

Resumen CV de Regino Zamora: Regino Jesús Zamora Rodríguez <http://www.reginozamora.es> es Doctor en Ciencias Biológicas (1987) y Catedrático de Ecología de la Universidad de Granada (03/03/2006). Su principal campo de investigación es el estudio de la ecología de las interacciones planta-animal y planta-planta y sus consecuencias sobre las comunidades y los procesos ecosistémicos bajo escenarios de cambio global. Regino Zamora se encuentra entre los ecólogos españoles más citados (índice H = 64 en Google Scholar, índice H = 51 en WOS, con un número total de citas > 16200) y ha sido incluido en el “Ranking of the World Scientists: World's Top 2% Scientists”, elaborado por la Universidad de Stanford. Cuenta con una dilatada experiencia en la dirección y coordinación de equipos humanos, tanto en investigación como en la gestión y promoción de la actividad investigadora, desde diferentes organismos y agencias estatales (ANEP, AEI, CENAI) e internacionales (SCOPE). Ha dirigido 15 tesis doctorales. La gran mayoría de los doctores formados bajo su dirección han consolidado su posición académica y ahora son catedráticos y profesores universitarios, e investigadores seniors en diferentes centros del CSIC y media docena de universidades. Su actividad académica e investigadora se complementa con la colaboración continuada con las administraciones públicas responsables de la gestión ambiental, fomentando la transferencia y aplicación del conocimiento científico a la conservación, gestión y restauración de los ecosistemas. En este sentido, es el coordinador científico del Observatorio del Cambio Global de Sierra Nevada (<http://obsnev.es>), que ha compilado una gran cantidad de información ambiental y ha movilizó a los científicos, ciudadanía y administraciones, estableciendo vínculos con proyectos similares a escala nacional e internacional. Regino Zamora es Editor del libro “The Landscape of the Sierra Nevada, a Unique Laboratory of Global Processes in Spain”, Ed. Springer nature (2022). También es el coordinador científico del centro temático “Thematic Center on Mountain Ecosystems, remote sensing, Deep learning-AI and e-Services, Universidad de Granada-Lifewatch ERIC”. Este centro temático está asociado a la Infraestructura Europea Lifewatch, y va a permitir incorporar todas las fuentes de información existentes en el campo de la biodiversidad, las ciencias ambientales y el cambio global en Sierra Nevada y otras montañas europeas y del resto del mundo para su análisis, interpretación y difusión en un contexto científico.

Parte A. DATOS PERSONALES

Fecha del CVA	14-07-2022
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Nombre y apellidos	MARIA CARMEN PEREZ MARTINEZ		
DNI/NIE/pasaporte	24193016Y		
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

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. En la última década 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).

A lo largo de toda mi vida laboral he realizado actividades de gestión universitaria, fundamentalmente a nivel del Grado en Biología, del que soy la actual responsable.

ACTIVIDAD DOCENTE

Tengo reconocidos seis quinquenios de docencia

He impartido docencia en grado (Biología y Ciencias Ambientales) y posgrado en Universidad desde el curso 1995-96.

Las asignaturas principales en grado han sido Ecología de Poblaciones y Comunidades y Ecología de Sistemas así como la optativa Limnología. En Posgrado asignaturas relacionadas con Limnología, Paleolimnología y Cambio global.

He realizado proyectos de innovación docente, publicaciones docentes y diversos cursos de especialización como los del Centro Mediterráneo de la UGR, Universidad Internacional Antonio Machado de Baeza y Programa de Cooperación (PCI-AECI), entre otros.

ACTIVIDADES DE GESTIÓN

He sido investigadora principal en 6 proyectos de investigación

Representante en la Comisión Docente del Grado en Biología. Curso 2003-04 a curso 2017-18.

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.

Como Secretaria de la CDB, además de miembro responsable de la Comisión TFG, he sido 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.

En la actualidad soy la Coordinadora del Grado en Biología desde el 6 febrero 2021-actualidad

ACTIVIDAD INVESTIGADORA

Número de sexenios de investigación reconocidos = 5

1. Peñas, F.J. et al. (2022) Monitoring global change effects on freshwater ecosystem: An insight from ILTER nodes and mountain National Parks. *Biodiversity and Conservation* (in press).
2. Pérez-Martínez, C., Conde-Porcuna, J.M., Ramos Rodríguez, E., Moreno, E., Rühland, K.M., Jeziorski, A. Smol, J.P., García-Alix, A., Heiri, O.H., Corral Arredondo, E. & Jiménez, L. (2022). Paleolimnological indicators of global change. In: *The landscape of Sierra Nevada: A unique laboratory of global processes*, Zamora, R. & Oliva, M. (eds.). Springer, Cham. (pp. 279-291). ISBN 978-3-030-94218-2.
3. Pérez-Martínez, C., Conde-Porcuna, J.M., Ramos-Rodríguez, E., Moreno, E., Rühland, K.M., Jeziorski, A. Smol, J.P., García-Alix, A., Heiri, O.H., Corral Arredondo, E. & Jiménez, L. (2022). Paleolimnological indicators of global change. In: *The landscape of Sierra Nevada: A unique laboratory of global processes*, Zamora, R. & Oliva, M. (eds.). Springer, Cham. (pp. 279-291). ISBN 978-3-030-94218-2.
4. 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>
5. 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>
6. 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>
7. **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>
8. 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>.
9. **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>
 10. 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>
 11. 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>
 12. 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>
 13. 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.org/10.1002/2015GB005254>.

Proyectos

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 €

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 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)

IMPORTE TOTAL DEL PROYECTO: 108.700 €

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](#), 1 abril -1 diciembre 2010.
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)

Parte A. DATOS PERSONALES

Fecha del CVA 20/01/2023

Nombre y apellidos	José Manuel Tierno de Figueroa		
Núm. identificación del/de la investigador/a	WoS Researcher ID (*)	k-8143-2014	
	SCOPUS Author ID(*)		
	Open Researcher and Contributor ID (ORCID) **	0000-0003-1616-9815	

(*) Al menos uno de los dos es obligatorio

(**) Obligatorio

A.1. Situación profesional actual

Organismo	Universidad de Granada		
Dpto./Centro	Facultad de Ciencias		
Dirección	Campus Fuentenueva, s/n. 18071, Granada		
Teléfono	958241000 ext: 20099	correo electrónico	jmtdef@ugr.es
Categoría profesional	Catedrático de Universidad	Fecha inicio	17/11/2019
Palabras clave	Zoología, fauna acuática, Ecología fluvial,		

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

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciatura en Ciencias Biológicas (Zoología)	Universidad de Granada	1993
Doctor en Ciencias Biológicas (Zoología)	Universidad de Granada	1998

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

Número de sexenios de investigación: 4, el último de ellos por el periodo 2014-2019 (obtenido con fecha 17/7/2020).

Número de tramos autonómicos: 5 (obtenido con fecha 24/10/2019)

Número quinquenios por méritos docentes reconocidos: 5, el último de ellos por el periodo 2015-2019

Número de tesis doctorales dirigidas en los últimos 10 años: 2

Citas totales: 1670 (Web of Science Researcher ID); 3164 (Google académico)

Promedio de citas/año durante los últimos 5 años (2018-2022): 152 citas/año (Web of Science Research ID), 259,2 citas/año (Google académico).

Número de publicaciones en revistas SCI: 152 (desde 1998)

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

Pertenece al grupo de investigación “Biología y ecología Animal de los medios acuáticos lóticos” (RNM102) desde 1995. Es autor de más de 300 publicaciones incluyendo seis libros como autor (más 3 como editor), numerosos capítulos y fichas de libro (algunos de ellos en editoriales como Springer, Elsevier u Oxford University Press), 152 artículos en revistas incluidas en SCI, etc. Además, es autor de 137 comunicaciones a congresos y jornadas (47 nacionales, 90 internacionales). Mantiene numerosas colaboraciones con investigadores de otras universidades nacionales e internacionales. Sus principales líneas de investigación son el estudio de la fauna acuática (principalmente fluvial, aunque también marina) y de la ecología fluvial. Entre las temáticas abordadas en sus investigaciones, se han tratado aspectos: a) taxonómicos (empleando herramientas morfológicas, bioquímicas, moleculares y/o comportamentales); b) faunísticos y biogeográficos; c) etológicos (especialmente sobre la comunicación intersexual y su evolución, pautas de apareamiento, mecanismos de guarda de la pareja, selección de substrato de emergencia, efecto de depredadores sobre selección de microhábitats por parte de la presa, selección de presa, etc.); d) ecológicos



(fundamentalmente de ecología trófica, de ciclos vitales y/o de productividad secundaria, análisis de la actividad enzimática digestiva, defensa antioxidante, y, a nivel de comunidad, sobre colonización de paquetes de hojas, redes tróficas fluviales, etc.; e) morfológicos y ultraestructurales; y f) de conservación. Ha participado o participa en proyectos de investigación subvencionados a nivel regional, nacional o internacional. Su labor en el estudio de los plecópteros le llevó a ser elegido miembro del *Standing Committee of the International Society of Plecopterologists* en 2008 (continúa desde entonces). Ha participado activamente en la divulgación del conocimiento científico mediante artículos y conferencias. Ha dirigido cuatro tesis de doctorado (más una actualmente en realización), 23 TFGs/TFCs, cinco DEAs y dos TFMs. Ha recibido como tutor a numerosos estudiantes predoctorales mayoritariamente de otros países. Fue coeditor de *Zoologica Baetica* (2002-2016), Associate Editor de *The European Zoological Journal* (antes *Italian Journal of Zoology*) (Taylor & Francis, JCR journal) (2016-2020) y ha sido coeditor de *Acta Granatense* (2002-2004). Pertenece al Comité Editorial de *Perla (Annual Newsletter and Bibliography of The International Society of Plecopterologists)* desde 2010. Ha actuado como revisor en más de 35 revistas científicas. Ha realizado estancias, durante períodos de tiempo variables en diversos centros extranjeros de Italia, Estados Unidos, Argentina, etc. Fue asistente científico de la empresa Hydraena S.L.L. de Evaluación del Estado Ecológico de los Sistemas Fluviales, Restauración de ríos y riberas, Análisis químico-físicos y microbiológicos y Ensayos de Ecotoxicidad (2002 a 2016).

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología)

C.1. Publicaciones (algunos de los más relevantes de los últimos 5 años)

- López-Rodríguez MJ, Paz Moreno I, Peralta-Maraver I, Pérez-Martínez C & Tierno de Figueroa JM. 2021. Experimental evaluation of biodiversity response to dispersal barriers and patch primary producer biomass in Mediterranean streams. *Aquatic Science*, 83(1): 1-10. <https://doi.org/10.1007/s00027-020-00757-5>
- Larios-López JE, Alonso González C, Galiana-García M & Tierno de Figueroa JM. 2021. Driving factors of synchronous dynamics in brown trout populations at the rear edge of their native distribution. *Ecology of Freshwater Fish*, 30(1), 4-17. <https://doi.org/10.1111/eff.12554>
- Villar-Argaiz M, López-Rodríguez MJ & Tierno de Figueroa JM. 2021. Divergent nucleic acid allocation in juvenile insects of different metamorphosis modes. *Scientific Reports*, 11:10313. <https://doi.org/10.1038/s41598-021-89736-w>
- Sedano F, Tierno de Figueroa JM, Navarro Barranco C, Ortega E, Guerra-García JM & Espinosa F. 2020. Do artificial structures cause shifts in epifaunal communities and trophic guilds across different spatial scales? *Marine Environmental Research*, 158: 104998. <https://doi.org/10.1016/j.marenvres.2020.104998>
- Peralta-Maraver I, López-Rodríguez MJ, Roberston A & Tierno de Figueroa JM. 2020. Anthropogenic flow intermittency shapes food web topology and community delineation in Mediterranean rivers. *International Review of Hydrobiology*, 105: 74–84. <https://doi.org/10.1002/iroh.201902010>
- Sarremejane R, Cid N, Stubbington R, Datry T, Alp M, Cañedo-Argüelles M, Cordero-Rivera A, Csabai Z, Gutiérrez-Cánovas C, Heino J, Forcellini M, Millán A, Paillex A, Pařil P, Polářek M, Tierno de Figueroa JM, Usseglio-Polatera P, Zamora-Muñoz C. & Bonada N. 2020. DISPERSE, A trait database to assess the dispersal potential of European aquatic macroinvertebrates. *Scientific Data*, 7:386, <https://doi.org/10.1038/s41597-020-00732-7>.
- Tierno de Figueroa JM, López-Rodríguez MJ & Villar Argaiz M. 2019. Spatial and seasonal variability in the trophic role of aquatic insects: an assessment of functional feeding group applicability. *Freshwater Biology*, 64: 954–966. <https://doi.org/10.1111/fwb.13277>



- Tierno de Figueroa JM & López-Rodríguez MJ. 2019. Trophic ecology of Plecoptera (Insecta): a review. *The European Zoological Journal*, 86(1): 79-102. <https://doi.org/10.1080/24750263.2019.1592251>

- Navarro-Barranco C, Tierno de Figueroa JM, Ros M & Guerra García JM. 2019. Influence of Marine Protected Areas on parasitic prevalence: the case of the isopod *Anilocra physodes* as a parasite of the fish *Lithognathus mormyrus*. *Journal of Zoology*, 308: 280-292. <https://doi.org/10.1111/jzo.12674>

- López-Rodríguez MJ, Martínez Megías C, Salgado Charrao AC, Cámara Castro JP & Tierno de Figueroa JM. 2018. The effect of large predators on the decomposition rate and the macroinvertebrate colonization pattern of leaves in a Mediterranean stream. *International Review of Hydrobiology*, 103: 90-98. <https://doi.org/10.1002/iroh.201801951>

C.2. Proyectos

- PID2021-126143OB-C21 y PID2021-126143OB-C22. “Herramientas avanzadas para la evaluación del estado ecológico de ríos temporales mediterráneos durante su fase seca (DRY-Guadalmed // Advanced tools for the assessment of the ecological status of Mediterranean temporary rivers during the dry phase (DRY-Guadalmed)”. «Proyectos de Generación de Conocimiento 2021. Modalidad: Investigación Orientada Tipo Coordinado» del Ministerio de Ciencia e Innovación. IPs: N. Bonada Caparrós, N. Cid Puey (C1) y M.M. Sánchez Montoya (C2). 2023-2026. 223850 + 169400 € (C1 + C2). Investigador (C1).

