Fecha del CVA	01/02/2022

Parte A. DATOS PERSONALES

Nombre y apellidos	Luis Álvarez de Cienfuegos Rodríguez		
Núm. identificación del investigador		Researcher ID	K-2391-2014
		Código Orcid	0000-0001-8910-4241

A.1. Situación profesional actual

Organismo	Universidad de Granada		
Dpto./Centro	Departamento de Química Orgánica / Facultad de Ciencias		
Dirección	Campus de Fuentenueva, 18071, Granada, España		
Teléfono		Correo electrónico	lac@ugr.es
Categoría profesional	Catedrático de Universidad	Fecha inicio	2021
Espec. cód. UNESCO	230600, 230400, 320800		
Palabras clave	Química Supramolecular. Materiales Orgánicos. Química Biológica. Química Organometálica. Dispositivos electrónicos moleculares.		

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

Licenciatura/Grado/Doctorado	Universidad	Año
Doctorado en Química Orgánica	Universidad de Granada	2003
Ldo. Farmacia. Esp. Biosanitaria	Universidad de Granada	1999

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

Notas: (i) fuente de datos bibliométricos: Web of Science; (ii) los datos JCR son del año de publicación del artículo (para los artículos de 2021 se usan los datos JCR de 2020).

- Número de sexenios de investigación: **4**. Fecha del último concedido: **2018**.
- Tesis doctorales dirigidas en los últimos 10 años (2010-2021): **5** (2 Premio extraordinario y 1 Tesis Europea, 1 Tesis Internacional)
- Tesis de Máster dirigidas en los últimos 10 años (2010-2020): **9**
- Número de publicaciones (2000-2021): **59**
- Citas totales: **1670** (fuente Google Scholar)
- Promedio de citas/año durante los últimos 5 años (2014-2018): **135**
- Promedio de citas por artículo: **23.40**
- Publicaciones totales en primer cuartil (Q1) 2001-2021 (datos basados en los IF de JCR 2013): **39**
- Número de publicaciones (2008-2018): **36**
- Publicaciones totales en primer cuartil (Q1) 2008-2018 (datos basados en JCR 2014): **30**

Química multidisciplinar: **20**, ChemSocRev (1), Ad. Funct. Mater. (1), AngewChem (1), JACS (2), ChemSci (2), ChemSusChem (1), ChemComm (4), ChemEurJ (3), Nanoscale (1), CrystEngComm (1), PhysChemChemPhys (1), PharmRes (1), Soft Matter (1).
Química Orgánica: **10**, OrgLett (2), AdvSynCat (1), JOC (5), EurJOrgChem (1), OrgChemFront (1).
-Índice h: **23**

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

En la actualidad soy Profesor Titular del Departamento de Química Orgánica de la Universidad de Granada (UGR) (Acreditado a Catedrático por ANECA 12/2020) y dirijo el Grupo de Investigación FQM-367 "MATERIALES ORGÁNICOS FUNCIONALES". Soy Investigador principal de proyectos de investigación tanto de ciencia básica ("*HIDROGELES MAGNETICOS SUPRAMOLECULARES PARA MEDICINA REGENERATIVA*". Proyectos del MINECO, Ref.: *REF: FIS2017-85954-R*), ("HIDROGELES SUPRAMOLECULARES BASADOS EN PEQUEÑOS PÉPTIDOS PARA LA OBTENCIÓN DE NUEVOS MATERIALES HÍBRIDOS CON APLICACIONES TECNOLÓGICAS" Junta de Andalucia Project, Ref.: P18-FR-3533), como de transferencia de tecnología ("An improved formulation and delivery of biopharmaceuticals by protein crystals in gels"; financiados por la Fundación La Caixa y el Instituto Europeo de Salud).

Mis líneas de investigación se centran en el desarrollo de nuevos materiales orgánicos y en el estudio de sus posibles aplicaciones tecnológicas y biotecnológicas. Soy autor de 59 publicaciones científicas en revistas de alto índice de impacto como PNAS, Adv. Funct. Mater., Angew. Chem., J. Am. Chem. Soc., Chem. Sci., etc. He dirigido 5 Tesis Doctorales, 12 Tesis de Máster y actualmente estoy dirigiendo 4 Tesis Doctorales. He participado como colaborador en numerosos Proyectos de Investigación tanto nacionales como internacionales (23) y he sido Investigador Principal en 7 proyectos de investigación. Desde 2015 soy Editor Asociado de la revista RSC Advances de la RSC.
He realizado estancias posdoctorales en el Instituto de Tecnología de Massachusetts (MIT) (2004-06) bajo la supervisión del Prof. Alexander Klibanov; en la Universidad de Tufts (2006-2007) bajo la supervisión del Prof. Krishna Kumar y en la Universidad de Granada (2008-2011) bajo la supervisión del Prof. Juan M. Cuerva. Estas estancias me han permitido trabajar en campos muy diversos de la química orgánica ampliando mi experiencia en química de polímeros, glicoconjugados y química organometálica respectivamente.
Gran parte de mi investigación ha tenido y tiene un marcado carácter translacional, siendo autor de 4 patentes PCT. Dos de ellas fueron desarrolladas durante mi estancia posdoctoral en el MIT y una en colaboración con la empresa BIND Therapeutics Inc., especializada en el desarrollo de nanopartículas poliméricas para la administración de fármacos. Recientemente, mi grupo ha solicitado la patente PCT/EP2017/06084 basada en el desarrollo de una nueva formulación farmacéutica que permite una liberación sostenida de insulina. En 2017 fundamos la spin-off Crystalgel S.L que va a ser la encargada de explotar dicha tecnología.

Parte C. MÉRITOS MÁS RELEVANTES

C.1. Publicaciones

Notas: (i) Factores de Impacto (FI) y Posiciones de las Revistas en su Área (P. Rev.) tomados del JCR de la Web of Science; (ii) el número de citas (Nº Citas) está tomado de la Web of Science.

1. Insulin Crystals Grown in Short-Peptide Supramolecular Hydrogels Show Enhanced Thermal Stability and Slower Release Profile.
Rafael Contreras-Montoya, María Arredondo-Amador, Guillermo Escolano-Casado, Mari C. Mañas-Torres, Mercedes González, Mayte Conejero-Muriel, Vaibhav Bhatia, Juan J. Díaz-Mochón, Olga Martínez-Augustin, Fermín Sánchez de Medina, Modesto T. Lopez-Lopez, Francisco Conejero-Lara, José A. Gavira, and **Luis Álvarez de Cienfuegos**. ***ACS Appl. Mater. Interfaces*** *DOI: 10.1021/acsami.1c00639* ***Índice de impacto:*** *8.758.* ***P. Rev.:*** *33/314 (1er cuartil).* ***Corresponding author.***
2. *Catalytic and Electron Conducting Carbon Nanotube Reinforced Lysozyme Crystals.*
Rafael Contreras-Montoya, Guillermo Escolano, Subhasish Roy, Modesto T. Lopez-Lopez, Jose M. Delgado-López, Juan M. Cuerva, Juan J. Díaz-Mochón, Nurit Ashkenasy, José A. Gavira, ***Luis Álvarez de Cienfuegos. Adv. Funct. Mater. 2019,*** *29, 1807351.* ***Índice de impacto:*** *16.8.* ***P. Rev.:*** *11/170 (1er cuartil).* ***Corresponding author.***
3. Novel Oleanolic and Maslinic Acids derivatives as a promising treatment against bacterial biofilm in nosocomial infections: An in Vitro and in Vivo study. Núria Blanco-Cabra, Karina Vega-Granados, Laura Moya-Andérico, **Luis Álvarez de Cienfuegos**, Eduard Torrents. **ACS Infect. Dis., 2019**, 5, 1581−1589. ***Índice de impacto:*** 4.911. ***P. Rev.:*** 4/59 (*1er* **decil**). **Corresponding author**.
4. *Unravelling the 2D Self-Assembly of Dipeptides at Fluid Interfaces.*
Pablo Gómez-Agudo, Rafael Contreras-Montoya, ***Luis Álvarez de Cienfuegos****, Juan M. Cuerva, Manuel Cano, David Alba-Molina, María T. Martín-Romero, Luis Camacho y Juan J. Giner-Casares.* ***Soft Matter 2018,*** *14, 9343-9350.* ***Índice de impacto****: 3.709.* ***P. Rev****.: 10/78 (1er cuartil). Este articulo recibió el Inside Cover de la revista.* ***Corresponding author****.*
5. *Iron Nanoparticles-Based Supramolecular Hydrogels to Originate Anisotropic Hybrid Materials with Enhanced Mechanical Strength.*
Rafael Contreras-Montoya, Ana B. Bonhome-Espinosa, Angel Orte, Delia Miguel, Jose M. Delgado-López, Juan D. G. Duran, Juan M. Cuerva, Modesto T. Lopez-Lopez, and ***Luis Álvarez de Cienfuegos****.* ***Mater. Chem. Front., 2018,*** *2, 686-699.* Impact Factor: 6.788. J.

Rank.: 29/172 (1st quartile). Inside Cover. Number citations: 18. Position/Number of authors: 9/9. **Corresponding author**.

6. *Pyrene-Containing ortho-Oligo(phenylene)ethynylene Foldamer as Ratiometric Probe Based on Circularly Polarized Luminescence.*
Pablo Reiné, José Justicia, Sara P Morcillo, Sergio ABBATE, Belén Vaz, María Ribagorda, Ángel Orte, Luis Álvarez de Cienfuegos, Giovanna Longhi, Araceli G. Campaña, Delia Miguel, and Juan M. Cuerva. ***J. Org. Chem. 2018,*** *83, 4455-4463.* ***Índice de impacto****: 4.849.* ***P. Rev****.: 8/59 (1er cuartil).* ***Citas:*** *6.*

7. *Sulfoxide-Induced Homochiral Folding of o-OPEs by Ag I Templating: Structure and Chiroptical Properties.*
Sandra Resa, Delia Miguel, Santiago Guisán-Ceinos, Giuseppe Mazzeo, Duane Choquesillo- Lazarte, Sergio Abbate, Luis Crovetto, Diego J. Cárdenas, M. Carmen Carreño, María Ribagorda, Giovanna Longhi, Antonio J. Mota, ***Luis Álvarez de Cienfuegos*** *and Juan M. Cuerva.* ***Chem. Eur. J. 2018,*** *24, 2653-2662.* ***Índice de impacto****: 5.317.* ***P. Rev****.: 29/165 (1er cuartil).* ***Citas****: 11.* ***Corresponding author****. Recogido en Synfacts 2018; 14(05): 0478.*

8. *Stapled helical o-OPE foldamers as new Circularly Polarized Luminescence emitters based on carbophilic interactions with Ag(I)-sensitivity.*
Sara P. Morcillo, Delia Miguel, ***Luis Álvarez de Cienfuegos****, José Justicia, Sergio Abbate, Ettore Castiglioni, Christophe Bour, María Ribagorda, Diego J. Cárdenas, José Paredes, Luis Crovetto, Duane Choquesillo-Lazarte, Antonio Mota, M. Carmen Carreño, Giovanna Longhi, Juan M. Cuerva.* ***Chem. Sci. 2016****, 7, 5663–5670.* ***Índice de impacto****: 9.144.* ***P. Rev****.: 14/155 (1er cuartil).* ***Citas****: 26.*

