centre allowed my participation in the European projects ALPE 2 (EC-ENVIROMENT-EV5V-CT92-0205) MOLAR EC-ENVIROMENT-ENV4-CT95-0007) and BIOMAN (EVK2-CT-1999-00046). In 1996, I joined the Ecology Department in Granada as a Assistant, then I started a new research line on Global Change and UVR effects on organisms and trophic interactions in high mountain lakes. These ecosystems have been the main goal of my research, focused on fundamental aspects trophic interactions: herbivory (Carrillo et al., 1990, 1991, 1995), commensalism (Carrillo et al., 2002), competence (Villar-Argaiz et al., 2002 a), mutualism (Medina et al 2006), parasitism (Reche et al., 1994), as well as the indirect effects generated by these interactions that act modulating the communities structure (Carrillo et al., 1995, Carrillo et al., 1996a, Carrillo et al., 1996b) and the C-flux in high mountain Lakes (Reche et al., 1997, Medina-Sánchez et al., 2006). From these studies, we have proposed some models of pelagic trophic networks (Carrillo et al., 1995, Villar-Argaiz et al., 2001, Medina-Sánchez et al., 2004; Carrillo, et al., 2006). In the last 10 years, my work has been focused on the interactive effect of multiple stressors of global change (UVR, nutrient inputs, CO₂, Warming, aerosol deposition in lakes of Pyrenees, Picos de Europa and Sierra Nevada, Andes, lagunas de Ruidera, Mar de Alborán, Atlántico Sur etc... following different approaches, molecular, physiological and stoichiometry. As a result of these works, I have published a total of 90 papers in high impact scientific journals in ecology / limnology, 8 book chapters and more than 170 presentations at congress. I have made different research stays and promoted cooperation agreements with different European countries (France, Italy, Portugal, and Latin America Argentina, USA). Currently, I coordinate the Functional Ecology research group, composed by ten researchers (permanent teacher, postdoctoral, predoctoral and technical assistant). Since the 1996 we have obtained funding in National I+D +i programs, both from the MICINN and Ministry of the Environment and Excellence Project of the Junta de Andalucía, European UVB network in which CSIC researchers collaborate: Museum of Natural Sciences, Spanish Institute of Oceanography, Univ, Málaga, Valencia, Cavanilles Institute, Comahue University-CONICET. Photobiology center-CONICET in Argentina and Grand Valley State University (USA)

PartC. RELEVANT MERITS

C.1. Some publications (including books)