- A-BIO-538-UGR20. “Análisis de la vulnerabilidad demográfica y genética de especies centinela de cambio climático”. Proyectos de I+D+I en el marco del Programa Operativo FEDER Andalucía 2014-2020. IP: M.J. López Rodríguez (UGR). 2021-2023. 45000 €. Investigador.

- LifeWatch-2019-10-UGR-01_WP-2. “LifeWatch-Thematic Center on Mountain Ecosystem & Remote sensing, Deep learning-AI e-Services University of Granada-Sierra Nevada”. IP (Work Package 2): M. Villar Argáiz (UGR). 2019-2023. 588003 €. Investigador.

- RNM-327. “Estudio integrado de sistemas acuáticos como sensores de procesos de cambio en la cuenca hidrográfica”. Proyecto motriz. Programa de Excelencia de la Junta de Andalucía. IP: M. Villar (UGR). 2014-2018. 108.556,73 €. Investigador.

- RNM-7041. “Crustáceos caprélidos invasores de las costas andaluzas: aplicaciones en acuicultura”. Proyecto I+D. Programa de Excelencia de la Junta de Andalucía. IP: J.M. Guerra (US). 2013-2017. 167.172,05 €. Investigador.

- D/023976/09. “Fortalecimiento del centro de biodiversidad y recursos naturales (BIORENA) en Sucre (Bolivia)”. Agencia Española de Cooperación Internacional. IP: F. Serrano Bernardo (UGR). 2010-2012. 129.205,00 €. Investigador.

- CGL2008-02221. “Estudio de la biología preimaginal de las familias europeas de Plecópteros (Insecta): una aproximación integradora”. Proyecto I+D 2008 del Ministerio de Ciencia e Innovación, Subdirección General de Proyectos de Investigación. IP: J. Manuel Tierno de Figueroa (UGR). 2009-2011. 61.710,00 €. Investigador principal.

- RNM-02654. “Modelización de comunidades de macroinvertebrados acuáticos en ríos mediterráneos para la implementación de la Directiva Marco del Agua”. Proyecto I+D. Programa de Excelencia de la Junta de Andalucía. IP: Javier Alba-Tercedor (UGR). 2008-2012. 289.888,42 €. Investigador.



C.3. Contratos, méritos tecnológicos o de transferencia

- Investigador principal del contrato nº 3407 “Estudio y desarrollo de metodologías para la cría de larvas de quironómidos como alimento de peces” suscrito entre HYDRAENA, S.L.L y la Universidad de Granada. 13-2-2014 a 12-4-2014. 900,00 €.

- Investigador colaborador del Contrato nº 3152 "Macroinvertebrates in Mediterranean climate watercourses" suscrito entre Leibniz-Institut für Gewässerökologie und Binnenfischerei (IGB) y la Universidad de Granada, responsable: Carmen Zamora-Muñoz (UGR). 15-9-2012 al 15-2-2013. 25.000 €.

C.4. Patentes

C.5. Tesis doctorales dirigidas

- Fue director (junto con el Dr. A. Sánchez-Ortega, Universidad de Granada) de la Tesis doctoral de D. Julio Miguel Luzón-Ortega titulada “Contribución al conocimiento de los plecópteros (Insecta, Plecoptera) del sur de la Península Ibérica”, defendida el 29 de julio de 2002 en la Universidad de Granada.

- Fue director (junto con el Dr. J. Alba-Tercedor, Universidad de Granada) de la Tesis doctoral de D. Manuel Jesús López Rodríguez titulada “Life history, nymphal feeding and secondary production of Ephemeroptera and Plecoptera from Southern Iberian Peninsula”, defendida el 26 de noviembre de 2008 en la Universidad de Granada.

- Fue director (junto con el Dr. Carlos Alonso González, Universidad Politécnica de Madrid) la Tesis doctoral de D. José Enrique Larios López titulada “La trucha común [*Salmo trutta* (Linnaeus, 1758)] en Andalucía. Distribución, fenología reproductiva, procesos reguladores y propuestas de gestión de sus poblaciones”, defendida el 23 de junio de 2017 en la Universidad de Granada.

- Fue director (junto con la Dra. J. Garrido, Universidad de Vigo) la Tesis doctoral de D. Jacobo Rúa titulada “Alimentación ninfal e imaginal de los plecópteros del sur de Galicia”, defendida el 27 de julio de 2017 en la Universidad de Vigo.

Fecha del CVA	20/01/2023
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Parte A. DATOS PERSONALES

Nombre	M ^a GEMA		
Apellidos	PARRA ANGUIA		
Sexo	Mujer	Fecha de Nacimiento	
DNI/NIE/Pasaporte			
URL Web			
Dirección Email			
Open Researcher and Contributor ID (ORCID)	0000-0002-4519-4799		

A.1. Situación profesional actual

Puesto	CATEDRÁTICA DE UNIVERSIDAD		
Fecha inicio	2022		
Organismo / Institución	Universidad de Jaén		
Departamento / Centro	BIOLOGÍA ANIMAL, BIOLOGÍA VEGETAL Y ECOLOGÍA / Facultad de Ciencias Experimentales		
País		Teléfono	
Palabras clave	Ecotoxicología; Ecología acuática		

A.2. Situación profesional anterior (incluye interrupciones en la carrera investigadora - indicar meses totales, según texto convocatoria-)

Periodo	Puesto / Institución / País
2020 -	Vicedecana de Asuntos Generales / Universidad de Jaén

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES

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

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores. Si aplica, indique el número de citaciones

- Artículo científico.** (AC); LUIS JOAQUIN LPOEZ-GARCIA; JOSE A PIQUERAS; ROBERTO GARCÍA. (1/4). 2022. Identification of Farmers' Barriers to Implement Sustainable Management Practices in Olive Groves SUSTAINABILITY. MDPI. 14, pp.6451. <https://doi.org/10.3390/su14116451>
- Artículo científico.** (AC). (1/10). 2021. The future of temporary wetlands in drylands under global change. INLAND WATERS. <https://doi.org/10.1080/20442041.2021.1936865>
- Artículo científico.** GEMA PARRA ANGUIA. (5/6). 2021. Promoting Environmental Citizenship in Education: The Potential of the Sustainability Consciousness Questionnaire to Measure Impact of Interventions SUSTAINABILITY. 13, pp.11420. <https://doi.org/10.3390/su132011420>
- Artículo científico.** M^a Eugenia López Valcárcel; (AC); Ana I Del Arco Ochoa. (2/3). 2021. Environmental disturbance history undermines population responses to cope with anthropogenic and environmental stressors CHEMOSPHERE. 2662. ISSN 00456535. <https://doi.org/10.1016/j.chemosphere.2020.128373>
- Artículo científico.** Cristiano Araujo; Abdelmourhit Laissaoui; Daniel Silva; et al; (AC);. (9/15). 2020. Not Only Toxic but Repellent: What Can Organisms' Responses Tell Us about Contamination and What Are the Ecological Consequences When They Flee from an Environment? Toxics. 8-4, pp.118-140.
- Artículo científico.** Luciana Gomes Barbosa; C Amorin; Gema Parra Anguita; J Laço Portinho; M Moraes; E Morales; R Menendez. (2/7). 2020. Advances in limnological research in Earth's drylands INLAND WATERS. <https://doi.org/10.1080/20442041.2020.1728179>

- 7 **Artículo científico.** David Espinoza Villalobos. (2/2). 2020. Effects of CO₂-driven acidification on the ostracod *Cypridopsis vidua*: what are its likely environmental consequences? *Toxicological and Environmental Chemistry*. 102-5-6, pp.284-301. ISSN 02772248. <https://doi.org/10.1080/02772248.2020.1779723>
- 8 **Artículo científico.** MERCEDES CONRADI; EMILIO MOYANO; KHURSHID BUIYAN; et al; ;. (8/9). 2019. Intraspecific variation in the response of the estuarine European isopod *Cyathura carinata* (Kroyer, 1847) to ocean acidification *SCIENCE OF THE TOTAL ENVIRONMENT*. 683, pp.134-145. <https://doi.org/10.1016/j.scitotenv.2019.05.227>
- 9 **Artículo científico.** MERCEDES CONRADI; EMILIO MOYANO; ANDREA GALOTTI; et al; ;. (7/9). 2019. CO₂ leakage simulation: Effects of the decreasing pH to the survival and reproduction of two crustacean species *MARINE POLLUTION BULLETIN*. 143, pp.33-41. WOS (1) <https://doi.org/10.1016/j.marpolbul.2019.04.020>
- 10 **Artículo científico.** Ana Isabel del Arco Ochoa; Francisco Guerrero Ruiz; Francisco Jiménez Gómez; Gema Parra Anguita. 2019. Plankton community responses to environmentally-relevant agrochemical mixtures. *International Journal of Limnology*. 5, pp.1-5.
- 11 **Artículo científico.** Enrique García Muñoz; Francisco Guerrero Ruiz; Garbiñe Arechaga; (AC). (4/4). 2019. Does wetland watershed land use influence amphibian larval development? A relevant effect of agriculture on biota *Journal of Oceanology and Limnology*. Springer. 37-1, pp.160-168. <https://doi.org/10.1007/S00343-019-7378-8>
- 12 **Artículo científico.** ANDREA GALOTTI DE SOUZA; FRANCISCO JIMÉNEZ GÓMEZ; GEMA PARRA ANGUITA. (3/3). 2018. An abrupt CO₂-mediated decrease in pH affects growth rates, cellular features and the interspecific interaction of *Scenedesmus* (*Acutodesmus*) *obliquus* and *Cryptomonas pyrenoidifera* *LIMNETICA*. 37-2, pp.267-281. <https://doi.org/10.23818/limn.37.20>
- 13 **Artículo científico.** ANA ISABEL DEL ARCO OCHOA; GEMA PARRA ANGUITA. (2/3). 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, pp.513-519. SCOPUS (1)
- 14 **Artículo científico.** Helmut Stremmel; Linda Caroline Weiss; Gema Parra; Eloisa Ramos-Rodríguez; Cristiano Araujo. 2022. Ecotoxicological assessment of the effects of fluoxetine on *Daphnia magna* based on acute toxicity, multigenerational reproduction effects, and attraction repellence responses *SCIENCE OF THE TOTAL ENVIRONMENT* (PRE PRINT SSRN).
- 15 **Artículo científico.** (AC); ANDREA GALOTTI. (1/2). 2021. *Metacyclops minutus* and *Daphnia magna* interspecific competition coefficients under CO₂-mediated acidification *FUNDAMENTAL AND APPLIED LIMNOLOGY*. 195, pp.143-152. <https://doi.org/10.1127/fal/2021/1391>
- 16 **Artículo científico.** ANDREA GALOTTI; FRANCISCO JIMÉNEZ-GÓMEZ; GEMA PARRA. 2020. Flow cytometry assessment of microalgae physiological alterations under CO₂-injection *CYTOMETRY PART A. WILEY*. <https://doi.org/DOI:10.1002/cyto.a.24028>
- 17 **Artículo científico.** Gema Parra Anguita; Valeria Acevedo García; M^a Eugenia López Valcárcel; Ana Isabel del Arco Ochoa. 2019. ECOTOXICOLOGICAL ANALYSIS OF THE FUNGICIDE PHOSPHITE OF SODIUM ON A PLANKTONIC COMMUNITY *Revista Internacional de Contaminación Ambiental*. 35-1, pp.151-163.