9. *Toward Multiple Conductance Pathways with Heterocycle-Based Oligo(phenylene-ethynylene) Derivatives.*
Delia Miguel, ***Luis Álvarez de Cienfuegos****, Ana Martín-Lasanta, Sara P. Morcillo, Linda A. Zotti, Edmund Leary, Marius Burkle, Yoshihiro Asai, Rocío Jurado, Diego J. Cárdenas, Gabino Rubio-Bollinger, Nicolás Agraït, Juan M. Cuerva, and M. Teresa González.* ***J. Am. Chem. Soc. 2015****, 137, 13818-13826.* ***Índice de impacto:*** *12.103.* ***P. Rev****.: 10/157 (1er cuartil).* ***Citas****: 21.*

10. *Influence of the Chirality of Short Peptide Supramolecular Hydrogels in Protein Crystallogenesis.*
Mayte Conejero-Muriel, José A. Gavira, Estela Pineda-Molina, Adam Belsom, Mark Bradley, Mónica Moral, Juan de Dios García-López Durán, Angélica Luque González, Juan J. Díaz-Mochón, Rafael Contreras-Montoya, Ángela Martínez-Peragón, Juan M. Cuerva, and ***Luis Álvarez de Cienfuegos****.* ***Chem. Commun. 2015****, 51, 3862-3865.* ***Índice de impacto****: 6.567.* ***P. Rev****.: 20/148 (1er cuartil).* ***Citas****: 13.* ***Corresponding author****.*

C.2. Proyectos

C.2.1. Proyectos con participación como INVESTIGADOR PRINCIPAL

1. Referencia: ***P18-FR-3533***
Título: ***HIDROGELES SUPRAMOLECULARES BASADOS EN PEQUEÑOS PÉPTIDOS PARA LA OBTENCIÓN DE NUEVOS MATERIALES HÍBRIDOS CON APLICACIONES TECNOLÓGICAS.***
Entidad financiadora (convocatoria): ***Junta de Andalucia***
Nombre del investigador principal: **Luis Álvarez de Cienfuegos Rodríguez**
Entidad de afiliación: Universidad de Granada
Fecha de inicio y de finalización: 2020-2022
Cuantía de la subvención: 109.750 eur

2. Referencia: ***FIS2017-85954-R***
Título: ***HIDROGELES MAGNETICOS SUPRAMOLECULARES PARA MEDICINA REGENERATIVA.***
Entidad financiadora (convocatoria): ***MINECO***
Nombre del investigador principal: **Luis Álvarez de Cienfuegos Rodríguez**
Entidad de afiliación: Universidad de Granada
Fecha de inicio y de finalización: 2018-2020
Cuantía de la subvención: 133.000 eur

3. Referencia: ***EIT-Health-PoCPlus-2016***

Título: ***AN IMPROVE FORMULATION AND DELIVERY OF BIOPHARMACEUTICALS BY PROTEIN CRYSTALS IN GELS***
Entidad financiadora (convocatoria): ***European Institute of Technology***
Nombre del investigador principal: **Luis Álvarez de Cienfuegos Rodríguez**
Entidad de afiliación: Universidad de Granada
Fecha de inicio y de finalización: Nov.2016-Dic.2017
Cuantía de la subvención: 25.000 eur

4. Referencia: ***CaixaImpulse-2015***
Título: ***AN IMPROVE FORMULATION AND DELIVERY OF BIOPHARMACEUTICALS BY PROTEIN CRYSTALS IN GELS***
Entidad financiadora (convocatoria): ***Fundación La Caixa***
Nombre del investigador principal: **Luis Álvarez de Cienfuegos Rodríguez**
Entidad de afiliación: Universidad de Granada
Fecha de inicio y de finalización: Sep.2015-Jul.2017
Cuantía de la subvención: 58.000 eur

5. Referencia: ***CEI15-18***
Título: *CEI BIOTIC GRANADA 2015.*
Entidad financiadora (convocatoria): ***MINISTERIO DE EDUCACION, CULTURA Y DEPORTE.***
Nombre del investigador principal: **Luis Álvarez de Cienfuegos Rodríguez**
Entidad de afiliación: Universidad de Granada
Fecha de inicio y de finalización: Jul.2016-Dic.2016
Cuantía de la subvención: 25.000 eur

6. Referencia: ***FQM2012-2721***
Título: ***Geles supramoleculares para su empleo en ingeniería tisular, en medicina, en catálisis y en cristalización.***
Entidad financiadora (convocatoria): ***Proyecto de Excelencia Junta de Andalucía***-(2012)
Nombre del investigador principal: **Luis Álvarez de Cienfuegos Rodríguez**
Entidad de afiliación: Universidad de Granada
Fecha de inicio y de finalización: 2014-2018
Cuantía de la subvención: 43.125 eur

C.4. Patentes

1. Name: *Bi-Functional Polymer-Attached Inhibitors of Influenza Virus.*
Inventors/authors/obtainers: *Haldar, Jayanta;* ***Álvarez de Cienfuegos, Luis****; Klibanov, Alexander M.; Chen, Jianzhu.*
Holding institution: *Instituto Tecnológico de Massachusetts.*
Date: 2009. **Application number:** *PCT Int. Appl. (2009), WO 2009032605 (A3).*
2. Name: *Hydrophobic polymeric coatings with virucidal and bactericidal activity.*
Inventors/authors/obtainers: *Haldar, Jayanta; An, Deqiang;* ***Álvarez de Cienfuegos, Luis****; Chen, Jianzhu; Klibanov, Alexander M.*
Holding institution: *Instituto Tecnológico de Massachusetts.*
Date: 2008. **Application number:** *PCT Int. Appl. (2008), WO 2008127416 (A3).*
3 Name: *Methods for the Preparation of Targeting Agent Functionalized Diblock Copolymers for Use in Fabrication of Therapeutic Targeted Nanoparticles.*
Inventors/authors/obtainers: *Mir Mukkaram Ali,* ***Luis Álvarez de Cienfuegos****, Jeff Hrkach, Stephen E. Zale.*
Holding institution: *BIND BIOSCIENCES, INC. (MA, 02139, EEUU)*
Date: 2012. **Application number:** *US 08734846 B2*
4 Name: *Pharmaceutically active protein crystals grown in-situ within a hydrogel.*
Inventors/authors/obtainers: ***Luis Álvarez de Cienfuegos****, José A. Gavira Gallardo, Juan J. Díaz Mochón, María Teresa Conejero Muriel, Rafael Contreras Montoya.*
Holding institution: *Universidad de Granada-CSIC*
Date: 2017. **Application number:** *P201630584 y PCT/EP2017/060842*

C.5 Otros

Editor Asociado de *RSC Advances* y de *Frontiers in Chemistry.*
Premio extraordinario de Tesis Doctoral (2010).

MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

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

CV date	25/01/2022

Part A. PERSONAL INFORMATION

First name	Araceli		
Family name	González Campaña		
e-mail	araceligc@ugr.es	URL Web: http://nanographout.ugr.es/	
Open Researcher and Contributor ID (ORCID) (*)		0000-0001-5483-5642	

(*) Mandatory

A.1. Current position

Position	Profesor Titular de Universidad		
Initial date	13/12/2019		
Institution	Universidad de Granada		
Department/Center	Química Orgánica	Facultad de Ciencias	
Country	Spain		
Key words	Organic Synthesis, Organometallic Chemistry, Supramolecular Chemistry, Nanographenes, Polycyclic Aromatic Hydrocarbons, Chiroptical Properties		

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

Period	Position/Institution/Country/Interruption cause
12/11/2020 – 11/06/2021	*Interruption:* Maternity leave and temporary risk during pregnancy and breastfeeding
01/07/2016 – 24/01/2017	*Interruption*: Maternity leave and temporary risk during pregnancy and breastfeeding
01/01/2015 – 12/12/2019	"Ramón y Cajal" Researcher / Universidad de Granada
01/02/2012 – 31/12/2014	"Juan de la Cierva" Researcher / Universidad de Granada
01/10/2011 – 31/01/2012	Postdoctoral Research Fellow / University of Edinburgh (UK)
01/10/2009 – 30/09/2011	"Ramón Areces" Fellow /University of Edinburgh (UK)
01/02/2009 – 30/09/2009	Postdoctoral Researcher / Universidad Autónoma de Madrid
01/04/2006 – 31/01/2008	FPU PhD student / Universidad de Granada
01/05/2005 – 31/03/2006	PhD student (Project contract) / Universidad de Granada

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Chemistry	Universidad de Granada	2008
Degree in Chemistry	Universidad de Granada	2004

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

Dr. Araceli G. Campaña (AGC) currently is associate professor at the Departamento de Química Orgánica of the Universidad de Granada (UGR) and leads the Group *NanographOUT*. She obtained her BSc (2004) and PhD (2008, supervisor Prof. Juan M. Cuerva) from the UGR. Then, she worked at Universidad Autónoma de Madrid as Postdoctoral Researcher (2009, Group of Prof. Diego J. Cárdenas) and later on at the University of Edinburgh (UK) (2009-2012, Group of Prof. David A. Leigh). She was later appointed as "Juan de la Cierva" researcher (2012-2014) at the UGR. From 2015, she

worked as “Ramón y Cajal” researcher as Independent Group Leader before taking his current position in 2020.

Since 2015, AGC has been leading the research group *NanographOUT* at the UGR where young scientists (predoctoral and postdoctoral) have been trained and are continuing their scientific or professional careers in groups of international level. She has already supervised 6 PhD Thesis and 3 PhD Thesis are on-going (see research proposal-section 6., for details).

NanographOUT research focuses on bottom-up synthesis of distorted carbon nanostructures particularly incorporating non-hexagonal rings (7-membered or larger rings) and carbohelicenes in the structure. One of the major aims is to study the influence of such defects on the optical and chiroptical properties (ECD and Circularly Polarized Luminescence, CPL) of such curved aromatics. They are also interested in the study of the supramolecular interactions of such curved aromatics and their biomedical applications. Moreover, the research is also focused on the study of quiroptical properties in other organic structures such as foldamers or organic radicals, in interlocked species such as rotaxanes and also in metal complexes.

Several *scientific milestones* have been presented during this time placing *NanographOUT* as one of the world-class groups in the area of molecular nanographenes. Important breakthroughs include: the development of a versatile synthetic strategy to the straightforward preparation of heptagon-containing nanographenes (NGs), distorted NGs as CPL emitters, the first organic compound showing two-photon absorption (TPA) and CPL, the influence of heptagonal rings on TPA responses in NGs, new chiral moieties such as octa-[5]helicene and nona-[5]helicene, novel chiral NGs including fully π-extended helicenes, such as undecabenzo[7]helicene or large examples with multiple saddle-curvatures and helicenes. The first macrocyclic host based on saddle-shaped NGs or the influence of saddle-curvature on supramolecular assemblies have also been presented. Besides NGs, her research is also interested in molecular machines, with the first [2]rotaxane-based CPL switch which represents an important breakthrough in the field.