1. Biddanda BA., Dila DK., Weinke, AD., Mancuso JL., Villar-Argaiz, M., Medina-Sánchez, J.,González-Olalla, JM., Carrillo, P. 2021 (Review). Housekeeping in the hydrosphere: Microbial cooking, cleaning, and control under stress. *Life*11(2),152; doi:10.3390/life11020152.
2. Cabrerizo M. J., Medina-Sánchez, J.M.; González-Olalla, J M., Sánchez-Gómez. D. & P. Carrillo. 2021. Microbial plankton responses to multiple environmental drivers in marine ecosystems with different phosphorus limitation degrees *Science of the Total Environment* doi.org/10.1016/j.scitotenv.2021.151491. IF: 7.963 (Environmental Sciences, 25/274) (D1).
3. González-Olalla, J.M, Medina-Sánchez, J.M., Norici A. & P. Carrillo. 2021. Regulation of phagotrophy by prey, low nutrients, and low light in a mixotrophic haptophyte.*Microbial Ecology* doi.org/10.1007/s00248-021-01723-w IF: 4,55, *Marine and Freshwater* (8/110) (D1).
4. González-Olalla, JM. Medina-Sánchez, J.M. & P. Carrillo. 2021. Testing the Metabolic Theory of Ecology on functional phytoplankton groups under increased and fluctuating temperature and nutrient enrichment. *Microbial Ecology* doi.org/10.1007/s00248-021-01787-8. IF: 4,55, *Marine and Freshwater* (8/110)(D1).
5. Cabrerizo M. J., E. W. Helbling, V.E. Villafañe, J.M. Medina-Sánchez, & P. Carrillo. 2020. Multiple interacting environmental drivers reduce the impact of solar UVR on primary productivity in Mediterranean lakes. *Scientific Report*, 10:19812; doi.org/10.1038/s41598-020-76237-5: IF: 4,38, *Multidisciplinary Sciences* 19/128 (Q1)
6. Durán-Romero, C Medina-Sánchez, JM& Carrillo P. 2020. High-mountain Mediterranean lakes. *Scientific Reports* 10 (1), 1-11. IF: 4,38, *Multidisciplinary Sciences* 19/128 (Q1)
7. Cabrerizo, M.J., González-Olalla, J.M., Hinojosa-López, V. J., Peralta, F. J. & Carrillo, P. 2019. A shifting balance: Responses of mixotrophic marine algae to cooling and warming under UVR. *New Phytologist* doi: 10.1111/nph.15470 IF: 8.512, *Plant science* 2/251 (D1).
8. González-Olalla, J.M, J.M. Medina-Sánchez & Carrillo, P. 2019. Mixotrophic trade-off under warming and UVR in a marine and a freshwater alga. *Journal of Phycology* doi: 10.1111/jpy.12865. IF: 2,93, *Marine & Freshwater Biology* 25/107 (Q1)
9. Cabrerizo M., J., Medina-Sánchez, J.M., Villar-Argaiz, M. & P. Carrillo. 2019: Interplay between resistance and resilience governs the stability of a freshwater microbial food web under multiple stressors. *Science of the Total Environment* 691: 908–918; IF: 6,55 *Environmental Sciences*, 22/265 (D1).
10. Villar-Argaiz M., Rajic S., Cabrerizo M.J., Valiñas M., González-Olalla J.M. & P. Carrillo. 2018. Growth impacts of Saharan dust, mineral nutrients, and CO₂ on a planktonic herbivore in southern Mediterranean lakes. *Science of the Total Environment* doi.org/10.1016/j.scitotenv.2018.05.041. IF :5,73 (Environmental Sciences, 27/251) (Q1).
11. Cabrerizo M J., P. Carrillo, V.E. Villafañe, J.M. Medina-Sánchez& E. W. Helbling. 2018. Increased nutrients from aeolian dust and riverine origin decrease the CO₂-sink capacity of coastal South Atlantic waters under UVR exposure. *Limnology and Oceanography*, doi.org/10.1002/lno.10764. IF:4,32, *Oceanography* 3/63 (D1).
12. Carrillo, P., Medina-Sánchez, J.M., Villar-Argaiz, M., Bullejos, F.J., Durán, C. Bastidas-Navarro, M., Souza, M.S., Balseiro, E.G., & Modenutti, B.E. 2017. Vulnerability of mixotrophic algae to nutrient pulses and UVR in an oligotrophic Southern and Northern Hemisphere lakes: *Scientific Reports*, doi: 10.1038/s41598-017-06279-9. IF: 4,12 *Multidisciplinary science* 12/115 (D1)
13. Cabrerizo, M.J., Medina-Sánchez, I. Dorado; Villar-Argaiz, M & P. Carrillo, 2017. Rising frequency of resource pulses under solar UVR strengthen microbial interactions. *Scientific reports* 7, 43615; DOI: 10.1038/srep43615. IF: 4,12 *Multidisciplinary science* 12/115 (D1)
14. Duran, C., Medina-Sánchez, J.M., Herrera, G. & P. Carrillo. 2016. Changes in the phytoplankton-bacteria coupling triggered by joint action of UVR, nutrients, and warming in Mediterranean high-mountain lakes. *Limnology and Oceanography*, 61: 413-429, DOI: 10.1002/lno.10204 IF: 3.383 *Limnology* 2/20 (D1)
15. Carrillo P., Medina-Sánchez J.M., Herrera G., Durán C., Segovia M., Cortés D., Salles S, Korbee N., Figueroa F.L & J.M., Mercado, 2015. Interactive Effect of UVR and Phosphorus on the Coastal Phytoplankton Community of the Western Mediterranean Sea: Unravelling Eco-Physiological Mechanisms. *PLoS ONE* DOI: 10.1371/journal.pone.0142987. IF:3.05 *Multidisciplinary Science* 11/63 (Q1).
16. Carrillo P., Medina-Sánchez, J. M., Duran, C., Herrera, G-. Villafañe V. E. & Helbling W. E. 2015. Synergistic effects of UVR and simulated stratification on commensalistic algal-bacterial relationship in two optically contrasting oligotrophic Mediterranean lakes. *Biogeosciences* 12:697-712. IF.3,7, *Ecology* 31/15; (Q1)