C.3. Proyectos o líneas de investigación

- 1 **Proyecto.** CA21134, TOWARDS ZERO PESTICIDE AGRICULTURE : EUROPEAN NETWORK FOR SUSTAINABILITY. Comisión Europea. (INRAE). 13/07/2022-13/07/2026. Comité de Gestión.
- 2 **Proyecto.** Soluciones basadas en la Naturaleza frente a contaminantes emergentes: Protegiendo las aguas para la Transición Ecológica. TRANSICIÓN ECOLÓGICA. GEMA PARRA ANGUITA. (UNIVERSIDAD DE JAÉN). 01/12/2022-30/11/2024. 140.000 €. Investigador principal.

- 3 Proyecto.** AMPLIANDO LA PERSPECTIVA SOBRE ESTRÉS AMBIENTAL EN LOS ECOSISTEMAS ACUÁTICOS DEBIDO A LA CONTAMINACIÓN: UN ENFOQUE USANDO LA SELECCIÓN DE HÁBITAT EN UN BALANCE COSTE-BENEFICIO (BRESTRESS). Ministerio de Ciencia e Innovación. Universidades. Araujo. (ICMAN-CSIC). 01/06/2020-31/05/2023. 90.000 €. Miembro de equipo.
- 4 Proyecto.** SUSTAINOLIVE. Novel approaches to promote the Sustainability of OLIVE cultivation in the Mediterranean. Comisión Europea. ROBERTO GARCIA. (Universidad de Jaén). 01/06/2019-31/05/2023. 2.100.000 €. Miembro de equipo.
- 5 Proyecto.** DISEÑO ÓPTIMO Y PRELACIÓN DE MEDIDAS CORRECTORAS PARA MITIGAR LOS RIESGOS DE INUNDACIÓN Y EROSIÓN BASADAS EN ACTUACIONES A ESCALA DE CUENCA VÍA PARTICIPACIÓN CIUDADANA: CONTRIBUCIÓN AL PACTO ANDALUZ POR EL AGUA. PROGRAMA OPERATIVO FEDER ANDALUCÍA 2014-2020. PATRICIO BOHORQUEZ RODRÍGUEZ DE MEDINA. (Universidad de Jaén). 01/01/2021-31/12/2022. 57.456,49 €.
- 6 Proyecto.** CIENCIA CIUDADANA PARA LA DETECCIÓN PRECOZ Y SEGUIMIENTO DE LA INVASIÓN POR BRIOZOOS Y BIVALVOS EN LOS SISTEMAS DE REGADÍO GIENNENSES.. DIPUTACION DE JAEN. JIMÉNEZ MELERO. (Universidad de Jaén). 08/07/2021-09/07/2022. 4.400 €. Miembro de equipo.
- 7 Proyecto.** CA16229, EUROPEAN NETWORK FOR ENVIRONMENTAL CITIZENSHIP. UNIÓN EUROPEA. (Cyprus Centre for Environmental Research and Education.). 04/09/2017-26/04/2022. 140.000 €. Miembro de equipo.
- 8 Proyecto.** CTM2013-46951-R, RESTAURACION DE ECOSISTEMAS ACUÁTICOS MEDIANTE NANOPARTICULAS MAGNETICAS:. Ministerio de Economía y Competitividad. INMACULADA DE VICENTE ALVAREZ MANZANEDA. (UNIVERSIDAD DE GRANADA). 01/01/2014-31/12/2017. 141.570 €. COLABORADOR.
- 9 Proyecto.** CTM2012-36476-C02-02, DISEÑO Y OPTIMIZACIÓN DE TECNOLOGIAS AMBIENTALES MEDIANTE SIMULACIONES DE LABORATORIO DE EFECTOS CRÓNICOS Y DE CICLO DE VIDA DE ESPECIES BENTÓNICAS Y PLANCTÓNICAS. MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD. MARÍA GEMA PARRA ANGUIA. (UNIVERSIDAD DE JAÉN). 01/01/2013-31/12/2015. 92.000 €. Investigador principal.
- 10 Proyecto.** 2014-1-UK01-KA203-001645, NURSUSTOOLKIT: A TEACHING AND LEARNING RESOURCE FOR SUSTAINABILITY IN NURSING. ERASMUS+. Richardson. (UNIVERSITY OF PLYMOUTH). Desde 01/09/2014. 448.024 €. Miembro de equipo.
- 11 Contrato.** Alterra Project 5240485-01 (Chimera) 23/10/2013-22/01/2014. 3.000 €.

C.4. Actividades de transferencia de tecnología/conocimiento y explotación de resultados

M^a Luisa Grande Gascón; Manuel Linares Abad; Isabel López Medina; M^a Carmen Álvarez Nieto; Gema Parra Anguita; María Ruiz Zambrana. 1901249723936. "Juego NurSus SIM" España. 24/01/2019. Universidad de Jaén.



Part A. PERSONAL INFORMATION		CV date	January 2023
First and Family name	José Jesús Casas Jiménez		
Social Security, Passport, ID number		Age	
Researcher numbers	Researcher ID	I-2873-2015	
	Author ID	7203049680	
	ORCID code	orcid.org/0000-0003-0928-0080	

A.1. Current position

Name of University/Institution	University of Almería		
Department	Biology and Geology		
Address and Country	Edf. CITE II-B, Ctra. Sacramento s/n, Almería, Spain		
Phone number	+34950015501	E-mail	jjcasas@ual.es
Current position	Full Professor	From	07/27/2018
UNESCO code	2401, 2413, 2417, 2508		
Key words	Aquatic Ecology, Streams, Wetlands, Biodiversity, Ecosystem functioning		

A.2. Education

Degree/PhD	University	Year
Degree Biology	Granada	1984
PhD Biology	Granada	1990

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

Merits in research (# six-year periods): 5
 # JCR articles: 72 (Q1 30; Q2 10; Q3 10; Q4 22) & > 30 non-indexed publications
 # Book chapters: 10, 3 internationals
 # PhD thesis supervised: 8
 # Master thesis supervised: 7
 Research indicators.- **Scopus**: Hindex=22, total cites=1481; **Scholar**: Hindex=26, total cites=2669.

Part B. CV SUMMARY (max. 3500 characters, including spaces)

My research career begun with a pre-doctoral training fellowship for PhD degree at the University of Granada (UGR, 1986-1989) funded by the Spanish Ministry of Science (MEC). After getting my PhD in Biology (1990). Post-doctoral fellow funded by the University of Granada (January-September 1990) and Assistant Lecturer in this university. Post-doctoral fellow funded by MEC for two stays in USA (University of Pittsburgh) and Austria (Austrian Academy of Sciences) to stretch my knowledge and skills on stream ecology. I was hired as full time Associate Lecturer at the UGR (1994-96) and at the University of Almería (UAL, 1996-99), until I got a permanent position in Ecology, first as Senior Lecturer (1999) and later as Full Professor at UAL.

Main achievements of my research career: i. Establish, from scratch in a new university, of a research programme on Aquatic Ecology; ii. The establishment of collaborations with numerous national and international researchers in the field of ecology and other fields (e.g. botany, microbiology, agronomy, food science, geology..), achieving a remarkable transdisciplinarity in some studies. My research has focused on: i. Taxonomic and functional diversity of aquatic ecosystems, lately with a clear approach for searching management models to make human activities compatible with biodiversity conservation; ii. Studies on



ecosystem functioning with emphasis on trophic linkages in terrestrial-aquatic interfaces and the consequences of global change on these. Seventeen projects obtained in public calls (9 DGICYT, 2 OAPN-Miteco, 4 CCAA, 1 UE-LIFE, 1 UAL-FEDER), in 11 projects I acted as head researcher. Three research contracts with the regional administration, leading 2 of them.

Part C. RELEVANT MERITS

C.1. Publications (including books) (JCR publications, last 10 years):

1. Rubio-Ríos J.; J. Pérez; E. Fenoy; M. J. Salinas-Bonillo; J. J. Casas. 2022. Cross-species coprophagy in small stream detritivores counteracts low-quality litter: native versus invasive plant litter. *Aquatic Sciences* **85**, DOI: [10.1007/s00027-022-00905-z](https://doi.org/10.1007/s00027-022-00905-z)
2. Jódar J.; S. Martos-Rosillo; E. Custodio; L. Mateos; J. Cabello; J. J. Casas; M. J. Salinas-Bonillo; J. M. Martín-Civantos; A. González-Ramón; T. Zakaluk et al. 2022. The Recharge Channels of the Sierra Nevada Range (Spain) and the Peruvian Andes as Ancient Nature-Based Solutions for the Ecological Transition. *Water*, **14**(19), 3130; <https://doi.org/10.3390/w14193130>.
3. Rubio-Ríos J, Pérez J, Salinas MJ, Fenoy E, Boyero L, Casas JJ. 2022. Climate-induced plasticity in leaf traits of riparian plants. *Diversity and Distributions*, <https://doi.org/10.1111/ddi.13493>.
4. Fenoy E., Pradhan A., Pascoal C., Rubio-Ríos J., Batista D., Moyano-López F.J., Cássio F., Casas J. J. 2021. Elevated temperature may reduce functional but not taxonomic diversity of fungal assemblages on decomposing leaf-litter in streams. *Global Change Biology*. <https://doi.org/10.1111/gcb.15931>.
5. Rubio-Ríos J., Pérez J., Salinas M.J., Fenoy E., López-Rojo N., Boyero L. and Casas J.J. 2021. Key plant species and detritivores drive diversity effects on instream leaf litter decomposition more than functional diversity: a microcosm study. *Science of the Total Environment*. <https://doi.org/10.1016/j.scitotenv.2021.149266>
6. Boyero, L. et al (75 authors more) 2021. Impacts of detritivore diversity loss on instream decomposition are greatest in the tropics. *Nature Communications*, **12**: 3700.
7. Boyero, L. et al (81 authors more) 2021. Latitude dictates plant diversity effects on instream decomposition. *Science Advances*, **7** (13): eabe7860.
8. Fenoy, E., Rubio-Ríos, J., González, J.M., Salinas, M., Moyano, F.J. & Casas, J.J. 2021. Strategies of shredders when feeding on low-quality leaf-litter: local population adaptations or fixed species traits? *Limnology & Oceanography*, **66**: 2063–2077.
9. Larrañaga A., A. Martínez, R. Albariño, J.J. Casas, V. Ferreira, R. Príncipe. 2021. Effects of exotic tree plantations on litter decomposition in streams (297-322). In P. Swan, L. Boyero, C. Cañoto (eds): *The Ecology of Plant Litter Decomposition in Stream Ecosystems*. Springer.
10. López-Rojo, N., Pérez, J., Basaguren, A., Pozo, J., Rubio-Ríos, J., Casas, J.J. & Boyero, J. 2020. Effects of two measures of riparian plant biodiversity on litter decomposition and associated processes in stream microcosms. *Scientific Reports* **10**, 19682. <https://doi.org/10.1038/s41598-020-76656-4>.
11. Fenoy, E Moyano F J, Casas, J. J. 2020. Warming and nutrient-depleted food: Two difficult challenges faced simultaneously by an aquatic shredder. *Freshwater Science*. DOI: 10.1086/709023.
12. Castro, A.J.; López-Rodríguez, M.D.; Giagnocavo, C.; Giménez, M.; Céspedes, L.; La Calle, A.; Gallardo, M.; Pumares, P.; Cabello, J.; Rodríguez, E.; Uclés, D.; Parra, S.; Casas, J.; Rodríguez, F.; Fernandez-Prados, J.S.; Alba-Patiño, D.; Expósito-Granados, M.; Murillo-López, B.E.; Vasquez, L.M.; Valera, D.L. 2019. Six collective challenges for sustainability of Almería greenhouse horticulture. *Int. J. Environ. Res. Public Health*, **16**(21), 4097; <https://doi.org/10.3390/ijerph16214097>
13. Salinas MJ, Casas, J J, Rubio-Ríos J, López-Carrique E, Ramos-Miras JJ, Gil C. 2018. Climate-driven changes of riparian plant functional types in permanent headwater streams. Implications for stream food webs. *PLoS ONE*, **13**(6). <https://doi.org/10.1371/journal.pone.0199898>.
14. Rubio J, E Fenoy, JJ Casas, Moyano FJ. 2017. Modelling hydrolysis of leaf litter by digestive enzymes of the snail *Melanopsis praemorsa*: Combination of response