Those results have been adequately communicated leading to an excellent track record of publications: 27 publications in the last 5 years (since 2017), including high-impact journals in the Multidisciplinary Chemistry area like JACS (x2), ACIE (x9), Chemical Science (x2), Chem Commun (x5) or Chem Eur. J. (x2), with a total of 55 publications in JCR journals in her research career.

Her scientific accomplishments have been recognized by several Prizes: Young Investigator Prize of the Spanish Royal Chemical Society (Spain 2019) and Thieme Chemistry Journals Award (2020).

Her track record of obtained funding is excellent (> 2.5 million since 2016). She has been the recipient of an ERC Starting Grant in 2016 and several grants from Spanish Government, Junta de Andalucía and University of Granada. Currently, she participates in a MSCA Doctoral Networks DN-2021 submitted proposal.

During this time, AGC has established a network of scientific collaborations at different levels: national (Dr. Teresa González, IMDEA Nanociencia; Prof. Jose Ángel Martín Gago, ICMM-CSIC; Prof. Jaume Veciana, ICMAB-CSIC, Prof. Uwe Pischel, Universidad de Huelva) and international (Dra. Ermelinda Maçôas, University of Lisbon; Prof. Michal Juríček, University of Zurich; Prof. Tomás Solomek, University of Bern, Prof. Fabrizio Messina, University of Palermo).

AGC has participated as invited speakers in international conferences and symposiums (see below). She usually participates in dissemination activities to the general public: European Researchers’ Night, Scientist Meeting with female students, Workshop with high-school students).

Other activities include:
Referee activity (ACS, Wiley-VCH, RSC, Nature, Elsevier) and evaluation activities: i) Member of the Evaluation Commission for the Ramón y Cajal 2019 contracts (MATpanel) of the AEI (Ministerio de Ciencia, Innovación y Universidad); ii) ERC Remote Referee (ERC-2019-ADG) for the European Commission; iii) Expert assessment "Programa Estatal Proyectos de I+D de Generación de Conocimiento 2019 and I+D+i Retos Investigación 2019, and iv) Remote Referee in the IPODI International Post-Doct Initiative (Technische Universität Berlin)

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

C.1. Publications *(see instructions)*

1. M. A. Medel, C. M. Cruz, D. Miguel, V. Blanco, S. P. Morcillo,* A. G. Campaña.* "Chiral distorted hexa-peri-hexabenzocoronenes bearing a nonagon-embedded carbohelicenes" *Angew. Chem. Int. Ed.* **2021**, *60*, 22051.
2. M. A. Medel, R. Tapia, V. Blanco, D. Miguel, S. P. Morcillo,* A. G. Campaña.* "Octagon-embedded carbohelicene as chiral motif for CPL emission of saddle-helix nanographenes" *Angew. Chem. Int. Ed.* **2021**, *60*, 6094. (Highlighted as Hot Paper)
3. L. Palomino-Ruiz, S. Rodríguez-González, J. G. Fallaque, I. R. Márquez, N. Agraït, C. Díaz, E. Leary, J. M. Cuerva, A. G. Campaña, F. Martín,* A. Millán,* M. T. Gonzalez.* "Single-Molecule Conductance of 1,4-Azaborine Derivatives as Models of BN-doped PAHs" *Angew. Chem. Int. Ed.* **2021**, *60*, 6609
4. V. G. Jiménez, A. H. G. David, J. M. Cuerva, V. Blanco,* A. G. Campaña.* "A Macrocycle Based on a Heptagon-Containing Hexa-peri-hexabenzocoronene" *Angew. Chem. Int. Ed.* **2020**, *59*, 15124 (Highlighted as Hot Paper)
5. S. Castro-Fernández, C. M. Cruz, I. F. A. Mariz, I. R. Márquez, V. G. Jiménez, L. Palomino-Ruiz, J. M. Cuerva, E. Maçôas,* A. G. Campaña* *Angew. Chem. Int. Ed.* **2020**, *59*, 7139 (Highlighted as Insided Back Cover and in Chemistry Views)
6. C. M. Cruz, I. R. Márquez, S. Castro-Fernández, J. M. Cuerva, E. Maçôas, A. G. Campaña*. "A Triskelion-Shaped Saddle-Helix Hybrid Nanographene" *Angew. Chem. Int. Ed.* **2019**, *58*, 8068-8072 (Highlighted as *HOT article*)
7. P. Mayorga Burrezo, V. G. Jiménez, D. Blasi, I. Ratera, A. G. Campaña,* J. Veciana. "Organic free radicals as circularly polarized luminescence emitters" *Angew. Chem. Int. Ed.* **2019**, *58*, 16282-16288
8. A. H. G. David, R. Casares, J. M. Cuerva, A. G. Campaña, V. Blanco. "A [2]Rotaxane-based circularly polarized luminescence switch" *J. Am. Chem. Soc.* **2019**, *141*, 18064-18074.
9. C. M. Cruz, S. Castro-Fernández, E. Maçôas, J. M. Cuerva, A. G. Campaña*. "Undecabenzo[7]superhelicene: a helical nanographene ribbon as CPL emitter" *Angew. Chem. Int. Ed.* **2018**, *57*, 14782-14786. (Highlighted as *VIP article*)
10. C. M. Cruz; I. R. Márquez; I. F. A. Mariz; V. Blanco; C. Sánchez-Sánchez; J. M. Sobrado; J. A. Martín-Gago; J. M. Cuerva; E. Maçôas; A. G. Campaña*. "Enantiopure distorted ribbon-shaped nanographene combining two-photon absorption-based upconversion and circularly polarized luminescence". *Chem. Sci.,* **2018**, *9*, 3917-3924. (Highlighted as *Back Cover* issue 16, 2018).

C.2. Congress

Invited Speaker:

1. "Distorted heptagon-incorporating graphene molecules" 6th EuCheMS Chemistry Congress. EuCheMS. Sevilla (Spain). 11-15/09/2016
2. Women in Science – 1st Erlangen Symposium. Erlangen, Germany. 9-11 December, 2018

3. XXXVII Reunión Bienal de Química. San Sebastián (Spain). 26-30 May, 2019
4. ICIQ Seminar Programme. Tarragona. January, 2020
5. IV Ciclo de Conferencias. Máster Química Orgánica. Universidad Complutense de Madrid. March, 2020
6. Virtual GDCh lecture, University of Ulm, Germany. January 2022.
7. SISOC XIII – 13th Spanish-Italian Sympoium on Organic Chemistry. Postponed. New dates: Sept 2022
8. ISNA-19 - Warsaw, Poland. Postponed. New dates: July 2022

C.3. Research projects

Research Projects and Grants as **PI** in the last 5 years:

1. ERC-STG-2015 - nº 677023 - NANOGRAPHOUT
   "Design, synthesis, study and applications of distorted nanographenes".
   European Research Council. Amount: 1,492,297.00 eur
   01/04/2016 – 31/03/2022

2. PGC2018-101181-B-I00 – GoPro7Nanograph
   “Exploring the properties of saddle-shaped nanographenes”.
   Ministerio de Ciencia, Innovación y Universidades. Amount: 71,390 eur
   01/01/2019 – 31/12/2021

3. EQC2019-006543-P
   “System for two-photon excited circularly polarized luminescence”.
   Ministerio de Ciencia, Innovación y Universidades. Amount: 412,526.24 eur
   01/01/2019 – 31/12/2021

4. CTQ2015-70283-P
   “Síntesis y estudio de nanografenos que contengan anillos de tamaño medio”.
   Ministerio de Economía y Competitividad. Amount: 67,518.00 eur.
   01/01/2016 – 31/12/2018

5. UNGR15-CE-3478
   “Dotación de equipamiento al laboratorio ‘Nanografenos Distorsionados’ de la UGR
   Ministerio de Economía y Competitividad. Amount: 271,941.84 eur.
   01/01/2016 – 31/12/2018

6. P18-FR-2877
   “Desarrollo de dispositivos y máquinas moleculares basados en rotaxanos y nanografenos curvos”
   Junta de Andalucía. Amount: 94,800 eur.
   01/01/2016 – 30/03/2023

7. A-FQM-339-UGR18
   “Interacciones supramoleculares y receptores basados en nanografenos curvos que incluyen heptágonos”
   Programa Operativo Feder Andalucía 2014-2020. Amount: 14,900 eur.
   01/01/2020 – 31/06/2022

CV date	02/05/2021

Part A. PERSONAL INFORMATION

First and Family name	Mª Elena Fernández Gutiérrez		
Social Security, Passport, ID number			
Researcher codes	WoS Researcher ID *(*)*	C-7142-2016	
	SCOPUS Author ID*(*)*		
	Open Researcher and Contributor ID (ORCID) **	0000-0001-9025-1791	

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University	Universidad Rovira i Virgili (URV)		
Department	Química Física e Inorgánica		
Address and Country	C/ Marcel·lí Domingo s/n 43007 Tarragona, España		
Phone number		E-mail	mariaelena.fernandez@urv.cat
Current position	Full Professor (Catedrática Universidad)	From	01/08/2019
Key words	Catalytic organoboron chemistry, boron nucleophile, hydroboration, diboration, carboboration, diboron reagents, gem-diborylalkanes		

A.2. Education

Degree/PhD	University	Year
Chemistry B Sc Degree	University of Barcelona	1991
Chemistry Ph. D.	University of Rovira i Virgili	1995

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

Total Publications: 137 among which 131 in JCR journals and 120 at **Q1**
Publications from 2011: 60 articles
Total Times Cited: 5562 with an average of cites per article: 42.5
H index: 43
Positive evaluations for her research activity: 4 consecutive research sexenios (31/12/2016 last). **1 transference of knowledge sexenio**
Total Patents: 4 among which 1 from 2016 in exploitation
Books Edited from 2010: 2
Chapters of Books: 16 among which 10 from 2011
Ph. D. Theses supervised: 17 and currently 4 thesis under supervision.
Financed Competitive National Projects as IP: 12 among which 5 Spanish National Program for R&D (CTQ), 1 TRACE, 1 EXPLORA, 2 Acciones Integradas, 2 Generalitat Cataluña-AGAUR and 2 from URV.