C.2. Research projects and grants

1. Sinergias entre cambio climático y productos de degradación de plásticos sobre ecosistemas acuáticos andaluces. CLIMAPLAST. FEDER/Junta de Andalucía-Consejería de Transformación Económica,

- Industria, Conocimiento y Universidades Proyecto (P20-00105). 01/10/2021-31/09/2023. IP: P Carrillo; Grant:119.050€
2. REsilience of high-MOUNTAINLAKES to chronic, pulsed and fluctuating Disturbances of global stress factors: Observational and eXperimental approaches: (REMOLADOX) Ministerio de Ciencia e Innovación PID2020-118872RB-I00. 01/09/2021-30/08/ 2024.IPs: P Carrillo & M. Villar-Argaiz.Grant: 179 443€.
 3. CGL2015-67682-R.Metabolismo de los ecosistemas acuáticos del Sur de la Península Ibérica: Nuevos equilibrios frente al Cambio Global. Ministerio deCiencia e Innovación. 01/01/2016-31/12/2018.IPs P. Carrillo & J.M Medina-Sánchez.Grant: 171.820€
 4. Adquisición de un UHPCL-qTOF para el Instituto Universitario Investigación del Agua de la Universidad de Granada en un ámbito multidisciplinar para su aplicación en estudios de mejora de la calidad de los recursos hídricos. Junta de Andalucía 01/01/2018-31/12/2020. **IP: P Carrillo**. Grant: 273,152.60€
 5. LifeWatch-ERIC. Thematic Center on Mountain Ecosystem & Remote sensing, Deep learning-AI e-Services University of Granada-Sierra Nevada. European Research Infrastructure Consortium (ERIC). MRs: Regino Zamora (UGR). Duration: 01/2020-12/2023. Grant: 6.052.480 €. Participation as: Researcher.
 6. EQC2018-004720-P:Adquisición de un equipo de cromatografía de alta resolución LC-MS/MS triple cuadrupolo, para la cuantificación decontaminantes emergentes en aguas residuales y naturales Ministerio deCiencia e Innovación.Duration: 01/01/2018-31/12/2018.**IP: P Carrillo**.Grant: 282,452.60€
 7. CGL2015-67682-R.Metabolismo de los ecosistemas acuáticos del Sur de la Península Ibérica: Nuevos equilibrios frente al Cambio Global. Ministerio deCiencia e Innovación. Duration: 01/01/2016-31/12/2018.IPs **P Carrillo &** J.M Medina-Sánchez. Grant: 171.820€
 8. CGL2011-23681. Assessing Microbial Loop Sensitivity to impact of multiple factors in Mediterranean aquatic ecosystems. Ministerio de Ciencia e Innovación. Duration: 01/01/2012-31/12/2015. IP: **P.Carrillo**. Grant:158.510 €
 9. OAPN 2009/067.Seguimiento interanual y análisis experimental de factores de cambio global(UVR y entradas deP) sobre los productores primarios en lagos de alta montaña. Ministerio de Medio Ambiente y Medio Rural y Marino.Duration: 15/12/2009-30/06/2013. IP: **P. Carrillo**. Grant:109.499,90

C.3. ContractsC.4. PatentsC.5, C.6, C.7... (e. g., Institutional responsibilities, memberships of scientific societies...)