- surface methodology and in vitro assays. **Marine and Freshwater Behaviour and Physiology**, 50: 313-328.
15. Mollá S, JJ Casas, M Menéndez, A Basaguren, C Casado, E Descals, JM González, A Larrañaga, M Lusi, A Martínez, C Mendoza-Lera, O Moya, J Pérez, T Riera, N Roblas, J Pozo. 2017. Leaf-litter breakdown as an indicator of the impacts by flow regulation in headwater streams: Responses across climatic regions. **Ecological Indicators** 73, 11- 22.
 16. Fenoy E, JJ Casas, M Díaz-López, J Rubio, JL Guil-Guerrero & FJ Moyano-López. 2016. Temperature and substrate chemistry as major drivers of interregional variability of leaf microbial decomposition and cellulolytic activity in headwater streams. **FEMS Microbiology Ecology** 92(11). doi.org/10.1093/femsec/fiw169
 17. Martínez A, A Larrañaga, J Pérez, C Casado, JJ Casas, JM González, M Menéndez, S Mollá, J Pozo. 2016. Climate modulates the magnitude of the effects of flow regulation on leaf-litter decomposition. **Aquatic Sciences** 79, 507-514.
 18. Gallego I, C. Pérez-Martínez, PM. Sánchez-Castillo, M. Juan, F. Fuentes-Rodríguez, JJ Casas. 2015. Physical, chemical and management drivers of submerged macrophyte assemblages in Mediterranean farm ponds. **Hydrobiologia** 762, 209-222.
 19. Fenoy E, JJ Casas. 2015. Two faces of agricultural intensification hanging over aquatic biodiversity: The case of chironomid diversity from farm ponds vs. natural wetlands in a coastal region. **Estuarine, Coastal and Shelf Science** 157, 99-108.
 20. Casas JJ, Bonachela S, Moyano FJ, Fenoy E, Hernández J. Agricultural practices in the Mediterranean: A case study in Southern Spain. In **The Mediterranean Diet: An Evidence-Based Approach**, Victor R. Preedy and Ronald R. Watson (eds), Academic Press.
 21. Gallego I, TA Davidson, E Jeppesen, C Pérez-Martínez, M Juan, F Fuentes-Rodríguez, JJ Casas. 2014. Disturbance from pond management obscures local and regional drivers of assemblages of primary producers. **Freshwater Biology** 59 (7), 1406-1422.
 22. Juan M, JJ Casas, MA Elorrieta, S Bonachela, I Gallego, E Fenoy, MA Elorrieta. 2014. Can submerged macrophytes be effective for controlling waterborne phytopathogens in irrigation ponds? An experimental approach using microcosms. **Hydrobiologia** 732 (1), 183-196.
 23. Juan M, JJ Casas, S Bonachela, I Gallego, F Fuentes-Rodríguez, E Fenoy, MA Elorrieta. 2013. Management effects on fungal assemblages in irrigation ponds: are biodiversity conservation and the control of phytopathogens compatible? **Fundamental and Applied Limnology/Archiv für Hydrobiologie** 183 (4), 259-270.
 24. Sáez MI, JJ Casas, JL Guil-Gerrero, MD Gil, R Cañero, MD Suárez. 2013. Effects of organic matter, alkalinity and pH on acute copper toxicity to mosquitofish, *Gambusia holbrooki*: Implications for a multipurpose management of irrigation ponds. **International Review of Hydrobiology** 98 (5), 262-270.
 25. Casas JJ, A Larrañaga, M Menéndez, J Pozo, A Basaguren, A Martínez (8 autores más). 2013. Leaf litter decomposition of native and introduced tree species of contrasting quality in headwater streams: How does the regional setting matter? **Science of the Total Environment** 458, 197-208.
 26. Sáez MI, S García-Mesa, JJ Casas, JL Guil-Guerrero, CE Venegas-Venegas, AE Morales, MD Suárez. 2013. Effect of sublethal concentrations of waterborne copper on lipid peroxidation and enzymatic antioxidant response in *Gambusia holbrooki*. **Environmental Toxicology and Pharmacology** 36 (1), 125-134.
 27. Bonachela S, M Juan, JJ Casas, F Fuentes-Rodríguez, I Gallego, MA Elorrieta. 2013. Pond management and water quality for drip irrigation in Mediterranean intensive horticultural systems. **Irrigation Science** 31 (4), 769-780.
 28. Fuentes-Rodríguez F, M Juan, I Gallego, M Lusi, E Fenoy, D Leon, P Peñalver, J Toja, JJ Casas. 2013. Diversity in Mediterranean farm ponds: trade-offs and synergies between irrigation modernisation and biodiversity conservation. **Freshwater Biology** 58 (1), 63-78.
 29. Gallego I, TA Davidson, E Jeppesen, C Pérez-Martínez, P. Sánchez-Castillo, M Juan, F. Fuentes Rodríguez, D. León, P. Peñalver, J. Toja, J.J. Casas. 2012. Taxonomic or ecological approaches? Searching for phytoplankton surrogates in the determination of richness and assemblage composition in ponds. **Ecological Indicators** 18, 575-585.



30. Juan M, JJ Casas, S Bonachela, F Fuentes-Rodríguez, I Gallego, MA Elorrieta. 2012. Construction characteristics and management practices of in-farm irrigation ponds in intensive agricultural systems: agronomical and environmental implications. *Irrigation and Drainage* 61, 657-665.
31. Casas JJ, J Toja, P Peñalver, M Juan, D León, F Fuentes-Rodríguez, (5 autores más). 2012. Farm ponds as potential complementary habitats to natural wetlands in a Mediterranean region. *Wetlands* 32 (1), 161-174.

C.2. Research projects and grants (last 10 years)

1. Soluciones basadas en la naturaleza para la gestión resiliente del agua frente al cambio climático en zonas de montaña. Funciones y servicios de los ecosistemas. Convocatoria 2022 Proyectos Puente Plan Propio de Investigación y Transferencia 2022 de la Universidad de Almería. IP: **J. J. Casas** (2022), 10,000 €.
2. Nature based solutions for a resilient management of the hydrologic cycle in mountain areas: The traditional system for water management in Sierra Nevada. Convocatoria 2021 Proyectos Parques Nacionales OAPN-Miteco. IP: J Cabello (2021-2024), 90.631 €.
3. Effects of changes in plant diversity and species identity on Mediterranean headwater streams: An approach from fatty acids and carotenoids as trophic-transfer indicators. Convocatoria 2018 Proyectos de I+D en el marco del Programa Operativo FEDER Andalucía 2014-2020, IP: **JJCasas** (2019-2021), 44.000 €.
4. Responses to aridity of terrestrial-aquatic trophic linkages in headwater streams (RIBARID) (CGL2012-39635). Ministerio de Economía y Competitividad, Plan Nacional de I+D+I, IP: **JJ Casas** (2012-2015), 75.000 €.
5. Characterisation and evaluation of hydrogeological, hydrological and anthropogenic factors affecting groundwater-surface water interactions in a semiarid catchment CADESEM (2011-RNM8115). Proyectos de excelencia, Junta de Andalucía, IP: Francisco Sánchez-Martos (2012-2015), 172.490€.
6. Temperature effects on the functioning of headwater Iberian streams: Sierra Nevada. (CGL2010-22129-C04-04). Ministerio de Economía y Competitividad, Plan Nacional de I+D+I, IP: **JJ Casas** (2011-2012), 14.000€.

C.3. Contracts (most relevant)

- 1.- A proposal for a programme of ponds in Andalusia. A plan for the environmental strengthening of small artificial water bodies in Andalusia. Technical Assistance. EGMASA, Consejería de Medio Ambiente. Junta de Andalucía, IP: **JJ Casas** (2007-2009), 105.000€.
- 2.- A service proposal for monitoring the effects of global change on arid and semiarid ecosystems in Andalusia. Sub-project: Evaluating the integrity of fluvial ecosystems in semiarid Andalusia in response to global change. Technical Assistance. Consejería de Medio Ambiente. Junta de Andalucía. IP: **JJ Casas** (2010-2012), 110.000€.

C.5. Institutional responsibilities

- 1.- Head of the Department of Biology and Geology, University of Almería (since 2017).
- 2.- Head of the Research Group "Aquatic Ecology and Aquaculture" (Plan PAIDI, Junta de Andalucía, RNM346) (2005-present).
- 3.- Review Editor in the field of Freshwater Science of the journal *Frontiers in Environmental Science*
- 4.- Evaluator of ANEP (*Agencia Nacional de Evaluación y Prospectiva*) of research projects (since 2006)
- 5.- Evaluator of ANEP, six-years periods of transfer of research results, and ACSUG.

CV date	January 2023
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Part A. PERSONAL INFORMATION

Firstname	Presentación		
Family name	Carrillo Lechuga		
Gender (*)		Birth date	
ID number			
e-mail	pcl@ugr.es	URL Web	
Open Research and Contributor ID (ORCID)(*)	0000-0003-3794-4294		

(*) *Mandatory*

A.1. Current position

Position	Full professor		
Initial date	15/12/2011		
Institution	Granada University		
Departament/Center	University Research Institute of Water. Dpto Ecology. Fac Science		
Country	Spain	Teleph. number	34-958243093
Key words	UVR, CO ₂ , Warming, Dust deposition Phytoplankton, Primary Production, multiple stressors interaction, Metabolic balance		

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

Period	Position/Institution/Country/Interruption cause
1996- 2011	Associate Professor UGR/ SPAIN
1995-1996	Associate Professor with tenure UGR/ SPAIN
1994-1995	"Profesor Asociado" UGR/ SPAIN
1990-1994	Assistant L.R.U. UGR/ SPAIN
1990-1992	Postdoctoral Grant MEC
1986-1989	FPI grant MEC

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD Biology	Granada	1989
Licensed and Master in Biology	Granada	1985

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

Scientific trajectory: 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 (IES, Italy) working within the European project (Ecosystem Research in Freshwater Environment Recovery (ERIFER). The contact with researchers from the centre allowed my participation in the European projects ALPE 2 MOLAR and after BIOMAN; and currently in the Life Watch ERIC action. In 1996, I joined the Ecology Dpto (UGR) as an Associate professor, 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., 2002a), 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 105 papers in high-impact scientific journals in ecology/limnology, 10 book chapters and more than 170 presentations at congress. **Scientific collaborations** I have made different research stays and promoted cooperation agreements with different European countries (France, Italy, Portugal, Argentina, USA). Currently, I coordinate the Functional Ecology research group, composed by ten researchers (permanent teacher, postdoctoral, predoctoral and technical assistant). Since 1996 we uninterruptedly 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, Cavanilles Institute Valencia, Comahue University-CONICET. Photobiology Center-CONICET in Argentina and Grand Valley State University (USA). **Organization I+D activities:** I have experience as: Secretary of the VI Spanish Congress of Limnology Organization of Congress. September 1991; Secretary of the Workshop 5th ALPE Meeting. International, May 1995; Member of the Scientific Committee and Session Moderator of the XIV and XV Congress of the Iberian Association of Limnology in 2008 and 2010 respectively; Spanish representative of the UV4GROWTH-L NETWORK: COST-ACTION, January 2009-2014 Member of the Organizing Committee of the 9th International Workshop GAP. 2012; Adviser of the Scientific Committee Advisory Committee of the Museum of Natural Sciences (CSIC), Madrid from 2014 to the present. **Doctoral and Predoctoral Training.** I have been a supervisor of FPU fellowship and PhD: I. Reche, Full Professor (UGR) M. Villar Argai, and J. M. Medina-Sánchez associate Professor (UGR); J.A. Delgado-Molina, Biology teacher; F.J. Bullejos, Marie Sklodowska-Curie Postdoctoral, C. Durán-Romero, Associate Professor UNP (Argentina); M.J. Cabrerizo Postdoctoral JdC (UV). J.M González-Olalla Postdoctoral Utah-USA. M. Vila and V. Moreno A(FPU). **Responsibility in University management.** I had or have different positions as Secretary of University Research Institute of Water (UGR), from January 15, 2009-2017. Coordinator of the Doctorate Program of Fundamental Biology and Systems of Granada School International Postgraduate-UGR, from 2010 to 2019. Head of University Research Institute of Water-UGR from 2017-present. **General indicators of quality of scientific production** I have a total number of citations, 2557; the number of citations from 2017, 1007, the total number of publications in the first quartile in the five years 29 (Q1:20) and (D1:9). h-index:30; Índices:10:66.) Other indicators that you may consider relevant. 6/6 positive evaluations of six-year research periods” 6/6 positive five-year teaching periods.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Some publications (including books)