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

Elena Fernandez is the leader group of a research line devoted to study Catalytic Organoboron Chemistry, being a national and international benchmark in this area of research. She received her degree in chemistry at the University of Barcelona in 1991. She subsequently did graduate work in catalytic hydroformylation of sugars with Prof. Sergio Castillón and Prof. A. Ruiz at the University Rovira i Virgili, from which she earned her Ph.D. in 1995. The following two years, she moved at the University of Oxford (UK) to a postdoctoral position with Prof. John M. Brown where her studies culminated with an approach towards the first catalytic asymmetric hydroboration-amination reaction. She accepted a lecturer position at the University Rovira i Virgili, becoming part of the permanent staff in 2000. She is full professor from 2019 and obtained the Award on Excellence of Research in Organometallic Chemistry 2014, and the Award on Excellence of Research in Chemistry 2017, both from the Spanish Royal Society of Chemistry. She is Distinguished Professor at the URV from 2018. Within the last ten years, the main objective of her scientific campaign was to generate knowledge and awarness about activation modes of borane reagents to be used in organoboron synthesis in the absence of

any transition-metal complex. An added bonus to using organocatalytic borylative approaches is that they eliminate toxic and expensive metals without losing the prospects in efficiency and selectivity. The lack of precedents in understanding the influence of organocatalysts in the organoboron selective synthesis of multifunctional compounds, let to attract the interest from academia and industry to promote assisted routes for target compounds, such as fungicides and pharmaceuticals, even at gram scale preparations. Both, intrinsic data about the suggested mechanisms and spectroscopic evidence that supports the innovative theories are part of her research goals to understand the new trends and hopefully to generate inspiration for future discoveries in the field. Since 2011, the main achievements were published in 68 articles of prestigious international journals as well as one patent in exploitation. Her leadership in the field enabled her to edit two books on Synthesis and Applications of Organoboron Compounds for Spinger (2015) and Advances in Organoboron Chemistry toward Organic Synthesis for Science of Synthesis-Thieme (2019). Her expertise has also been demonstrated in the contributions to 16 Chapters of Books and the invitation to give 25 invited talks in International Meetings and 27 seminars at National and International Universities or Research Centres, from 2010 up today. She collaborates with international leaders in organoboron chemistry and has an active campaing to transfer the knowledge to industry throughout contracts with Repsol, Clariant, Pavimentos Tudela, Maystar, Syngenta-UK y Janseen.

Part C. RELEVANT MERITS

C.1. Publications (10 Selected Publications from 68 published articles from 2011)

→Ana. B. Cuenca, Elena Fernández*
The Boron-Wittig olefination with gem-diborylalkanes
Chem. Soc. Rev., **2021**, 50, 72.

→ J. Sendra, R. Manzano, E. Reyes, J. L. Vicario, E. Fernández,*
Catalytic Stereoselective Borylative Transannular Reactions
Angew. Chem. Int. Ed. **2020**, 1306.

→ N. Miralles, R. J. Maza,, R. J. Maza, E. Fernández,* *(**VIP paper**)*
Synthesis and reactivity of 1,1-diborylalkanes towards C-C bond formation and related mechanisms
Adv. Synth Catal., **2018**, 1306.

→Ana. B. Cuenca, Ryosuke Shishido, Hajime Ito,* Elena Fernández*
Transition-metal-free B-B and B-interelement reactions with organic molecules
Chem. Soc. Rev., **2017**, 46, 415.

→Z. Majzik,* A. B Cuenca, N. Pavlicek, N. Miralles, G. Meyer, L. Gross, E. Fernández*
Synthesis of a naphthodiazaborole and its verification by planarization with AFM
ACS Nano, **2016**, 10, 5340.

→N. Miralles, R. Alam, K. J. Szabó,* E. Fernández*
Transition metal-free borylation of allylic and propargylic alcohols
Angew. Chem. Int. Ed., **2016**, 55, 4303.

→N. Miralles, J. Cid, A. B Cuenca, J. J Carbó,* E. Fernández*
Mixed diboration of alkenes in a metal-free context
Chem. Commun. **2015**, 51, 1693.

→C. Sole, E. Fernández*
Alkoxide activation of aminoboranes towards selective amination
Angew. Chem. Int. Ed., **2013**, 52, 11351.

→J. Cid, H. Gulyás J. J. Carbó, E. Fernández*
Trivalent boron nucleophile as a new tool in organic synthesis
***Chem. Soc. Rev*, 2012**, 41(9), 3558.

→A. Bonet, C.Pubill-Ulldemolins,C.Bo,* H. Gulyás,* E. Fernández*
Transition Metal-Free Diboration Reaction by Activation of Diborons with Simple Bases
***Angew. Chem. Int. Ed.*, 2011**, 50, 7158. (*VIP paper*)

C.2. Edited Books and Author in Book's Chapters (a selection from 2011)

→E. Fernández (**Editor**)
Advances in Organoboron Chemistry toward Organic Synthesis, Thieme **2019**
→E. Fernández, Andy Whiting (**Editors**)
Synthesis and Applications of Organoboron Compounds Topics in Organometallic Chemistry, Springer **2015**

→A.B. Cuenca, **E. Fernández**, Organic Reactions, Chapter 2. Reactions of Diboron Reagents with Unsaturated Compounds ISBN 978-1-119-77120-3, **2021**
→**E. Fernández** Iridium-Catalyzed Undirected Homogeneous C–H Borylation Reaction Topics in Organometallic Chemistry, Springer **2021**
→A.B. Cuenca, E. Fernández Rhodium Catalyzed C-B Bond Formation, **2018**, Springer
→A.B. Cuenca, E. Fernández Benefits of N-heterocyclic carbenes in catalytic boron addition reactions. Science of Synthesis: N-heterocyclic carbenes in organic synthesis, **2017**, Thieme

C.3. Competitive Financed Research Projects (from 2011)

→IP: Elena Fernández **PID2019-109674GB-I00** Ministerio de Ciencia e Innovación.
Activación catalítica de alcanos poliborados para una síntesis racional de compuestos diana a partirde compuestos modelo
01/06/2020-30/05/2023.

→IP: Elena Fernández. **CTQ2016-80328-P** Ministerio de Ciencia e Innovación.
Diversidad molecular catalítica a partir de bis(boronatos) geminales
01/01/2017-29/12/2019.

→IP: Elena Fernández **CTQ2013-43395-P** Ministerio de Ciencia e Innovación.
Construyendo funcionalidad mediante la química organoborada catalítica.
01/01/2014-31/12/2016.

→IP: Elena Fernández **CTQ2013-50219-EXP** Ministerio de Ciencia e Innovación.
Fotografiar moléculas organoboradas en estado líquido y estudiar su comportamiento dinámico mediante una película real.
01/09/2014-31/08/2015

→IP: Elena Fernández **CTQ2010-16226-P** Ministerio de Ciencia e Innovación.
Desarrollo de la química catalítica organoborada selectiva mediante metales de transición económicamente viables
01/01/2011-31/12/2013

→IP: Elena Fernández.**TRACE (TRA2009-0149)** Ministerio de Ciencia e Innovación.
Innovación en la síntesis de resinas con aplicación industrial en el campo de la cosmética
01/09/2009-31/08/201.

→IP: María Elena Fernández Gutiérrez. Referencia del proyecto: Proyecto **VALFUS**
Aplicacions mediambientals i industrials de la catàlisi- Generalitat-CIDEM.
15/10/2009-14/10/2011

C.4. Privated Financed Projects – Transfer of Knowledge (from 2011)

→IP: Elena Fernández Gutiérrez. FURV-Maystar
Síntesis de materias primas e intermediarios de aplicación en cosmética y cera
01/03/2018-30/06/2023.

→IP: Elena Fernández TQC14018S Syngenta Limited (United Kigdom).
Efficient synthesis of highly functionalised compounds of industrial interest
18/12/2015-17/07/2016.

→ IP: Elena Fernández CTQC-Clariant
Mejora en la eficiencia de procesos catalíticos
01/05/2014-30/07/2014.

→IP: Elena Fernández. CTQC-Pavimentos Tudela
Estudio de fotocatalizadores en pavimentos para descontaminación ambiental
01/11/2013-30/04/2014.

C.5. Patents (from 2011)
E. Fernández, L. González, J. L. Moracho, A. Moracho, A. Cuenca
2016 Preparación de prefabricados con clústers metálicos con propiedades bactericidas - ES2571995A1 (P201600339) Pavimentos Tudela S.L. ***(in explotation)***

C.6. Invited Speaker at National, International Symposiums and Industry (from 2009)
Invited Speaker EuroBoron 5, Edinbugh (UK), September **2010, *Oral Communication*** GEQO XXVIII, Huelva, September **2010, *Invited Speaker*** Red CASI, Mallorca, October **2010**, ***Invited Speaker*** XIV Semana Científica La Laguna-Canarias, October **2010**, ***Invited Speaker*** Modern Syn-Methods-Chiral Europe, Edinburgh (UK) May **2011, *Invited Speaker*** XXXIII Reunión Bienal, de la RSEQ Valencia, July **2011, *Oral Communication*** XIV Imeboron, Niagara, (Canada) September **2011, *Invited Speaker*** Modern Syn Methods Chiral Europe, Praga, May **2012, *Invited Speaker*** 18th Int. Symp. Homogeneous Catalysis, Tolouse,July **2012, *Oral Communication*** 96th Canadian Chemistry Conference, Quebec, (Canada) May **2013, *Invited Speaker*** EuroBoron6 Radziejowice, (Poland) September **2013, *Oral Communication*** Johnson Matthey, Cambridge, (UK) May **2014**, ***Invited Speaker*** 19th Int. Symp. Homogeneous Catalysis, Ottawa, July **2014*, Invited Speaker*** XV Imeboron, Prague, (Czech Republic) August **2014**, ***Invited Speaker*** GEQOXXXIII, Madrid May **2015 *Plenary Lecture*** Journée Catalyse, Tolouse, (France), June **2015, *Invited Speaker*** XXXV Reunión Bienal de la RSEQ, La Coruña, July **2015, *Invited Speaker*** V Workshop UFI-QOSYC San Sebastián, September **2015, *Invited Speaker*** Syngenta, London (UK) September **2015, *Invited Speaker*** Villapharma, Murcia, Febrero **2016, *Invited Speaker*** Sanofi, Frankfurt (Alemania) Abril **2016, *Invited Speaker*** XXVI GEQOR, Huleva, June **2016, *Invited Speaker*** Janseen, Toledo, July **2016, *Invited Speaker*** EuroBoron7, Moscow-Suzdal, September **2016, *Invited Speaker*** CoSSHNet, Shefiled, September **2017, *Invited Speaker*** Symposium on Chemistry, Granada, January **2018, *Invited Speaker*** 21st Int Symp. Homogeneous Catalysis, Amsterdam, July **2018*, Invited Speaker*** ACS Forum, Heidelberg, October **2018**, ***Invited Speaker*** World Chemistry Forum, Barcelona, May **2019**.

C.7. Seminars at Univesities and Research Centers (from 2009):
Univ. of Durham (UK), **2009**, Univ. de Girona, **2009**, Univ. Debrecem (Hungria)-**2010**, Vezprem (Hungria)-**2010**, Univ Oviedo-**2010**, Univ. Nottingham, (UK)-**2011**, Univ Tubingen,(Alemania)-**2012**, Freiburgh,(Alemania)-**2012**, Wurzburg,(Alemania)-**2012**, Bielefeld,(Alemania)-**2012**, Univ Oxford (UK)-**2013**, CIQSO-Huelva-**2013**, Univ. Trieste (Italia)-**2015**, Univ Pisa (Italia)-**2015**, Univ. Hull (UK)-**2015**, Univ. Paul Sabatier-Tolouse (Francia)-**2017**, CIQUS (Santiago Compostela)-**2017** Univ. Autónoma de Madrid-**2017**, Univ. Barcelona- **2018,** CICA-(La Coruña)-**2019**, Univ. Viena (Austria)-**2019**, Univ. Sussex(UK)-**2020**.

C.8. Awards and recognitions (from 2011):
2014 Excellence on Research by GEQO-RSEQ.
2017 Excellence on Research by RSEQ.
2018 Distinguished Professor URV.