C.5 Experience in organizing I+D activities. Congress Organization, Seminars, conferences, etc.,

1. VI Spanish Congress of Limnology Organization of Congress (Secretary). National. September 1991
 2. Workshop Organization (Secretary): 5th ALPE Meeting. International, May 1995
 4. Member of the Scientific Committee of the XIV Congress of the Iberian Association of Limnology (Huelva) Scope: International. September 2008
 5. Member of the Scientific Committee and Session Moderator. XV Congress of the Iberian Association of Limnology (Azores). Date: July 2010 Scope: International
 6. Spanish representative of the uv4growth-L network: COST-Action Date: January 2009-2014 Scope: International
 7. Member of the Organizing Committee of the 9th International Workshop GAP. Scope: International 12-18 September 2012
 8. Adviser of the Scientific Committee Advisory Committee of the Museum of Natural Sciences of the CSIC. (Madrid) from 2014 to the present
 9. Responsible for the PAI Ecology Functional Research group RNM-367. Andalusian Research Plan-University of Granada. From 2009 to the present
 10. Member of the Academic Committee of the Master: Techniques and Sciences of Water Quality (IDEA).
 11. Member of the Advisory Committee of Doctorate in Sciences, Architecture and Engineering. EIP-UGR
- C6 • Peer Reviewer of national and international journals:** Ecology letters, Journal Plankton Research, Limnology and Oceanography, Limnetica, Protist. Microbial Ecology, Aquatic Microbial Ecology, Photochemistry and Photobiology, Ecology, FEMS Microbial Ecology. Hydrobiologia, Journal of Photochemistry and Photobiology B: Biology. Journal of Experimental Marine Biology and Ecology. Photochemistry and Photobiology Science Journal Marine and Freshwater. Ecological Engineering. Science of the Total Environment.Environmental Pollution, Scientia Marina. Journal of Marine Systems. ICES Journal of Marine Science. Freshwater Science, Biogeoscience,Coral reef, Algal Research, Journal of Phycology,Frontiers Environmental Science, Frontiers in Microbiology

• Project Reviewer:

Reviewer of Scientific and Technological Research Projects of the FONCyT from 2000 to the present

Reviewer of Scientific and Technological Research Projects of the FONDECYT from 2020

- Reviewer Projects of the Interministerial Commission of Science and Technology (ANEP) from 1986 to the present,
- Program Juan de la Cierva, Formación and Program Juan de la Cierva, Incorporación, Torres Quevedo, Ramón y Cajal
- Project Reviewer The Netherlands Organization for Scientific Research (NWO).
- Project Reviewer The Czech Science Foundation (CSF)

Associate Editor of *Limnética*, from 2010 to the present

C7 Responsibility in University management

1-Secretary of University Research Institute of Water of the University of Granada. From January 15, 2009-2017

2.Coordinator of the Doctorate Program of Fundamental Biology and Systems of Granada School International Postgraduate: of Granada University. From 2010 to 2019.

3. Head of University Research Institute of Water, Granada University. From April 4, 2017 to the present

C.8. Doctoral and Predoctoral Training (some publications)

1. PhD student: **Marco Jabalera Cabrerizo**. Universidad Granada. Calificación: Sobresaliente “cum laude” Mención Internacional 2017

Cabrerizo, M.J., Carrillo P., Villafañe V. E. & Helbling W. E. 2017. Differential impacts of global change variables on coastal South Atlantic phytoplankton: Role of seasonal variations

Marine Environmental Research DOI: 10.1016/j.marenvres.2017.01.005.IF: 3.1610/106 D1

Cabrerizo, M.J., Medina-Sánchez, J.M., Villar-Argaiz, M., González Olalla, J.M. & Carrillo, P. 2016. Saharan dust inputs and high UVR levels jointly alter the metabolic balance of marine oligotrophic ecosystems. *Scientific reports* | 6:35892 | 10.1038/srep35892. Q1.