1. Cabrerizo M. J., Medina-Sánchez, J.M.; González-Olalla, J M., Sánchez-Gómez. D. & P. Carrillo 2022. 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: 7.96, *Environmental Science* (25/ 274) (D1)
2. Biddanda BA., Dila DK., Weinke, AD., Mancuso JL., Villar-Argai, 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.
3. 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).
4. 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).
5. 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).
6. 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)

7. 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)
8. 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).
9. 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)
10. 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).
11. Villar-ArgaizM., Rajic S., Cabrerizo M.J., ValiñasM., 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).
12. 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).
13. 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)
14. 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)
15. 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)
16. 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).
17. 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. Congress

1. González Olalla, J.M., Medina-Sánchez, J. M. & P. Carrillo. Looking into the real impact of phagotrophy on a cosmopolitan mixotrophic protist. *Congreso American Society of Limnology and Oceanography – ASLO 2021.Mallorca (Spain). 2021.Oral presentation*
2. Cabrerizo, M. J Helbling E.W., Villafañe V.E, Medina-Sánchez, J. M., Villar-Argaiz, M. & P. Carrillo. Cumulative impact of multiple global-change drivers on primary production change their net effect along an optical gradient. *XIX Conference of the Iberian Association of Limnology. Coimbra (Portugal). 2018.Oral presentation*
3. Cabrerizo M. J Medina-Sánchez, J. M. Villar-Argaiz, M. & P. Carrillo. Accumulative impact of multiple global-change stressors modulates the phytoplankton-bacteria interaction. *10th Symposium for European Freshwater Sciences 2017. Olomouc, Czech Republic. 2017. Oral presentation*
4. González Olalla J. M., Medina-Sánchez J.M., Margenet V. & P. Carrillo Mixotrophy is questioned under global change: UVR induces negative effect at high temperatures. *10th Symposium for European Freshwater Sciences 2017. Olomouc, Czech Republic. 2017. Oral presentation*

5. González-Olalla, J.M. Medina- Sánchez J.M., Villar-Argaiz, M., López- Lozano I. & P. Carrillo. Has mixotrophic metabolism been altered by climate-driven changes after a decade? SIL XXXII Congress (SIL 2016). Torino (Italy). 2016. Oral presentation
6. Villar-Argaiz, M.; Rajic, S.; González Olalla, J. M.; Medina-Sánchez, J. M.; Cabrerizo, M. J. Carrillo, P. Do atmospheric depositions or nutrients compensate for the effects of CO₂ on the growth rate of *Daphnia Magna*? .Aquatic Sciences: Global And Regional Perspectives – North Meets South (ASLO 2015). Granada. 2015. Oral presentation
7. Medina-Sánchez JM, Dorado-García I, Cabrerizo MJ, Jiménez-Coll E, Carrillo P. Experimental test of resource limitation of bacterioplankton in Mediterranean inland waters of contrasted trophic status. SIL XXXII Congress. Budapest (Hungria). 2013. Oral presentation.
8. Carrillo P, Medina-Sánchez JM, Duran C, Herrera G, Cabrerizo MJ, Villar-Argaiz.M, Villafañe V& Helbling EW. Algae-bacteria relationship altered by increasing stratification and UVR in oligotrophic Mediterranean lakes. SIL XXXII Congress Budapest (Hungria). 2013. Oral presentation

C.3. Research projects

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 de Ciencia e Innovación. 01/01/2016-31/12/2018. **IPs P. Carrillo & J.M Medina-Sánchez**. Grant: 171.820€
4. CGL2011-23681. Assessing Microbial Loop Sensitivity to the 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 €
5. OAPN 2009/067. Seguimiento interanual y análisis experimental de factores de cambio global (UVR y entradas de P) sobre los productores primarios en lagos de alta montaña. Ministerio de Medio Ambiente y Medio Rural y Marino. 15/12/2009-30/06/2013. **IP: P. Carrillo**. Grant:109.499,90 €
6. P07-CVI-02598. Vulnerabilidad de ecosistemas acuáticos del Sur de la Península Ibérica frente a factores de cambio global. Radiación Ultravioleta y aporte de nutrientes minerales. Junta de Andalucía (conv. proy EXCELENCIA). 15/1/2008-31/12/2012. **IP: P. Carrillo**. Grant: 198.185 €

C.4. Contracts, technological or transfer merits.

- 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€
- LifeWatch-ERIC. Thematic Center on Mountain Ecosystem & Remote sensing, Deep learning-AI e-Services University of Granada-Sierra Nevada. European Research Infrastructure Consortium (ERIC). I.P: M Villar Argaiz(UGR).01/2020-12/2023. Grant: 580.480 €. Participation as Researcher.
- EQC2018-004720-P: Adquisición de un equipo de cromatografía de alta resolución LC-MS/MS triple cuadrupolo, para la cuantificación de contaminantes emergentes en aguas residuales y naturales Ministerio de Ciencia e Innovación. Duration: 01/01/2018-31/12/2018. **IP: P Carrillo**. Grant: 282,452.60€.
- Ríos de la Vida. Ministerio de Ciencia, Innovación y Universidades La Fundación Española para la Ciencia y la Tecnología (FECYT) 01/09/2021 30/08/ 2022. IP: M. Villar-Argaiz. Grant: 35000€. Participation as Researcher
- 74 Oasis glaciares de alta montaña en Sierra Nevada: una campaña de ciencia ciudadana por todo lo alto Entidad: Universidad de Granada FCT-18-13095. La Fundación Española para la Ciencia y la Tecnología (FECYT).01/01/2019-31/12/2020. IP: M.Villar-Argaiz. Grant: 10.000€. Participation as Researcher



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	20/01/2023
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, catchment land-uses		

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. In the Web of Science database, she has 56 publications, among them 53 are JCR articles (56.6% in the first quartile; with an average of 16.9 citations per item), 11 national and international book chapters and 74 conference papers international. She has supervised 4 PhD, 20 End-of-Degree Projects (Bachelor /Degree in Environmental Sciences and Biology) 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. It is of outstanding concern to consider that the last Thesis that she supervised in closely linked to the convenience of using magnetic particles as phosphorus adsorbents for counteracting the present alteration of phosphorus biogeochemical cycle was assessed. More specifically, the next goals were achieved: (i) to assess the toxicity of novel 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); (ii) to achieve the efficiency of magnetic particles for trapping phosphorus in secondary municipal effluents which lastly discharge in a Ramsar site (Fuente de Piedra, Málaga, Spain; Álvarez-Manzaneda et al., 2021, Chemosphere) and (iii) 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 interesting to remark the extensive experience of Inmaculada de Vicente 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); Department of Environmental Sciences and Cary Institute of Ecosystem Studies (de Vicente et al. 2010b, Hydrobiologia); and Aarhus University (Egemose et al. 2011, Canadian Journal of Fisheries and Aquatic Sciences).

Considering her contributions to society, she has also be 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, in seven complete volumes (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 graduates (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 (01/06/2015-31/01/2017); Dra. Ingrid Fanes Treviño (15/10/2015-14/02/2016) and Dr. Kouassi, N’Guessan Louis Berenger, University of Peleforo Gon Coulibaly, Korhogo (Côte d’Ivoire; 1/03/2019 - 1/05/2019).

PartC. 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

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

2.- 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

3. Title: *Anthropogenic eutrophication and emergent pollution in a Mediterranean wetland in a context of climate change: restoration of water quality by using magnetic adsorbents (ECRAM)*

Financial institution: *Ministerio de Ciencia e Innovación. Proyectos Generación del Conocimiento. Proyecto PID2021-122429OB-I00*

Participants: University of Granada and University of Jaén

Date: 2022-2025

Quantity: 133.100€

PI: Dra. Inmaculada de Vicente and Dr. José María Conde Porcuna

4. Title: *Laboratory optimization and in-situ assessment of using magnetic nanomaterials for environmental remediation in a Mediterranean wetland (NANOREM)*

Financial institution: *Ministerio de Ciencia e Innovación. Proyectos de Transición Ecológica y Transición Digital Proyecto TED2021-129384B-C22*

Participants: University of Granada and University of Jaén

Date: 2022-2024

Quantity: 144.900€

PI: Dra. Inmaculada de Vicente and Dr. José María Conde Porcuna

C.4. Contracts, technological or transfer merits

- Secretary of the Department of Ecology of the University of Granada: May 2013-May 2022
- 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



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

23/01/2023

First name	Castro		
Family name	Jorge		
Gender (*)		Birth date (17/11/1970)	
ID number			
e-mail	jorge@ugr.es	URL Web	
Open Research and Contributor ID (ORCID)(*)	0000-0002-6362-2240		

(*) Mandatory

A.1. Current position

Position	Full Professor		
Initial date	29/12/2017		
Institution	University of Granada		
Department/Center	Department of Ecology, Faculty of Science		
Country	Spain	Teleph. number	+34610718508
Key words	Forest ecology, Ecological restoration, Plant ecology, Global change, Biodiversity conservation, Mediterranean-type ecosystems		

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

Period	Position/Institution/Country/Interruption cause
2007-2017	Professor of Ecology/University of Granada/Spain
2002-2007	Associate Professor of Ecology ("Titular"), University of Granada/Spain
2002-2007	Assistant Professor of Ecology, University of Granada/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licensed in Biology	University of Granada / Spain	1993
PhD in Biology (Ecology)	University of Granada / Spain	2000

Part B. CV SUMMARY (4998 characters, including spaces)

I studied Biology at the University of Granada (1988-93), where I received my PhD in 2000 at the Department of Ecology. I obtained the position of Professor in 2007 at this university, and subsequently the position of Full Professor in 2017 (accredited by ANECA since 2014). I have made numerous short and post-doc stays at research centers in Denmark and Sweden (post-doc), United States (two stays, University of Minnesota and USGS in New Mexico) and the United Kingdom (University of Stirling, three stays). I have taught both at the University of Granada and for other international institutions (in English) such as the Studies Abroad program of the IES (Institute for Education of Students, Chicago), for which I have been teaching annually since 2005. I teach also in Master degrees at the University of Granada since 2002. I have given numerous invited talks (~35) in a considerable number of research

centers in Spain, UK, France, Sweden, Switzerland, Germany, USA and Morocco, including other organizations such as IUCN or the Society for Ecological Restoration. I have been the director of 6 Doctoral Thesis and a large number of Master's Thesis (20) or undergrad dissertations (35). I act as peer reviewer of a large number of SCI Journals and Research Agencies of different countries. I am the head of the Research Group RNM918 ("Conservation and Restoration of Ecosystems and Agroecosystems") since its creation in January 2015. I have published 85 articles in JCR-listed journals (most of them in first quartile) having had some of them a profound impact in their field of research, as well as a similar number of publications including outreach articles, conference proceedings and book chapters.

My professional career has focused on the study of the factors that determine the regeneration of Mediterranean forests, considering most of the processes that operate from seed dispersal to the establishment of adult trees. Thus, I have studied seed predation, seed dispersal, the effect of herbivores, soil-plant-microorganism interactions, soil nutrient dynamics, or the effect of drought and climate change. In particular, I have paid special attention to the restoration of the Mediterranean forest, having developed applied works intended to improve both the knowledge of the processes operating in the ecosystems and the knowledge for the management of the Mediterranean forest and the recovery of disturbed communities. In this sense, I consider that a clear value of my professional career has been the realization of applied studies that have also meant an advance in the basic knowledge in the field of Ecology. My interests and objectives also include a considerable effort to transfer knowledge to society. In this sense, I have written numerous articles for the general public, I have participated in radio and TV programs, I have participated in expert committees, and I have developed patents that are currently being exploited by the industrial sector.