C.9. Organization of scientific meetings (from 2011):
XXXII (GEQO).17 – 19 Septiembre 2014, en Tarragona. **Chair**
OMCOS18: 28 Junio - 2 Julio 2015, en Sitges. **Comite Organizador**

C.10. Service to scientific societies (from 2011):
Advisory Board in Chemical Society Reviews (Chem. Soc. Rev.) - Royal Society of Chemistry, from 2014.
Member of the scientific committee of Euroboron from 2010
Tesorera sección catalana RSEQ from 2015

MINISTERIO DE CIENCIA E INNOVACIÓN

CURRICULUM VITAE (maximum 4 pages)

AGENCIA ESTATAL DE INVESTIGACIÓN

Part A. PERSONAL INFORMATION

CV date	01-2-2022

First and Family name	Juan Manuel Cuerva Carvajal	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0001-6896-9617
	SCOPUS Author ID (*)	
	WoS Researcher ID (*)	C-6366-2013

(*) Optional
(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad de Granada		
Department	Facultad de Ciencias. Departamento de Química Orgánica		
Address and Country	Campus Fuentenueva		
Phone number		E-mail	jmcuerva@ugr.es
Current position	Full Professor	From	January-2017
Key words	Organometallic Chemistry, natural product synthesis, radical chemistry, organic materials, fluorescent probes.		

A.2. Education

PhD, Licensed, Graduate	University	Year
Chemistry Degree, Esp. Organic Chemistry	Universidad de Granada	1992
Chemistry Degree, Esp. Technical Chemistry	Universidad de Granada	1992
PhD Organic Chemistry	Universidad Autónoma de Madrid	1997

A.3. General indicators of quality of scientific production *(2010-2020)*

- "Sexenios de investigación": **4**. Last one: 2017.
- Number of Supervised PhD Thesis (2010-2020): **11** (4 Extraordinary awards and 9 International Thesis)
- Número de publicaciones (2010-2020): **84**
- Total citation: **3371**. Average citation per year (2016-2020): **261**
- Field-Weighted Citation Impact (Scopus) (2016-2019): All areas (**1.50**), Chemistry (**1.63**)
- Publications in Q1 2010-2020 (based on JCR 2019): **66**
  Multidisciplinar Chemistry: **39**, JACS (5), AngewChem (8), Nat. Commun. (2), Adv. Func. Mat. (1), Chem. Sci. (4), ChemSusChem (1), ChemComm (7), ChemEurJ (8), Chem.Soc.Rev. (1), Nanoscale (1). *Organic Chemistry*: **12**, OBC (2), JOC (5), OL (2), AdvSynCat (1), Org. Chem.. Front. (2). *Inorganic Chemistry*: **3**, Dalton (2), Organometallics (1). *Analytical Chemistry*: **3**, Sensor and Actuators: Chemical (3). *Applied Chemistry:* **2** *Dyes and Pigments (2)*. *Molecular Biology:* **1** *Int. J. Mol. Sci. (1)*. *Material Science, multidisciplinary:* **1** *J. Mat. Chem. C: (1)*. *Crystallography:* **2** *Cryst. Grow. Design (2)*. *Multidisciplinary Sci.:* **2** *Scientific Rep. (2)*. *Microbiology*: **1**, *Frontiers in microbiology* (1)

h Index (web of Science): **34**

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

Graduated in Chemistry from the UGR (1992) in two specialties: Organic Chemistry and Technical Chemistry. Doctor from the Autonomous University of Madrid (1997) under the supervision of Prof. A. M. Echavarren. In 1998 I joined the staff of the University of Granada, currently as a University Professor. I am the author of more than 130 scientific publications in high impact factor journals such as Nat. Commun. Angew. Chem., J. Am. Chem. Soc., Chem Sci., Chem. Eur. J., Chem. Commun., Org. Lett., or J. Org. Chem. I have supervised 17 doctoral theses, 7 of them as extraordinary doctoral awards and 9 with international mention. I have participated in numerous Research Projects (35) being Principal Investigator of eight of them in recent years: three autonomous granted by the the Junta de Andalucía, three

national granted by the Ministry of Science and Innovation , an integrated Hispano-Alemana action and a Campus Project of International Excellence of the University of Granada. Recently (2014) we have also participated as a subproject in a North American NIH Project. All this research has been communicated in different national and international congresses in the form of invited lectures, oral communications and / or posters. In 2015 he was awarded the “Ignacio Ribas” Medal, from the Specialized Group on Organic Chemistry of the Royal Spanish Chemistry Society. The research career has focused on the development of synthetic methodologies, although more recently we have applied that experience in the development of new materials and/or molecular probes with potential applications in bioscience and nanoelectronics.

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

C.1. Publications *(see instructions)*

1. *A Macrocycle Based on a Heptagon-Containing Hexa-peri-hexabenzocoronene*. VG Jiménez, AHG David, JM Cuerva, V. Blanco, AG Campaña. *Angew. Chem. Int. Ed.* **2020**, 59, 15124-15128

2. *Lipid analogs reveal features critical for hemolysis and diminish granadaene mediated Group B Streptococcus infection B*. Armistead, P. Herrero, M. Coleman, J. M. Cuerva (AC), L. Rajagopal (AC) *Nat Commun* **11,** 1502 (2020). Número de autores 17. Posición 16 de 17.

3. *A [2] Rotaxane-Based Circularly Polarized Luminescence Switch*. AHG David, R Casares, JM Cuerva, AG Campaña, V Blanco. *J. Am. Chem. Soc.* **2019**, *141*, 13244-13252.

4. *Chiral Molecular Ruby [Cr(dqp)2]3+ with Long-Lived Circularly Polarized Luminescence.* Juan-Ramón Jiménez, Benjamin Doistau, Carlos M Cruz, Céline Besnard, Juan M Cuerva, Araceli G Campaña, Claude Piguet. *J. Am. Chem. Soc.* **2019**, *141*, 13244-13252.

5. *A Triskelion-Shaped Saddle–Helix Hybrid Nanographene*. Carlos M. Cruz, Irene R. Márquez, Silvia Castro-Fernández, Juan M. Cuerva, Ermelinda Maçôas, Araceli G. Campaña. *Angew. Chem. Int. Ed.* **2019**, *58*, 8068-8072

6. *Undecabenzo[7]superhelicene: a helical nanographene ribbon as CPL emitter*
Carlos M. Cruz, Silvia Castro-Fernández, Ermelinda Maçôas, Juan M. Cuerva, Araceli G. Campaña. *Angew. Chem. Int. Ed.* **2018**, *57*, 14782-14786 (VIP paper)

7. *Stapled helical o-OPE foldamers as new circularly polarized luminescence emitters based on carbophilic interactions with Ag(I)-sensitivity*
Sara P. Morcillo, Delia Miguel, Luis Álvarez, Giovanna Longhi (AC), Juan M. Cuerva (AC)
Chemical Science, **2016**, *7*, 5663-5670. Número de autores 16. Posición 16 de 16.

8 *Toward multiple conductance pathways with heterocycle-based oligo(phenyleneethynylene) derivatives*
D. Miguel, L. Álvarez, A. Martín-Lasanta, J. M. Cuerva (AC), M. T. González (AC).
J. Am. Chem. Soc. **2015**, *137*, 13818–13826. Número de autores 14. Posición 13 de 14.

9. *Ti(III)-catalyzed cyclizations of ketoepoxypolyprenes: Control over the number of rings and unexpected stereoselectivities*
S. P. Morcillo, D. Miguel, S. Resa, A. Martín-Lasanta, A. Millán, D. Choquesillo-Lazarte, J. M. García-Ruiz, A. J. Mota (AC), J. Justicia (AC), J. M. Cuerva (AC).
J. Am. Chem. Soc. **2014**, *136*, 6943−6951. Número de autores 10. Posición 10 de 10.

10. *A versatile bottom-up approach to stapled π-conjugated helical scaffolds: Synthesis and chiroptical properties of cyclic o-phenylene ethynylene oligomers*
N. Fuentes, A. Martin-Lasanta, L. Álvarez de Cienfuegos, J. M. Cuerva (AC).
Angew. Chem. Int. Ed. **2012**, *51*, 13036–13040. Número de autores 13. Posición 13 de 13.

C.2. Research projects as IP (2010-2020)

1. **A-FQM-221-UGR18**
   Title: Conductividad unimolecular en PAHs dopados con nitrógeno y boro como modelos de conductividad en BN-grafenos.
   Funding agency: Proyectos de I+D+i por equipos de investigación en el marco del Programa Operativo FEDER de Andalucía 2014-2020. Modalidad Frontera
   Dates: 01/01/2020 al 31/12/2021
   Budget amount: 37150 €

2. **CTQ2017-85454-C2-1-P**
   Title: Synthesis and applications of homochiral photoactive organic systems.
   Funding agency: Ministerio de Ciencia e Innovación (2014)
   Dates: 2018-2020
   Budget amount: 121.000 €

3. **CTQ2014-53598**
   Title: Materiales Orgánicos Funcionales
   Funding agency: Ministerio de Ciencia e Innovación (2014)
   Dates: 2014-2017
   Budget amount: 141.000 €

4. **P12-FQM-790**
   Title: Disociación homolítica de enlaces O-H: aplicaciones prácticas e implicaciones en Química, Física y Bioquímica
   Funding agency: Proyecto de Excelencia Junta de Andalucía-
   Dates: 2014-2019
   Budget amount: 273.894 eur

5. **1R01AI112619-01**
   Title: Role of an ornithine rhamnolipid pigment in GBS virulence
   Funding agency: NIH (Estados Unidos)
   PI: Dr. Lakshmi Rajagopal, Seattle Children's Research Institute
   Dates: 2014-2016
   Budget amount: 54000 $
   PI of subprojetc 11074SUB

6. **CTQ2011-22455**
   Title: Reacciones mediadas por Ti (III), herramientas útiles en síntesis orgánica
   Funding agency: Ministerio de Ciencia e Innovación (2011)
   Dates: 2012-2014
   Budget amount: 104.060 eur

7. **P09-FQM-4571**
   Title: Nanodispositivos orgánicos para electrónica molecular: diseño, síntesis y evaluación
   Funding agency: Proyecto de Excelencia Junta de Andalucía-
   Dates: 2011-2014
   Budget amount: 293939.68

8. **PRI-AIBDE-2011-1122**
   Title: Study of new titanocene(III) complexes and their application to C-C bonds forming reactions and in the reduction of carbon centered radicals.

Funding agency: Ministerio de Ciencia e Innovación (2011).Acción Integrada Hispano-Alemana
Dates: 1/12/2011-30/11/2013
Budget amount: 8,000 €

C.3. Contracts, technological or transfer merits

Company: **Vadolivo S. A. (Jaen)**
Contract: Preparación de patrones deuterados como referencias en el analisis de aceite de Oliva Virgen
Dates: 2015-2016
Budget amount: 24000 Eur

C.4. Patents

Title: Procedimiento para la estimación de la concentración de fosfatos en células vivas, colorante xanténico y síntesis del mismo
Inventors/authors/obtainers: J. M. Álvarez Pez, L. Crovetto, J. M. Cuerva, M. D. Girón, J. Justicia, A. Orte, M. J. Ruedas, R. Salto, E. M. Talavera, A. Martínez-Peragón, J. M. Paredes
Holding institution: Universidad de Granada
Date: 10/2012
Application number: P201330861

C5. Awards

Ignacio Ribas Medal, Organic Chemistry Division of the RSEQ (2015).