2. PhD student: **Cristina Durán Romero**. Universidad Granada. Calificación: Sobresaliente “cum laude” Mención Internacional 2014

Helbling, E.W., Carrillo, P., Medina-Sánchez, J.M., **Duran, C.** Herrera, G. Villar-Argaiz, M. & Villafañe. 2013: Interactive effects of vertical mixing, nutrients and ultraviolet radiation: In situ photosynthetic responses of phytoplankton from high mountain lakes of Southern Europe *Biogeosciences* 10, 1037–1050. IF: Q1

Durán-Romero, C., Medina-Sánchez, J.M., Herrera, G. & P. Carrillo. 2016. Changes in the phytoplankton-bacteria coupling triggered by joint action of UVR, nutrients, and warming in Mediterranean high-mountain lakes. *Limnol&Oceanogr.* 61:413-429, DOI: 10.1002/lno.10204 IF: D1.

1. **Durán-Romero, C** Medina-Sánchez, JM Carrillo P. 2020. Uncoupled phytoplankton-bacterioplankton relationship by multiple drivers interacting at different temporal scales in a high-mountain Mediterranean lake. *Scientific Reports* 10 (1), 1-11 (D1)

3 PhD student: Juan Manuel González Olalla Universidad Granada. Calificación: Sobresaliente “cum laude” Mención Internacional 2019 Tesis por compendio de artículos en régimen de cotutela

González Olalla, J.M. Medina-Sánchez, J. M. Cabrerizo, M.J. Villar-Argaiz, M. Sánchez-Castillo P.M. & P. Carrillo 2017 Contrasting effect of Saharan Dust and UVR on autotrophic picoplankton in Nearshore vs. Open Sea waters of Mediterranean Sea. *Journal of Geophysical Research: Biogeosciences* DOI: 10.1002/2017JG003834.IF: 3.48 (31/190) Q1

González-Olalla, J.M., J.M. Medina-Sánchez; López-Lozano, I., Villar Argaiz, M. & Carrillo, P. 2018 Climate-driven shifts in algal-bacterial interaction of high-mountain lakes after a decade

Scientific Report 8:10278 | DOI:10.1038/s41598-018-28543-2 IF 4,01 (15/69) Q1

González-Olalla, J.M., J.M. Medina-Sánchez & Carrillo, P. 2019. Mixotrophic trade-off under warming and UVR in a marine and a freshwater alga | doi: 10.1111/jpy.12865. *Journal of Phycology* doi: 10.1111/jpy.12865. IF: 3 (13/106) Q1

C.9. Supervision of FPU fellowship).

I. Reche Cañabate, Full Professor UGR, M. Villar Argaiz, Associate Professor UGR, J. M. Medina Sánchez, Associate Professor UGR, J.A. Delgado Molina, Biology teacher

F. J. Bullejos Carrillo, Marie Sklodowska-Curie Postdoctoral Researcher, C. Durán Romero, Associate Professor Universidad Nacional de la Patagonia (Argentina), Ismael Lopez Lozano Predoctoral student UGR, M. Jabalera Cabrerizo Juan de la Cierva (Postdoctoral Researcher), J.M González Olalla Postdoctoral USA. María Via Duplá (FPU 1-year)

C. 10 Secretary or Chair of Evaluation Commissions

- Secretary of different 20 PhD commissions tribunals and chair of 5 of them
- Commissions of 20 positions of Associate and Full Professor of Universities, and CSIC and Professor and Research Professors CSIC.
- Member of the National Commission for Evaluation of Research Activity (CNEAI). Field 5. National Agency for Quality Assessment and Accreditation (ANECA). from 2018-2019 and 2019-2020.