An essential aspect of my career that I wish to highlight is the innovation and creation of new lines of work. These lines of work are at all times connected, but have involved challenges that I have not hesitated to take and that have given results of great impact. For example, during the development of my PhD thesis I initiated studies on the theory and applicability of plant-plant facilitation for forest restoration in Mediterranean environments, which has led to a large number of papers with a high impact (e.g., *J. Ecol.* 92: 266-277; *Restor. Ecol.* 10: 297-305). In 2004 I initiated a line of work related to the effect of increased drought on Mediterranean forests, which generated participation in one of the most cited articles in the field of Ecology (*Forest Ecol. Managem.* 259: 660-684; more than 6000 citations in Scholar Google), or more recent papers that are having a great impact in this field (e.g. *Global Change Biol.* 24: 4069-4083). In 2006 I initiated a line of work in post-fire restoration that has originated one of the most unique study sites in the world (experimental plots in Lanjarón, Sierra Nevada National Park) and a reference point worldwide, which has allowed not only the publication of a large number of articles, but also the participation in numerous international studies of great impact such as *Frontiers Ecol. Environm.* 18: 391-400, *J. Appl. Ecol.* 55: 279-289, or *Nature Commun.* 11: 4762. It is also worth mentioning my international collaboration network, which has allowed me to share ideas I am co-author of a recent article on wood decay rate at planetary scale published in **Nature** (another of the research lines I started some years ago) or the equally recent publication (November 2021) of an article in **Restoration Ecology** in which we propose a new concept for forest restoration (precision restoration). In short, I would like to highlight my extensive knowledge of Mediterranean forest ecology, my capacity for knowledge transfer (including the industrial sector), my ability to collaborate in multidisciplinary and interdisciplinary groups, and my ability to develop fresh and disruptive ideas that provide new solutions to problems of ecology and the environment.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

A list of the most relevant publications, including all those listed in JCR, can be found at the URL: <https://scholar.google.com/citations?user=d5SEfi0AAAAJ&hl=es>

- Molina-Morales M., Leverkus A.B., Albaladejo-Robles G., Martínez-Baroja L., Pérez-Camacho L., Villar-Salvador P., Rebollo S., Rey-Benayas J.M., **Castro J.** (2022). Linking animal behaviour and tree recruitment: caching decisions by a scatter-hoarder corvid determine seed fate in a Mediterranean agroforestry system. **Journal of Ecology** (doi: 10.1111/1365-2745.14004).
- Castro J.**, Sáez C., Molina-Morales M. (2021). The monk parakeet (*Myiopsitta monachus*) as a potential pest for agriculture in the Mediterranean basin. **Biological Invasions** (doi: 10.1007/s10530-021-02702-5).
- Castro J.** (2021). Post-fire restoration of Mediterranean pine forests. Pp. 537-565 in: Pines and their mixed forest ecosystems in the Mediterranean Basin. Ne'eman G., Osen Y. (eds), Pines and their mixed forest ecosystems in the Mediterranean Basin. Gidi N. y Yagil O. Springer.
- Castro J.**, Morales-Rueda F., Navarro F.B., Löf M., Vacchiano G., Alcaraz-Segura D. (2021). Precision restoration: a necessary approach to foster forest recovery in the 21st century. **Restoration Ecology** 29, e13421 (doi: 10.1111/rec.13421).
- Seibold S., Rammer W., Hothorn T, et al. (73 autores). The contribution of insects to global forest deadwood decomposition. **Nature** 597: 77-81.
- Thorn S., Chao A., Goergiev K.B., Müller J., Bässler C., Campbell J.L., **Castro J.**, et al. (2020). Estimating retention benchmarks for salvage logging to protect biodiversity. **Nature Communications** 11: 4762 (doi: 10.1038/s41467-020-18612-4).
- Leverkus A.B., Gustafsson L., Lindenmayer D.B., Castro J., Rey-Benayas J.M., Ranius T. Thorn S. (2020). Salvage logging effects on regulating ecosystem services and fuel loads. **Frontiers in Ecology and the Environment** 18:391-400 (doi: 10.1002/fee.2219).
- Molinas-Morales M., **Castro J.**, Albaladejo G. Parejo (2020). Precise cache detection by olfaction in a scatter-hoarder bird. **Animal Behaviour** 167: 185-191.
- Georgiev K.B., Chao A., **Castro J.**, et al. (2020). Salvage logging changes the taxonomic, phylogenetic and functional successional trajectories of forest bird communities. **Journal of Applied Ecology** 57: 1103-1112.
- Salazar-Tortosa D., **Castro J.**, Saladin B., Zimmermann N.E., Rubio de Casas (2020). Arid environments select for larger seeds in pines (*Pinus* spp). **Evolutionary Ecology** 34: 11-26
- Löf M., **Castro J.**, Engman M., Leverkus A.B., Madsen P., Reque J.A., Villalobos A., Gardiner E.S. (2019). Tamm Review: Direct seeding to restore oak (*Quercus* spp.) forests and woodlands. **Forest Ecology and Management** 448:474-489.
- Salazar-Tortosa D., **Castro J.**, Villar-Salvador P., Viñepla B., Matías L., Michelsen A., de Casas R.R. y Querejeta I. (2018). The "isohydric trap": a proposed feed-back between water shortage, stomatal regulation and nutrient acquisition drives differential growth and survival of European pines under climatic dryness. **Global Change Biology** 24: 4069-4083.
- Castro J.**, Molina-Morales M., Leverkus A.B., Martínez-Baroja L., Pérez-Camacho L., Villar-Salvador P., Rebollo S., Rey-Benayas J.M. (2017). Effective nut dispersal by magpies (*Pica pica* L.) in a Mediterranean agroecosystem. **Oecologia** 184: 183-192.
- Leverkus A.B., Rey-Benayas J.M., **Castro J.** (2016). Shifting demographic conflicts across recruitment cohorts in a dynamic post-disturbance landscape. **Ecology** 97: 2628-2639.
- Leverkus A.B., **Castro J.** (2017). An ecosystem services approach to the ecological effects of salvage logging: valuation of seed dispersal. **Ecological Applications** 24: 1057-1063.
- Castro J.**, Leverkus A.B., Fuster F. (2015). A new device to foster oak forest restoration via seed sowing. **New Forests** 46: 919-929.
- Matías L., **Castro J.**, Zamora R. (2011). Soil-nutrient availability under a global-change scenario in a Mediterranean mountain ecosystem. **Global Change Biology** 17: 1646-1657.

C.2. Congress

I have attended a large number of congresses and participated with about 130 communications. I do not consider this particularly relevant. Instead, I provide a small sample of some of the conferences I have given (title in the language used).

Castro J. Precision restoration: a necessary approach to foster forest recovery in the 21st century. Webinar scheduled for 26 January 2022; Society of Ecological Restoration (SER). https://us02web.zoom.us/webinar/register/WN_1nH1ucU2QbG-LaWptA84Hg

Castro J. Biodiversidad: ¿para qué? 2021 Autumn program of CosmoACCIÓN (Obra Social La Caixa y Fundación Fórum Ambiental). Caixa Forum Barcelona, Barcelona, España. 21 October 2021.

Castro J. Restauración tras incendios forestales. ¿Sacar o no la madera quemada? Inaugural lecture of the Interuniversity Master in Ecosystem Restoration. Universidad Complutense de Madrid. Madrid, España. 27 September de 2018.

Castro J. From soil to birds: linking ecosystem functioning to ecological processes to understand patterns of plant recruitment in relation to post-fire salvage logging. **Institut de Recherche sur la Biologie de l’Insecte (IRBI)**. Tours, Francia, 26 de January de 2015.

C.3. Research projects

2021-2022: TED project TED2021-129690B-I00 (Ministerio de Ciencia e Innovación): Smart forest restoration driven by ecological knowledge, deep learning, remote sensing and drone seeding (SmartFoRest). Participan insitutions: University of Granada, Swedish University of Agricultura Science, IFAPA-Junta de Andalucía. Duration: 24 months. Budget: 255.000 €. Investigador principal: **Jorge Castro Gutiérrez**.

2014-2019: Proyecto Exceclencia Junta de Andalucía P12-RNM-2705: “Efecto del fuego sobre la diversidad de insectos claves (Hormigas y Abejas) en el monte andaluz: aspectos funcionales e implicaciones para la conservación”. Entidades Participantes: Universidad de Granada, Estación Biológica de Doñana, Universidad Autónoma de Barcelona, CREAM y Universidad de Tel Aviv. Duración: 48 meses. Cuantía del presupuesto: 163.000 €. Investigador principal: **Jorge Castro Gutiérrez**.

2015-2018: Proyecto Ministerio de Economía y Competitividad CGL2014-53308-P: “Servicios de la avifauna (high mobile link species) en mosaicos agroforestales: regeneración forestal y regulación de plagas” (SERAVI). Entidades Participantes: Universidad de Alcalá y Universidad de Granada. Duración: desde junio 2016 hasta diciembre de 2018. Cuantía del presupuesto: 205.700 €. Investigador principal: **Salvador Rebollo de la Torre y José María Rey Benayas**.

2019-2022: Proyecto IFAPA PR.AVA.AVA2019.004: “Nuevas técnicas de regeneración asistida del arbolado en dehesas” (NUTERA-DE II). Entidades Participantes: IFAPA Camino de Purchil y Centro Hinojosa del Duque, Universidad de Córdoba y Universidad de Granada. Duración: 36 meses. Cuantía del presupuesto: 150.000 €. Investigador principal: **Francisco Bruno Navarro Reyes**.

2020-2023: Proyecto Exceclencia Junta de Andalucía P18-RT-1927: “Aumentando la resiliencia y resistencia de los sistemas agroforestales andaluces: bases para la restauración frente a los efectos del cambio global (RESISTE)”. Entidades Participantes: Universidad de Granada, Universidad de Alcalá de Henares, Universidad Politécnica de Madrid, Swedish University of Agricultural Sciences (Suecia), Universidad de Oporto (Portugal), Universidad de Cagliari (Italia) e IFAPA Camino de Purchil. Duración: 36 meses. Cuantía del presupuesto: 108.292 €. Investigador principal: **Jorge Castro Gutiérrez**.

C.4. Contracts, technological or transfer merits

1. Contract with Company to exploit a patent. Use and development of the technology described in patent P201331441, application PCT/ES2014/070757 and application P201690010. Castro-Gutiérrez, Jorge (Universidad de Granada). 2016-2036. License agreement signed the 01/03/2016.

2. Patent. Inventors: Jorge Castro Gutiérrez and Alexandro B. Leverkus. Title: Dispositivo protector de semillas ante depredadores. Nº of publication: ES2428943. Country of priority:

Spain. Date of approval: 23/07/2014. Owner: Universidad de Granada. **Under commercial exploitation (Grupo Sylvestris).**

3. I have been granted a transfer six-year term (“sexenio de transferencia”) dated January 2019.
4. I have been the Director of the course "Nature-based solutions to global change" funded by the Vice-Rectorate for Inclusion, Equality and Sustainability of the University of Granada (3 credits, 18 November to 11 December 2021).

Part A. PERSONAL INFORMATION

CV date

20/01/2023

First and Family name	María José Carmona Navarro		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0002-4835-6933	
	SCOPUS Author ID (*)	24480385300	
	WoS Researcher ID (*)	AAM-4340-2020	

(*) *Optional*

(**) *Mandatory*

A.1. Current position

Name of University/Institution	University of Valencia (UV)		
Department	Cavanilles Institute of Biodiversity and Evolutionary Biology(ICBIBE) /Department of Microbiology and Ecology		
Address and Country	C/ Catedrático José Beltrán Martínez, 2, 46980 Paterna (Valencia)		
Phone number	+34 963543665	E-mail	maria.j.carmona@uv.es
Current position	Senior Researcher Evolutionary Ecology Lab/Full Professor of Ecology	From	2017-11-16
Key words	Population ecology, evolutionary ecology, demography, sexual reproduction in cyclic parthenogens, rotifers, coexistence of cryptic species, evolution of life history traits, intraspecific variability, ecological differentiation, local adaptation, interpopulation hybridization, diapause		

A.2. Education

PhD, Licensed, Graduate	University	Year
PhD in Biology	University of Valencia	1992
Bachelor in Biology	University of Valencia	1985

A.3. General indicators of quality of scientific production (see instructions)

- *Sexennial periods of research activity that have received positive evaluation by the Spanish National Commission for Research Evaluation: 5 (i.e, the maximum possible according to the regulations); Last six-year period awarded: 2012-2017 (positively evaluated in 2018-06-06).*
- *PhD theses supervised (2010-01-01/2020-12-17): 4 theses defended (one with Outstanding Award from University of Valencia) plus 2 theses ongoing.*
- *JCR (Web of Science)articles:*
 - 1989-01-01/2020-01-01: 53 articles; 26 Q1 (49%), 15 Q2 (28%), 10 Q3 (19%) and 2 Q4 (4%) according to JCR raking in the year of publication.*
 - 2010-01-01/2020-12-17: 24 articles; 12 Q1 (50%), 9 Q2 (38%), 1 Q3 (4%) y 2 Q4 (8%) according to JCR raking in the year of publication.*
- *Citations: 1299 (Web of Science; 1989-01-01/2020-01-01); 1776 (Google Scholar). Average citations per article: 24.1 (Web of Science, 1989-01-01/2020-01-01). Average citations per year: 3.3 (Web of Science, 1989-01-01/2020-01-01)*
- *h index: 23 (Web of Science); 27 (Google Scholar); i10 index: 47*

Part B. CV SUMMARY (max. 3500 characters, including spaces)

I am senior research evolutionary ecologist at ICBiBE (UV). My research activity has been continuous since I joined UV in 1996 as a PhD grant holder of the Spanish Ministry of Science (1986-1989), were I received my PhD in 1992 co-advised by MR Miracle and M Serra. During 1993 I was a Postdoctoral fellow at Georgia Tech in Atlanta (USA) hosted by TW Snell. I have served as Assistant Professor (1990-1995), Associated Professor (1996-2017) and Full Professor of Ecology (2017-) at UV.