C7. Management activities

- Member of the Organic Chemistry Comitee of RSEQ (2016-2020)

- Secretary of the Department of Organic Chemistry at the University of Granada (2012-2017)**.**

- Head of the Department of Organic Chemistry at the University of Granada (sept. 2019-)

- Reviewer of National, Regional and International Projects (Iberoamerica, Europe and ACS).

- Reviewer of relevant journals such as JACS, ACIE, Chem. Sci, Nature Comm., ChemComm, Chemistry Eur. J., Nanoscale, OL, or JOC,.

Part A. PERSONAL INFORMATION

Enrique Gómez Bengoa

Researcher ID: F-8371-2015
Orcid Code: 0000-0002-8753-3760

A.1. Current position
Name of the University: University of the Basque Country (UPV-EHU)
Department: Organic Chemistry I
Address: Manuel de Lardizabal 3, 20018 San Sebastián, Spain
e-mail: enriqe.gomez@ehu.eus
Current Position: Profesor Agregado (October 17, 2008)
UNESCO Code: 2306
Key words: Computational Chemistry, Organocatalysis, Organometallics

A.2. Education
PhD: Universidad Autónoma de Madrid 1994

A.3. JCR articles, h Index, thesis supervised (04.02.2022**)**
- 107 peer-reviewed contributions in major international journals
- 80 articles in journals of the first quartile
- 3050 times cited (excluding self citations)
- Average citation per item: 33.2
- H-index = 34 (Web of Science).
- 4 Sexenios (Last one recognized in 2019)
- 5 PhD Thesis, 2 Master Thesis, 13 Bachelor Theses directed
- 12 Undergraduate Students supervised during Internships at Sanofi-Aventis Frankfurt (4) and Bayer CropScience GmbH Deutschland (8).

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*
Enrique Gomez Bengoa (Vitoria-Gasteiz, 1966), graduated at the Autonomous University of Madrid in 1989. He obtained his PhD in Chemistry in 1994 at the same University under the direction of Prof. Antonio M. Echavarren. Later, he conducted two post-doctoral stays, the first one (1995) at the University of Gottingen (Germany) under the supervision of Prof. Ullrich Groth and the second (years 1996 and 1997) in the Department Chemistry at Boston College (Massachusetts) under the supervision of Prof. Amir Hoveyda. During these formative years, he worked in the field of organometallic chemistry and its application to organic synthesis. In 1998 he joined the Department of Organic Chemistry I at the University of the Basque Country (UPV-EHU) and since 2008 occupies a place of Associate Professor (Profesor Agregado). In mid-2005, he entered the field of Theoretical and Computational Chemistry, and he is dedicated since then to the elucidation of mechanisms of both organometallic and organocatalytic reactions by computer calculations, in collaboration with various European groups of experimental chemistry. Specifically, the group currently maintains about 25 active collaborations, from which about 70 experimental / theoretical publications have appeared in the last ten years.
He has participated in two European H2020 ITN Networks: ECHONET (2013-2016) and CATMEC (2017-2020).
In 2017, he was Invited Professor in the University of Zürich for two months.

Part C. RELEVANT MERITS
C.1. Publications

Selected publications for the period 2016-2021 (19 shown, out of total of 49 in the period)

● "*Au(I)-Catalyzed Hydroalkynylation of haloalkynes"* García-Fernández, Pedro D.; Iglesia-Sigüenza, Javier; Rivero-Jerez, Paula S.; Díez, Elena; Gómez-Bengoa, Enrique; Fernández, Rosario; Lassaletta, José M. *J. Am. Chem. Soc*. **2020**, *142*, 16082-16089

● "*An umpolung strategy to react catalytic enols with nucleophiles* Sanz-Marco, Amparo; Martínez-Erro, Samuel; Pauze, Martin; Gómez-Bengoa, Enrique; Martín-Matute, Belén. *Nature Commun.* **2019**, *10*, 5244-5252

● "*Base-Catalyzed [1,n]-Proton Shifts in Conjugated Polienyl Alcohols and Ethers".* Molleti, N., Martínez-Erro, S.; Carretero-Cerdán, A.; Sanz-Marco, A.; Gómez-Bengoa, E.; Martín-Matute, B. *ACS Catalysis,* **2019***, 9,* 9134-9139*.*

● "*Brønsted Base Catalyzed One-Pot Synthesis od Stereodefined Six-Member Carbocycles Featuring Transient Trienolates and a Key Intramolecular 1,6-Addition"* Olaizola, O.; Iriarte, I.; Zanella, G.; Gómez-Bengoa, E.; Ganboa, I.; Oiarbide, M.; Palomo, C. *Angew. Chem. Int. Ed.* **2019**, *58*, 14250-14254

● "*Oxidant Speciation and Anionic Ligand Effects in the Gold-catalyzed Oxidative Coupling of Arenes and Alkynes"* Hofer, M.; de Haro, T.; Gómez-Bengoa, E.; Genoux, A.; Nevado, C. *Chem. Sci.* **2019**, *10*, 8411-8420

● "*Branched Ketone Dienolates: Base-Catalyzed Generation and Regio- and Enantioselective Addition Reactions"* Urruzuno, I.; Mugica, O.; Zanella, G.; Vera, S.; Gómez-Bengoa, E.; Oiarbide, M.; Palomo, C. *Chem. Eur. J.* **2019**, *25*, 9701-9709

● "*Dynamic Kinetic Asymmetric Heck Reaction for the Simultaneous Generation of Central and Axial Chirality"* Carmona, J. A.; Hornillos, V.; Ramírez-López, P.; Ros, A.; Iglesias-Sigüenza, J.; Gómez-Bengoa, E.; Fernández, R.; Lassaletta, J. M. *J. Am. Chem. Soc.* **2018**, *140*, 11067-11075

● "*Intermediacy of Ni-Ni Species in sp^2 C-O Bond Cleavage of Aryl Esters: Relevance in Catalytic C-Si Bond Formation"* Somerville, R. J.; Halle, L. V. A.; Gómez-Bengoa, E.; Burés, J.; Martín, R. *J. Am. Chem. Soc.* **2018**, *140*, 8771-8780

● "*Synthetic and Mechanistic Investigation of an Oxime Ether Electrocyclization Approach to Heteroaromatic Boronic Acid Derivatives"* Mora-Radó, H.; Sotorríos, L.; Ball-Jones, M. P.; Bialy, L.; Czechtizky, W.; Méndez, M.; Gómez-Bengoa, E.; Harrity, J. P. A. *Chemistry, A European Journal* **2018**, *24*, 9530-9534

● "*Baldwin-type Rules for Metal Controlled Intramolecular Migratory Insertions. A Computational Study of Ni, Pd and Pt case"* Fiser, B.; Cuerva, J. M.; Gómez-Bengoa, E. *Organometallics* **2018,** *37*, 390-395

● "*Mild Base- and Additive-free Ir-Catalyzed ortho-Iodination of Benzoic Acids: Scope and Mechanistic Investigations"* Erbing, E.; Sanz-Marco, A.; Vázquez-Romero, A.; Malmberg, J.; Johansson, M. J.; Gómez-Bengoa, E.; Martín-Matute, B. *ACS Catalysis* **2018**, *8*, 920-925

● "*The First Gold(III)-Formate: Evidence for β-Hydride Elimination"* Kumar, R.; Krieger, J.-P.; Gómez-Bengoa, E.; Fox, T.; Linden, A.; Nevado, C. *Angew. Chem. Int. Ed.* **2017**, *56,* 12862-12865

● "*Pd-Catalyzed Hydroamination of Alkoxyallenes with Azole Heterocycles: Examples and Mechanistic Proposal"* Bernar, I.; Fiser, B.; Blanco-Ania, D.; Gómez-Bengoa, E.; Rutjes, F. *Org. Lett.* **2017**, *19*, 4211-4214

● "*Selective C(sp^2)-H Halogenation of "Click" 4-Aryl-1,2,3-Triazoles"* Goitia, A.; Gómez-Bengoa, E.; Correa, A. *Org. Lett.* **2017,** *19*, 962-965.

● "*Expeditious Stereoselective Synthesis of Elaborated Ketones via Remote Csp3-H Functionalization"* Shu, W.; Llorente, A.; Gómez-Bengoa, E.; Nevado, C. *Nature Commun*. **2017**, *8*, 13832

● "*Versatile Synthesis and Enlargement of Functionalized Distorted Heptagon-Containing Nanographenes"* Marquez, I. R.; Fuentes, N.; Cruz, C. M.; Puente-Muñoz, V.; Sotorrios, L.; Marcos, M. L.; Choquesillo-Lazarte, D.; Biel, B.; Crovetto, L.; Gómez-Bengoa, E.; González, M. T.; Martin, R.; Cuerva, J. M.; Campaña, A. G. *Chem. Sci.* **2017**, *8*, 1068-1074

● "*Efficient Construction of Cyclopenta[b]indol-1-ones by a Tandem Gold(I)-Catalyzed Rearrangement/Nazarov Reaction and Application to the Synthesis of Bruceolline H"* Scarpi, D.; Petrovic, M.; Fiser, B.; Gómez-Bengoa, E.; Occhiato, E. *Org. Lett.* **2016,** *18*, 3922-3925

● "*A Modular Class of Fluorescent Difluoroboranes: Synthesis, Structure, Optical Properties, Theoretical Calculations and Applications for Biological Imaging"* Bachollet, S. P. J. T; Volz, D.; Fiser, B.; Münch, S..; Rönicke, F.; Carrillo, J.; Adams, H.; Schepers, U.; Gómez-Bengoa, E.; Bräse, S.; Harrity, J. P. A. *Chem. Eur. J.* **2016**, *22*, 12430-12438

● "*A Dynamic Kinetic C-P Cross-Coupling for the Asymmetric Synthesis of Axially Chiral P,N Ligands"* Ramírez-López, P.; Ros, A.; Estepa, B.; Fernández, R.; Fiser, B.; Gómez-Bengoa, E.; Lassaletta, J. M. *ACS Catalysis* **2016**, *6*, 3955-3964

C.2. IP in Research projects and grants (since 2016)

1. *"Estudios Computacionales y Experimentales sobre Activación C-H Catalizada por paladio"Sinergia Experimental y Teórica para el desarrollo de nuevos métodos sintéticos"*
From 01-01-2020 to 31-5-2024
Principal Researcher UPV-EHU: Enrique Gómez-Bengoa
MINECO PID2019-110008GB-I00
54.500 €

2. *"Movilidad de Investigadores. Suiza"*
UPV/EHU: MOV16/29
From 07-01-2017 to 6-03-2017
Invited Professor University of Zürich: Enrique Gómez-Bengoa
2.300,00 €

3. *"Catalytic Methods for Sustainable Synthesis. A Merged Experimental and Computational Approach (CATMEC)"*
European comisión: H2020-MSCA-ITN14/06. 721223
From 01-01-2017 to 31-12-2020
Principal Researcher UPV-EHU: Enrique Gómez-Bengoa
Coordinator: J. Harrity (University of Sheffield)

495.745,92 € (UPV/EHU)

4. *“Sinergia Experimental y Teórica para el desarrollo de nuevos métodos sintéticos”*
MINECO G16-P38
From 01-01-2017 to 31-12-2019
Principal Researcher UPV-EHU: Enrique Gómez-Bengoa
CTQ2016-78083-P
32.397,75 €

5. *“Expanding Capabilities in Heterocyclic Organic Synthesis (ECHONET)”*
European commission: 7PM-People-ITN12/06. 316379
From 01-01-2013 to 31-12-2016
Principal Researcher UPV-EHU: Enrique Gómez-Bengoa
Coordinator: J. Harrity (University of Sheffield)
226.681,62 € (UPV/EHU)

CV date	16/12/2021

Part A. PERSONAL INFORMATION

First and Family name	Enrique-José Alvarez-Manzaneda Roldán		
Social Security, Passport, ID number	----------	Age	---------
Researcher codes	WoS Researcher ID *(*)*	Q-4429-2016	
	SCOPUS Author ID*(*)*		
	Open Researcher and Contributor ID (ORCID) **	0000-0002-3659-4475	

A.1. Current position

Name of University/Institution	University of Granada		
Department	Organic Chemistry		
Address and Country	Campus Fuentenueva s.n., Granada, SPAIN		
Phone number	34 958 248089	E-mail	eamr@ugr.es
Current position	Full Professor	From	21/08/2003
Key words	Organic Synthesis, Natural Products, Bioactive Molecules		

A.2. Education

PhD	University	Year
Chemistry graduate Extraordinary Award	Granada	1975
Sciences PhD Extraordinary Award	Granada	1982

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

I have 6 six-year research periods recognized by the CNEAI. Direction of PhD theses: 22 (2 in progress). Total appointments: 2501. Average appointments / year (2016-2021) = 157.8 (789/5). Publications: 116 (108 in ORCID). Publications in Q1: 84 (for the publications prior to 1997, the data of the journal have been taken in the JCR of 2013). H-Index = 30 (Metrics were obtained from Web of Science).

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

Degree in Chemical Sciences in June 1975, with the qualification of Outstanding and Extraordinary Prize (University of Granada). PhD thesis carried out in the carbohydrate group of the University of Granada, under the direction of Profs. Fidel J. López Aparicio and Francisco Zorrilla Benítez. Doctor in Chemical Sciences in 1982, with the qualification of Outstanding and Extraordinary Prize (University of Granada). Assistant Professor and Fellow of the Training Plan of the research staff (courses 75-76 and 76-Dec. 77) (University of Extremadura). Assistant Professor, University of Granada (1-3-78 / 31-5-85). Collaborating professor, University of Granada (1-6-86 / 20-8-87). Associate Professor of the University (21-8-87 / 20-8-03). Full Professor (21-8-03- to date). In 1985 I joined the research group "Biotechnology of fungi and development of pharmacologically active molecules" of Prof. Alejandro Fernández Barrero, staying there until 2002. Within this group I published 46 articles, directed 8 PhD theses, developed 3 patents and participated in 7 research projects, awarded in competitive competition. In 2003 I created the group "Natural Products and Applied Organic Synthesis", for which I am the responsible. From that date until today I have published 58 articles, directed 13 PhD theses, developed 12 patents, and participated in 15 research

projects, awarded in competitive competition, as principal investigator. Research lines: Synthesis of natural products with biological activity; new synthetic methodologies. I have been part of the coordination team of the Project "Management of Centers of Scientific Instrumentation", of the ALFA Program of the European Union (between February 14, 1996 and February 14, 1998). I have been Vice-Dean of the Faculty of Sciences (21-10-97 to 26-11-99) and Director of the Department of Organic Chemistry (July 2008 -July 2010). Member of the Scientific and Organizing Committee of the VI Symposium of Young Researchers (RSEQ- SIGMA ALDRICH) 20-25 November 2010, University of Granada. Since March 1992, I am a Scientific Advisor of Nuclear Magnetic Resonance at the University of Granada, a position I currently hold. In December 2021 I was awarded the 2021 Scientific Career Award in Research in Chemistry of Natural Products (Specialized Group in Chemistry of Natural Products, Royal Spanish Society of Chemistry)

Part C. RELEVANT MERITS

C.1. Publications (From 2016, and other selected from last 10 years)

- Chaboun, R.; Botubol-Ares, J.M.; Durán-Peña, M. J.; Jiménez, F.; Alvarez-Manzaneda, R.; Alvarez-Manzaneda, E. "Decojnjugative alpha-Alkylation of Cyclohexenecarboxaldehydes: An Acces to Diverse Terpenoids" *Journal of Organic Chemistry*, **2021**, *86*, 8742-8754.
- Gil, J.A.; Arias, F.; Chahboun, R.; Alvarez-Manzaneda, E., "Synthesis of Cyclosiphonodictyol A and Its Bis(sulfato)" *Journal of Organic Chemistry*, **2020**, *85*, 3799-3805.
- H. Zentar, F. Arias, A.Haidour, R. Alvarez-Manzaneda, R. Chahboun, E.Alvarez-Manzaneda, "Protecting-Group-Free Synthesis of Cassane-Type Furan Diterpenes via a Decarboxylative Dienone-Phenol Rearrangement", *Organic Letters* **2018**, *20*, 7007-7010.
- M. Ait El Had, J. J. Guardia, J. M. Ramos, M. Taourirte, R. Chahboun, E. Alvarez-Manzaneda, "Bioinspired Synthesis of Pygmaeocins and Related Rearranged Abietane Diterpenes. Synthesis of Viridoquinone" *Organic Letters*, **2018,** *20*, 5666-5670.
- S Mahdjour, J J. Guardia, F. Rodríguez-Serrano, J. M. Garrido, I. B. López-Barajas, N. Mut-Salud, R. Chahboun, E. Alvarez-Manzaneda, "Synthesis and antiproliferative activity of podocarpane and totarane derivatives", *Eur. J. Med. Chem.* **2018**, *158*, 863-873.
- P. Gutierrez, J. Altarejos, P. J. Linares, R Chahboun, E. Alvarez-Manzaneda, "Synthesis of cassane-type diterpenes from abietane compounds: the first synthesis of taepeenin F", *Org.Chem. Front.* **2018**, *5*, 2537-2541.
- Fernández, E. Boulifa, F. Jiménez, S. Mahdjour, A. I. Mansour, R. Chahboun, E. Alvarez-Manzaneda, "Enantiospecific synthesis of antifungal dasyscyphin E from cupressic acid", *Tetrahedron* **2017**, 73, 6549-6557.
- F. Jiménez, A. Fernández, E. Boulifa, A. I. Mansour, R. Alvarez-Manzaneda, R. Chahboun, E. Alvarez-Manzaneda, "Diastereoselective Intramolecular Heck Reaction Assisted by an Acetate Group: Synthesis of the Decahydrobenzofluorene Derivative Dasyscyphin E", *Journal of Organic Chemistry* **2017**, *82*, 9550-9559.
- J. J. Guardia, R. Tapia, S. Mahdjour, F. Rodriguez-Serrano, N. Mut-Salud, R. Chahboun, E. Alvarez-Manzaneda, "Antiproliferative Activity of Natural Taiwaniaquinoids and Related Compounds", *J. Nat. Prod.* **2017**, *80*, 308-318.
- S. Mahdjour, M. Harche-Kaid, A. Haidour, R. Chahboun, E. Alvarez-Manzaneda, "Short Route to Cassane-Type Diterpenoids: Synthesis of the Supposed Structure of Benthaminin 1", *Organic Letters*, **2016,** *18*, 5964-5967.
- H. Bouanou, J. A. Gil, R. Alvarez-Manzaneda, R. Chahboun, E. Alvarez-Manzaneda, "Oxidative Coupling of (−)-Sclareol and Related Diols Leading to Oxepane Terpenoids", *Journal of Organic Chemistry*, **2016,** *81*, 10002-10008.
- Torres, P. Gutierrez, R. Alvarez-Manzaneda, R. Chahboun, E. Alvarez-Manzaneda, "Preparation of oxocene terpenes. The first enantiospecific synthesis of cytotoxic arenaran A", *Org. Biomol. Chem.* **2016**, 14, 9836-9845.
- Fernández, E. Alvarez, R. Alvarez-Manzaneda, R. Chahboun, E. Alvarez-Manzaneda, "A short route towards merosesquiterpenes with a benzoxanthene Skeleton", *Chemical Communications*, **2014,** *50*, 13100-13102.
- R. Tapia, M.J. Cano, H. Bouanou, E. Alvarez, R. Alvarez-Manzaneda, R. Chahboun, E.J. Alvarez-Manzaneda, "I2-PPh3 mediated spiroannulation of unsaturated beta-dicarbonyl compounds. The first synthesis of (±)-negundoin A", *Chemical Communications*, **2013,** *49*, 10257-10259.
- E.J. Alvarez-Manzaneda, R. Chahboun, E. Alvarez, A. Fernández, R. Alvarez-Manzaneda,

A. Haidour, J.M. Ramos, A. Akhaouzan, "First enantiospecific synthesis of marine sesquiterpene quinol akaol A", *Chemical Communications*, **2012,** *48*, 606-608.

- E.J. Alvarez-Manzaneda, R. Chahboun, E. Alvarez, R. Martín, R. Alvarez-Manzaneda, "Enantioselective Total Synthesis of Cytotoxic Taiwaniaquinones A and F", *Chemical Communications*, **2010,** 46, 9244-9246.
- E.J. Alvarez-Manzaneda, R. Chahboun, E. Alvarez, M.J. Cano, A. Haidour, R. Alvarez-Manzaneda, "Enantioselective Total Synthesis of the Selective PI3 Kinase Inhibitor Liphagal". *Organic Letters*, **2010,** 12, 4450-4453.