I have performed studies in evolutionary ecology of zooplankton with a special focus on rotifers including: identification and ecological characterization of cryptic species; mechanisms of niche differentiation and coexistence mediation; interpopulation genetic differentiation and intrapopulation genetic diversity; patterns of sexual reproduction (induction, allocation, evolution and optimization);



analysis and characterization of diapausing egg banks; and local adaptation. A common factor is my interest in the ecological and evolutionary consequences of sex in these facultative sexual organisms, and the combination of multiple theoretical and empirical approaches. I have contributed to: understanding the mechanisms controlling sexual reproduction in the life cycle; extending sex ratio evolution Fisher's theory to rotifers; evaluating the costs of sex investment; explaining the maintenance of sex in populations; understanding the relevance of sex investment in coexistence of cryptic species; and analyzing plasticity, genetic polymorphism, and risk spreading strategies in traits related to sexual reproduction and diapause. I am currently interested in identifying how these responses contribute to the ability of populations to adapt and evolve in unpredictable environments. My achievements are illustrated by 53 JCR articles (10 as first and 14 as last author), 49% published in journals ranked in the first quartile of evolutionary biology, ecology and limnology areas. My research has also generated other scientific and popular science publications and 82 conference contributions (65 international). These results are the product of 19 projects and grants funded in competitive public calls (see C2). I have been PI in 3 projects of the Spanish National Plan and one autonomic grant. It is worth noting my continued participation in projects since 1995 in a research group, pioneer in the evolutionary ecology of aquatic organisms in Spain, which has been consolidating and tackling increasingly ambitious projects, and where my leadership capacity has been evident over the last 15 years. I have co-advised 8 PhD theses, 7 in excellence programmes (2 with outstanding award, 4 with international mention) and currently I co-direct 2 theses (Doctoral Programme in Biodiversity and Evolutionary Biology with excellence mention). I have initiated in research collaborator students with scholarships (Spanish Ministry of Science and Education) and obtained institutional funds to train technicians. In terms of mobility, I have visited prestigious research centers invited or with funding obtained in public calls (see C4). I have been a reviewer in JCR journals and an evaluator of projects in national (ANEP) and foreign agencies (CONICYT, Chile; FWF, Austria; ANR, France). I have been part of ICBiBE Management Team (2007-2010) and have participated in the organization of scientific meetings and scientific dissemination conferences.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (10 selected articles from 2010-01-01 to 2020-12-17)

1. Tarazona, E, JI Lucas-Lledó, **MJ Carmona** & EM García-Roger, 2020. Gene expression in diapausing rotifer eggs in response to divergent environmental predictability regimes. *Scientific Reports* 10: 21366.
2. Dimas-Flores, N, M Serra, EM García-Roger & **MJ Carmona**, 2019. Evidencing the cost of sexual reproduction in the rotifer *Brachionus plicatilis*. *Hydrobiologia* 844: 243-255.
3. Tarazona, E, C Hahn, L Franch-Gras, EM García-Roger, **MJ Carmona** & A Gómez 2019. Ecological genomics of adaptation to unpredictability in experimental rotifer populations. *Scientific Reports* 9-1: 19646.
4. Tarazona, E, EM García-Roger & **MJ Carmona**, 2017. Experimental evolution of bet hedging in rotifer diapause traits as a response to environmental unpredictability. *Oikos* 126: 1162-1172.
5. Franch-Gras, L, EM García-Roger, M Serra & **MJ Carmona**, 2017. Adaptation in response to environmental unpredictability. *Proceedings of the Royal Society of London B*. 284: 20170427.
6. Gabaldón, C & **MJ Carmona**, 2015. Allocation patterns in modes of reproduction in two facultatively sexual cryptic rotifer species. *Journal of Plankton Research* 37: 429-440.
7. Gabaldón, C, **MJ Carmona**, J Montero-Pau & M Serra, 2015. Long-Term competitive dynamics of two cryptic rotifer species: diapause and fluctuating conditions. *PLOS ONE* 10: e0124406.
8. EM García-Roger, M. Serra, & **MJ Carmona**, 2014. Bet-hedging in diapausing egg hatching of temporary rotifer populations -A review of models and new insights. *International Review of Hydrobiology* 99: 96-106.
9. Gabaldón, C, J Montero-Pau, M Serra & **MJ Carmona**, 2013. Morphological similarity and ecological overlap in two rotifer species. *PLOS ONE* 8: e-57087.
10. Campillo, S, EM García-Roger & **MJ Carmona**, M Serra, 2011. Local adaptation in rotifer populations. *Evolutionary Ecology* 25: 933-974.

C.2. Research projects



1. Adaptation to predictable and unpredictable environmental variation in rotifers: integrated strategies and time scales (PID2020-114153GB-I00). Ministry of Science and Innovation PIs: Eduardo M García Roger & **MJ Carmona**. Duration: 01/09/2021-31/08/2023. Funding: 136.367 €.
2. Spacial dispersal and sexual reproduction in rotifers (AICO/2020/013). Conselleria de Educació i Ciència. PI: M Serra. 2020-05-19/2022/05/18. Funding: 39.450 €. Participation: Team member.
3. Environmental unpredictability and counteracting effects on sex response in rotifers (CGL2015-65422-P). Spanish Ministry of Economy, Industry and Competitiveness PIs: **MJ Carmona** & M. Serra. Duration: 01/01/2016-31/12/2019. Funding: 113.740 €.
4. Adaptation to environmental unpredictability in rotifer populations (CGL2012-30779). Spanish Ministry of Economy and Competitiveness. PI: **MJ Carmona**. Duration: 01/01/2012-31/12/2015. Funding: 136.890 €.
5. Implications of the environmental and demographic fluctuations on the coexistence of cryptic rotifer species (CGL2009-07364). Spanish Ministry of Economy and Competitiveness. PI: M Serra. Duration: 01/01/2010-31/12/2012. Funding: 169.400 €. Participation: Team member.
6. Complementary grant to the project Ecology and the evolution of sex in rotifers (GVACOMP2009-030). Valencian Council for Education and Science. IP: **MJ Carmona**. Duration: 01/01/2009-31/12/2009. Funding: 10.000 €.
7. Ecology and the evolution of sex in rotifers (CGL2006-07267). Spanish Ministry of Education and Science. PI: **MJ Carmona**. Duration: 01/10/2006 -31/09/2009. Funding: 60.500 €.
8. A Biochemical, Genetic, and Genomic Investigation of the Evolution and Ecology of Sexual Reproduction (EF-04126749) National Science Foundation (USA); Spanish Group PI: M Serra. Duration: 01/01/2005-31/08/2009. Funding: 47.865 €. Participation: Team member.
9. Differentiation among-rotifer populations and outbreeding effects (BOS 2003-00755; IP: M Serra Galindo. Spanish Ministry of Science and Technology. Duration: 01/01/2004-31/12/2006. Funding: 138.250 €. Participation: Team member.

C.3. Scientific dissemination and technology transfer activities

Popular Science articles (from 2010-01-01 to 2020-12-17)

1. Serra, M, MJ Carmona, EM García-Roger & R Ortells, 2020. Surviving uncertainty. Biodiversity, adaptation, and environmental fluctuation in rotifers. *Mètode Annual Review*. 10: 183-191.
2. Carmona, MJ, 2011. Asexualidad: la vía más rápida para proliferar. *Investigación y Ciencia*. 414: 14-15. ISSN 0210-136X.

Technology transfer contracts

Study on the reliability, reproducibility, error and linearity of an automatic cell counter for microscopy. Research institution: Institute Cavanilles of Biodiversity and Evolutionary Biology (Universitat de Valencia). Researcher in charge: **MJ Carmona**. Enterprise: CELEROMICS TECHNOLOGIES, S.L. Starting date: 2011. Budget: 4,500 euros.

Organization and participation in scientific communication events

Open Day of the Science Park of the University of Valencia “Expociencia”. 2009 and 2010.

C.4. Research stays abroad

1. Institution: Department of Biological Sciences. University of Hull (Hull, United Kingdom). Year: 2011. Duration: 6 weeks; Position: Invited Professor.
2. Institution: Institute for Limnology. Austrian Academy of Sciences. (Mondsee, Austria). Year: 2009; Duration: one week; Position: Invited Professor.
3. Institution: Institute of Aquaculture. Hellenic Centre for Marine Research (Heraklion, Greece). Year: 2009. Duration: one week; Position: Invited Professor.
4. Institution: School of Biology. Georgia Institute of Technology (Atlanta, USA). Year: 1993, Duration: 7 months; Position: Postdoctoral researcher.



5. Institution: Dip. Biologia 'Luigi Gorini'. Sez. Ecologia. Univ. degli Studi di Milano (Milán, Italy). Year: 1991, Duration: 2 months & Year 1989, Duration 3 months; Position: Doctoral student.

C.5. Mentoring

- 8 PhD theses co-advised (plus 2 ongoing): (1) E Aparici, 1999. *Estratègies reproductives i assignació sexual en rotífers* UV. (2) J Ciro, 2001. *Exclusión y coexistencia entre especies gemelas de rotíferos: mecanismos subyacentes* UV. (3) EM García-Roger, 2006. *Análisis demográfico de bancos de huevos de resistencia de rotíferos*. UV, Outstanding Award; (4) S Campillo, 2009. *The Dispersal-Gene Flow Paradox in zooplankton: the case of rotifers dwelling in temporary environments* UV European Mention (5) C Gabaldón, 2015. *Persistence, niche differentiation and ecological similarity in two cryptic rotifer species*, UV, International Mention; (6) AM Tortajada, 2016. *Diferenciación de poblaciones de rotíferos y efectos de la reproducción interpoblacional*. UV. (7) L Franch, 2017. *Rotifer adaptation to environmental unpredictability* UV; Internat. Mention & Outstanding Award. (8) E Tarazona, 2018. *Adaptation to environmental unpredictability in rotifers: an experimental evolution approach*, UV, International mention. (9) N. Colinas, ongoing. *Environmental unpredictability and counteracting effects on sex response in rotifers*. UV. (10) C. Arenas, ongoing. *Spatial dispersal, sexual reproduction and successful colonization in rotifers*. UV.
- 5 BSc theses advised: S Pérez-Polo, 2013; N Ibañez, 2015; M Saez-Fliquete, 2016; C Arenas, 2018; N Carabal, 2019.

C.6. Scientific, technical and/or assessment committees

- Member of University Professor Habilitation Committees: University of Salzburg, Austria (2012); Spanish Ministry of Education (2014-2015).
- Member of committees to judge open examination for CSIC Senior Scientist: 2006, 2016, 2019.
- Member of committees to judge open examination for Spanish University Professor (Associate and Full Professor): 1999, 2001, 2018, 2020.
- Member of 15 PhD committees: N Navarro, 1996; A Gómez, 1996; J Armengol, 1997; E Ortega, 2001; R Ortells, 2002; E Pérez, 2003; S Lapesa, 2004; O Smith, 2012; J. Montero, 2012; E Alvarez, 2013; C Olmo, 2015; S Rodriguez, 2017; M Macari, 2017; C Llopis, 2020; E Puche, 2020.

C.7. Experience in the organization of I+D events

1. 5th Scientific Meeting of the Cavanilles Institute of Biodiversity and Evolutionary Biology (ICBiBE): 20 years of ICBiBE: the crossroads between diversity and evolution, 2018. Type of activity: Coordinator of the Organizing Committee
2. 2nd Congress of the Spanish Society of Evolutionary Biology, 2009. Type of activity: Member of the Scientific Committee.
3. 3rd Partner-workshops 2 (ESF): Origin and spread of asexuals, 2004. International workshop of the European Science Foundation network called 'PARThenogenesis Network (PARTNER)'. Type of activity: Member of the Organizing Committee.

C.8. Reviewer activities

Research Project Evaluation for National and international Agencies

- Agencia Nacional de Evaluación y Prospectiva (ANEP), Ministerio de Economía, Industria y Competitividad. 2007, 2013, 2016.
- Agence Nationale de la Recherche (ANR) (France). Calls for proposals 2015 y 2016.
- Comisión Nacional de Investigación Científica y Tecnológica (CONICYT) de Chile presentados al Concurso Nacional de Proyectos FONDECYT Regular 2017.

Reviewer for Scientific Journals

Aquatic Ecology, Marine Biology, Aquaculture, Oecologia, Hydrobiologia, Limnetica, Journal of Italian Zoology, BMC Ecology, Trends in Ecology and Evolution.

C.9. Institutional responsibilities

- Academic Secretary (Statutory position) of the Cavanilles Institute of Biodiversity and Evolutionary Biology (ICBiBE) at the University of Valencia, from 2007 to 2010.
- Academic Secretary of the Doctoral Programme in Biodiversity and Evolutionary Biology with excellence mention at the University of Valencia, from 2018 to the date.



CURRÍCULUM ABREVIADO (CVA)

Lea detenidamente las instrucciones que figuran al final de este documento para rellenar correctamente el CVA.

Fecha del CVA 20/01/2023

Parte A. DATOS PERSONALES

Nombre y apellidos	Francisco José Guerrero Ruíz		
DNI/NIE/pasaporte		Edad	58
Núm. identificación del investigador	Researcher ID	E-7704-2012	
	Scopus Author ID	7005991239	
	Código ORCID	0000-0002-8983-3003	

A.1. Situación profesional actual

Organismo	Universidad de Jaén		
Dpto./Centro	Departamento de Biología Animal, Biología Vegetal y Ecología		
Dirección	Campus de las Lagunillas, s/n. 23071 Jaén		
Teléfono	953-212518	Correo electrónico	fguerre@ujaen.es
Categoría profesional	Catedrático de Universidad	Fecha inicio	Julio 2011
Espec. cód. UNESCO	250808 (Hidrobiología); 250805 (Limnología); 250814 (Aguas superficiales); 251001 (Oceanografía Biológica)		
Palabras clave	Ecosistemas acuáticos; Restauración; Eutrofización; Conservación; Hidrología; Educación ambiental y desarrollo sostenible		

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

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciado en Biología	Universidad de Málaga	1987
Licenciado con grado en Biología	Universidad de Málaga	1987
Doctor	Universidad de Málaga	1993

A.3. Indicadores generales de calidad de la producción científica

5 sexenios de investigación

6 tesis doctorales dirigidas y 5 tesis doctorales en realización

Comunicaciones a congresos = 124 ponencias (formato oral y póster)

38 participaciones en proyectos de investigación (9 como investigador principal)

4 participaciones en contratos artículo 83

Fuente Web of Science: Número de publicaciones = 80; Índice h = 17; Citas totales = 1111; Total de veces citado sin citas propias = 806; Promedio número de citas por elemento = 14,06; Publicaciones en primer cuartil (Q1): 22; Publicaciones en segundo cuartil (Q2): 24

Fuente SCOPUS: Número de trabajos = 84; Índice h = 18; Número de citas = 1289; Coautores = 120

Fuente Research Gate: Número de publicaciones = 159; Índice h = 21; Número de citas = 1692; Research Interest Score = 953,5 (mayor que el 93% de los miembros de esta plataforma)

Fuente Google Académico: Número de publicaciones = 159; Índice h = 21; Índice i10 = 53; Citas totales = 1940



Parte B. RESUMEN LIBRE DEL CURRÍCULUM (máximo 3500 caracteres)

Mi producción científica se centra fundamentalmente en cuatro líneas de investigación: (i) ecología de sistemas acuáticos - biodiversidad; (ii) estructura y dinámica de comunidades planctónicas; (iii) ecotoxicología y (iv) educación ambiental y sostenibilidad. Como muestra de esta actividad he publicado más un centenar de manuscritos tanto en el ámbito nacional como internacional: 80 artículos científicos publicados en revistas incluidas en la base de datos del "Journal Citation Report" (JCR); 44 artículos científicos publicados en otras revistas, tanto nacionales como internacionales; 40 capítulos de libro; 4 ediciones de libros y 3 libros. Junto a esto, los resultados de mis investigaciones han sido presentados en numerosos congresos científicos de ámbito nacional e internacional, con un total de 124 comunicaciones, tanto orales como en formato póster. Todos estos resultados han sido obtenidos como consecuencia de la participación en un total de 37 proyectos de investigación y/o acciones coordinadas, de los cuales he actuado en 8 como investigador principal. Fruto de toda esta experiencia he dirigido un total de seis tesis doctorales (estando actualmente otras cinco en vías de realización); 19 direcciones de Memorias de Iniciación a la Investigación, Trabajos Tutelados (Diploma de Estudios Avanzados - DEA) o Trabajos Fin de Máster (TFM), así como 13 Trabajos Fin de Grado (TFG). En el plano de la gestión académica he sido vicedecano de la licenciatura de Biología de la Universidad de Jaén (desde el 15 de junio de 1999 hasta el 16 marzo de 2004); coordinador del Aula Verde de la Universidad de Jaén (desde el 7 de abril de 2008 al 21 de mayo de 2011) y director del Secretariado de Sostenibilidad, del Vicerrectorado de Infraestructuras, Desarrollo de Campus y Sostenibilidad de la Universidad de Jaén (desde el 22 de mayo de 2011 al 23 de abril de 2015). Actualmente soy representante de la Universidad de Jaén en el Campus de Excelencia Internacional de Medio Ambiente, Biodiversidad y Cambio Global (CEICambio – desde el 3 de mayo de 2016), Vocal del Consejo Andaluz de Medio Ambiente en representación de Consejo Andaluz de Universidades (CAMA – desde el 12 de febrero de 2018), así como Vocal del Comité Andaluz de Humedales (CAH – desde 2018). Finalmente indicar que he actuado como editor de volúmenes especiales en las revistas *Water*, *Inland Waters*, formando parte actualmente del comité editor de las revistas *Journal of Water and Land Development* y *Frontiers in Ecology and Evolution*.

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología – máximo 10 publicaciones de los últimos 10 años)

C.1. Publicaciones

- (1) **Artículo científico:** Jiménez-Melero, R.; J.M. Ramírez; F. Guerrero (2013). Seasonal variation in the population growth rate of a dominant zooplankton: what determines its population dynamics? *Freshwater Biology*, 58: 1221-1233.
Factor de Impacto: 2,905; Posición: 11/102 (Q1); Citas: 6
- (2) **Artículo científico:** Jiménez-Melero, R.; J.D. Gilbert; F. Guerrero (2013). Secondary production of *Arctodiaptomus salinus* in a shallow saline pond: comparison of methods. *Marine Ecology Progress Series*, 483: 103-116.
Factor de Impacto: 2,640; Posición: 15/102 (Q1); Citas: 5



- (3) **Artículo científico:** Gilbert, J.D.; F. Guerrero; I. de Vicente (2014). Sediment desiccation as a driver of phosphate availability in the water column of Mediterranean wetlands. *Science of the Total Environment*, 466-467: 965-975.
Factor de Impacto: 4,099; Posición: 18/221 (Q1); Citas: 22
- (4) **Artículo científico:** Gilbert, J.D.; I. de Vicente; F. Ortega; R. Jiménez-Melero; G. Parra; F. Guerrero (2015). A comprehensive evaluation of the crustacean assemblages in southern Iberian Mediterranean wetlands. *Journal of Limnology*, 74: 169-181
Factor de Impacto: 1,725; Posición: 9/20 (Q1); Citas: 22
- (5) **Artículo científico:** Gilbert, J.D.; I. de Vicente; F. Ortega; E. García-Muñoz; R. Jiménez-Melero; G. Parra; F. Guerrero (2017). Linking watershed land uses and crustacean assemblages in Mediterranean wetlands. *Hydrobiologia*, 799: 181-191.
Factor de Impacto: 2,165; Posición: 31/106 (Q2); Citas: 12
- (6) **Artículo científico:** Gilbert, J.D.; I. de Vicente; R. Jiménez-Melero; F. Guerrero (2017). Zooplankton body size versus taxonomy in Mediterranean wetlands: implication for aquatic ecosystem evaluation. *Freshwater Science*, 36: 774-783.
Factor de Impacto: 2,489; Posición: 20/106 (Q1); Citas: 4
- (7) **Artículo científico:** Funes, A.; F.J. Martínez; I. Álvarez-Manzaneda; J.M. Conde-Porcuna; J. de Vicente; F. Guerrero; I. de Vicente (2018). Determining major factors controlling phosphorus removal by promising adsorbents used for lake restoration: a linear mixed model approach. *Water Research*, 141: 377-386
Factor de Impacto: 2,299; Posición: 39/110 (Q2); Citas: 21
- (8) **Artículo científico:** Vera-Vera, V.; F. Guerrero; J. Blasco; C.V.M. Araújo (2019). Habitat selection response by the freshwater shrimp *Atyaephyra desmarestii* experimentally exposed to heterogeneous copper contamination scenarios. *Science of the Total Environment*, 662: 816-823
Factor de Impacto: 6,551; Posición: 22/265 (Q1/D1); Citas: 16
- (9) **Artículo científico:** Gilbert, J.D.; I. de Vicente; F. Ortega; **F. Guerrero** (2021). Zooplankton community dynamic in temporary Mediterranean wetlands: which drivers are controlling the seasonal species replacement? *Water*, 2021, 13, 1447
Factor de Impacto: 3,103; Posición: 39/98 (Q2); Citas: 6
- (10) **Artículo científico:** Parra, G.; **F. Guerrero**; J. Armengol; L. Brendonck; S. Brucet; M. Finlayson; L. Gomes-Barbosa; P. Grillas; E. Jeppesen; F. Ortega; R. Vega; T. Zohary (2021). The



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future of temporary wetlands in drylands under the global change. *Inland Waters*, 11: 445-456

Factor de Impacto: 7,051; Posición: 1/90 (Q1); Citas: --

C.2. Proyectos de investigación e innovación docente (últimos 10 años)

- (1) Título del Proyecto: Diseño y optimización de tecnologías ambientales mediante simulaciones de laboratorio de efectos crónicos y de ciclo de vida de especies bentónicas y planctónicas. Entidad Financiadora: Ministerio de Economía y Competitividad. Proyecto CTM2012-36476-C02-02. Duración: Desde: 2012 Hasta: 2015. I.P.: Dra. María Gema Parra Anguita.
- (2) Título del Proyecto: Humedales de montaña de Andalucía: inventario, tipologías y conservación. Entidad Financiadora: Centro de Estudios Avanzados en Ciencias de la Tierra. Universidad de Jaén. Duración: Desde: 2016 Hasta: 2017. I.P.: Dr. Francisco J. Guerrero Ruiz.
- (3) Título del proyecto: Laboratory optimization and in-situ assessment of using magnetic nanomaterials for environmental remediation in a Mediterranean wetland (NANOREM). Entidad financiadora: Ministerio de Ciencia e Innovación. Proyectos de Transición Ecológica. Proyecto TED2021-129384B-C22. Entidades participantes: Universidad de Granada y Universidad de Jaén Duración: Desde: 2022 Hasta: 2024. I.P.: Dra. Inmaculada de Vicente Álvarez-Manzaneda y Dr. José María Conde Porcuna.
- (4) Título del Proyecto: Soluciones basadas en la Naturaleza frente a contaminantes emergentes: Protegiendo las aguas para la Transición Ecológica. (*SbNPRO-TE*). Entidad Financiadora: Ministerio de Ciencia e Innovación. Proyectos de Transición Ecológica. Proyecto TED2021-129910B-I00 Duración: Desde: 01/12/2022 Hasta: 31/11/2024. I.P.: Dra. Gema Parra Anguita.
- (5) Título del Proyecto: Anthropogenic eutrophication and emergent pollution in a Mediterranean wetland in a context of climate change: restoration of water quality by using magnetic adsorbents (ECRAM). Entidad Financiadora: Ministerio de Ciencia e Innovación. Proyectos de Generación del Conocimiento. Proyecto PID2021-122429OB-I00. Entidades participantes: Universidad de Granada y Universidad de Jaén. Duración: Desde: 2022 Hasta: 2025. I.P.: Dra. Inmaculada de Vicente Álvarez-Manzaneda y Dr. José María Conde Porcuna.



C.3. Contratos, méritos tecnológicos o de transferencia

- (1) Título del Contrato: Programa de rutas eco-gastronómicas (agroecológicas) por la provincia de Jaén. Entidad Financiadora: Diputación Provincial de Jaén. Duración: Desde: 2012 Hasta: 2013 Investigador Responsable: Dr. Francisco José Guerrero Ruiz.
- (2) Título del Contrato: Análisis de la distribución actual, estado de conservación y requerimientos ecológicos de 38 especies de plantas. Entidad Financiadora: SEBiCoP – Sociedad Española de Biología de la Conservación de Plantas Duración: Desde: 23/05/2018 Hasta: 30/09/2018 Investigador Responsable: Dr. Carlos Salazar Mendías.