C.2. Research projects and grants

- B-FQM-278-UGR20. "Development of New Therapeutic Agents. Evaluatrion of its Antitumor, Antiinflammatory and Antiparasitic Activities", Consejería de Transformación Económica, Industria, Conocimiento y Universidades, Junta de Andalucía, Start date: 2022. Final date: 2023. Principal investigator: E. Alvarez-Manzaneda.
- UNGR15-CE-3100. " Update of the NMR Service of the Scientific Instrumentation Center of the University of Granada", Ministerio de Economía y Competitividad. Call: 2017. Final date: 2018. Principal investigator: E. Alvarez-Manzaneda.
- CTQ2014-56611-R. "Efficient transformations of commercial terpenes in compounds for application in cancer therapy and reprogramming of stem cells", Ministerio de Economía y Competitividad, Call: 2014. Principal investigator: E. Álvarez-Manzaneda. Start date: 2015. Final date: 2018.
- P11-CTS-7651. "Application of natural products to the design, synthesis and study of substances with potent antitumor, anti-inflammatory or antiparasitic activity" Consejeria de innovación, ciencia y empresa, Junta de Andalucía (Proyecto de Excelencia), Call: 2011. Principal investigator: E. Álvarez-Manzaneda. Start date: 2012. Final date: 2015.
- CTQ2009-09932. "Preparation of natural products of interest and search for new compounds of industrial application ", MCI-FECYT. Call: 2009. Principal investigator: E. Álvarez-Manzaneda. Start date: 01/01/2010. Final date: 31/12/2012.
- P07-FQM-03101: "New procedures for the preparation of products of industrial interest" Proyecto de Excelencia (Consejeria de innovación, ciencia y empresa, Junta de Andalucía). Call: 2008. Final date: 2012. Principal investigator: E. Alvarez-Manzaneda.
- PSE-060000-2009-003. "Valorization of National Horticultural Byproducts: Sustainable Obtaining of Natural-Origin Additives", Ministerio de Ciencia e Innovación. Call: 2009. Principal investigator:E.Alvarez-Manzaneda, Start date: 01/01/2009. Final date: 31/12/2010.
- CTQ2006-12697. "New processes for the preparation of bioactive compounds of pharmaceutical interest from natural terpenoids", MEC. Call: 2006. Principal investigator: E. Álvarez-Manzaneda, Start date: 2006. Final date: 2009.
- PPQ2002-03308.2 Synthesis of Compounds with Powerful Biological Activity from Natural Terpenoids", Ministerio de Ciencia y Tecnología, Principal investigator: E. Alvarez-Manzaneda. Start date: 01/01/2002. Final date: 31/12/2005.

C.4. Patents

- Authors: Álvarez-Manzaneda, E; Chahboun, R; Guardia, J. J. Reference: P20153158. Título: Process for the preparation of 2-alkyl-1H-indene and 2,3,4,4,4-tetrahydro-1H-fluorene derivatives from derivatives of 2- (2-alkyl-3-oxopropyl) benzaldehyde and 2- (2-formylcyclohexyl) benzaldehyde, respectively". Priority country: España . Date: August 2015.
- Authors: Aránega J., A.; Álvarez-Manzaneda, E.; Chahboun, R.; Rodriguez Serrano, F.; Prados S., J. C.; Melguizo A., C.; Tapia Martín, R.; Es-Samti, H.; Guardia, J.J.; Vázquez V., M. Isabel; Álvarez Aránega, P. J.. Reference: P201200438. Título: Anti-tumor activity of taiwaniaquinoids and related compounds. Priority country: España. Date: Abril 2012.
- Authors: Prados S., J. C.; Rodriguez Serrano, F.; Melguizo A., C..; Peran Q., M.; Aranega J., A.; Alvarez-Manzaneda, E.; Marchal C., J. A.; Chahboun, R.; Boulaiz, H. Título: "Synthesis and antitumor activity of merosesquiterpenes" Ref: ES 2355786 A1 20110331. Date: 2011.
- Authors: Aránega J., A.; Álvarez-Manzaneda, E.; Chahboun, R. Rodriguez Serrano, F.; Messouri, I.; Boulaiz, H.; Marchal C., J. A.; Melguizo A., C.; Perán Quesada, M.; Prados Salazar, J. C.. Ref.: WO 2010076358 A1 20100708.. Título: Synthetic analogs of merosesquiterpenes and compounds related with antitumor activity. Priority country: España. Date: 2010.

- Authors: Alvarez-Manzaneda, E. Chahboun, R.. Ref.: WO 2010072864 A1 20100701. Título: Procedure for the preparation of synthesis intermediates useful in the preparation of taiwaniaquinoids. Priority country: España. Date: December 2010.
- Authors: Alvarez-Manzaneda, E.; Chahboun, R.; Haidour, A. Ref.: WO2009153374 A1 20091223. Título: Procedure for the preparation of hydroxytirosol and 3-(3,4-dihydroxyphenyl) propanol from methylenedioxybenzenes. Priority country: España. Date: June 2009.
- Authors: Alvarez-Manzaneda; E.; Chahboun, R.; Messouri, I. Ref.: WO2009112622 A1 20090917. Title: Procedure for the preparation of merosesquiterpenes and related compounds from labdane diterpenes. Priority country: España. Date: April 2009.

C.5, C.6, C.7… (e. g., Institutional responsibilities, memberships of scientific societies…)

PhD Theses: Supervised Doctoral Thesis: 22 (2 more in progress)

Last graduated doctors (from 2016)

- Doctor: Soumicha Mahdjour. Título: "Transformation of *trans*-Communic Acid into Compounds with a Cassane Skeleton and Derivatives. Evaluation of the Antitumor Activity" University: Granada Faculty: Sciences, **October 2020**. Articles*: Org. Lett.* **2016**, *18*, 5964-5967; *J. Nat. Prod.* **2017**, *80*, 308-318; *Tetrahedron* **2017**, *82*, 9550-9559; *Eur.J. Med. Chem.* **2018**, *158*, 863-873; *J. Org. Chem.* **2020**, *85*, 3799-3805
- Doctor: Juan A. Gil Camarena. Título: "Synthesis of merosesquiterpenes with oxepane structure" University: Granada Faculty: Sciences, **March 2020**. Articles*: J. Org. Chem.* **2016**, *85*, 10002-10008; *J. Org. Chem.* **2020**, *85*, 3799-3805.
- Doctor: Maria Pilar Gutiérrez Adánez. Título: "Application of natural products to the design, synthesis and study of substances with a potent antitumor or antiparasitic activity". University: Granada Faculty: Sciences, **May 2018**. Articles: *Org. Biomol. Chem.* **2016**, *14*, 9836-9845. *Org.Chem. Front.* **2018**, *5*, 2537-2541.
- Doctor: Fermín Jiménez Rodriguez (He is actually I+D researcher in Abbott Laboratories S.A.) Title: "Strategy towards the synthesis of compounds with benzofluorene skeleton and new methodology for the preparation of alpha-acetoxycarbonyl derivatives", University: Granada Faculty: Sciences. **September 2017**. Articles: *Tetrahedron Letters* **2011**, *52*, 4017-4020; *Tetrahedron* .**2011**, *67*, 8910-8917; *J. Org. Chem.***2017**, *82*, 9550-9559.
- Doctor: Juan José Guardia Monteagudo (He has an indefinite contract in the biotechnology company DestiNIA Genomics S.L.as I+D researcher).Title: "Synthesis of natural products and derivatives with antiparasitic and antitumor activity from abietic acid". University: Granada Faculty: Sciences. **February 2016**. Articles: *Synthesis* **2010**, 3493-3503; *J. Org. Chem.* **2012**, *77*, 573-584; *Eur.J. Med.Chem.* **2015**, *89*, 683-690; *J. Nat. Prod.* **2017**, *80*, 308-318; *Org. Lett.* **2018**, *20*, 5666-5670; *Eur. J. Med. Chem.* **2018**, *158*, 863-873.
- Doctor: M. I. Barranco Pérez. Title: "Synthesis of bioactive compounds from labdane diterpenes". University: Granada Faculty: Sciences. **February 2016.** Articles: *Org. Lett.* **2005**, *7*, 1477-1480; *Tetrahedron Lett.* **2005**, *46*, 5321-5324; *Tetrahedron* **2007**, *63*, 11204-11212: *Eur. J. Org. Chem.* **2009**, 1139-1143.
- Membership of the American Chemical Society and of the Spanish Royal Society of Chemistry
- Fellowship of the Training Plan for Research Staff (1976-1978)
- Extraordinary Award in the Degree in Chemical Sciences (Sep 1976)
- Extraordinary Award in the Doctorate in Chemical Sciences (January 1984)
- Supervised Doctoral Thesis: 22 (2 more in progress)
- Scientific Advisor of Nuclear Magnetic Resonance of the University of Granada (13-3-92 until today)
- Vice Dean of the Faculty of Sciences (From 21-10-97 to 26-11-99)
- Director of the Department of Organic Chemistry (July 21, 2008 - July 28, 2010)
- Assistant to the coordination of the Project "Management of Centers of Scientific Instrumentation", of the ALFA Program of the European Union (it was held between February 14, 1996 and February 14, 1998.
- Member of the Scientific Committee of the VI SYMPOSIUM OF YOUNG RESEARCHERS-SIGMA ALDRICH (2009)
- 2021 Scientific Career Award in Research in Chemistry of Natural Products (Specialized Group in Chemistry of Natural Products, Royal Spanish Society of Chemistry)

MINISTERIO DE CIENCIA E INNOVACIÓN

CURRICULUM VITAE (maximum 4 pages)

AGENCIA ESTATAL DE INVESTIGACIÓN

CV date	**2/12/2021**

Part A. PERSONAL INFORMATION

First and Family name	**Ana Conejo García**		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	**0000-0001-5776-7315**	
	SCOPUS Author ID (*)	**8594689800**	
	WoS Researcher ID (*)	**I-5087-2018**	

(*) Optional
(**) Mandatory

A.1. Current position

Name of University/Institution	**University of Granada**			
Department	**Department of Medicinal and Organic Chemistry. Faculty of Pharmacy**			
Address and Country	**Campus Cartuja s/n (Spain)**			
Phone number	**+34958248593**	E-mail	aconejo@ugr.es	
Current position	**Full Professor of Organic Chemistry**		From	**14/11/2018**
Key words				

A.2. Education

PhD, Licensed, Graduate	University	Year
Graduate in Pharmacy	**University of Granada**	**1998**
Doctoral Thesis in Pharmacy	**University of Granada**	**2002**

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

Number of six-year terms: 3 (periods 2000-2005, 2006-2011 and 2012-2017)

Thesis supervised in the last 10 years: 2 defended and 1 in progress

Citations: 917; citations/year (5 last years): 89,7

JCR articles in Q1: 35

h Index: 19

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

I obtained my **BSc in Pharmaceutical Sciences** at the Univ. of Granada (UGR) in 1998. Then, I gained a competitive FPU fellowship from the Ministry of Education of Spain (MEC) and joined Prof. Espinosa group in the Department of Medicinal and Organic Chemistry in the UGR to conduct my PhD. During this period, I carried out a medicinal chemistry project focused on ChoK inhibitors. Funded by MEC, I did a research stays at the University Collegue of London (UK) under the supervision of Prof. Ganellin (2000). Once I obtained my **PhD** degree (2002, Summa cum Laude, **UGR PhD Extraordinary award**), I got a postdoctoral contract from UGR within my department. In 2003, I moved to the University of Oxford (Chemistry Research Laboratory/ Department of Chemistry) funded by the Ramón Areces Foundation to conduct a postdoc at the Prof. Schofield group where I worked in a highly multidisciplinary group and I gained training in molecular modeling, protein purification, and kinetic assays. In 2004, I was awarded a prestigious grant from the European Commission (MEIF-CT-2003-500521). In 2006, I returned to the UGR as Assistant Professor at the Department of Medicinal and Organic Chemistry, in 2009 I was promoted to

Associated Professor and I am currently Full Professor of Organic Chemistry since November 2018.

During my research career, I have published **62 articles in peer-review international journals** (**18 D1**, 35 Q1, **1st or last author in 29 of them**) highlighting: a) a publication in the prestigious journal Cell, led by Harvard University, in which we assessed one of the ChoK inhibitors to prove the role of lysophosphatidylcholine in the regulation of the sexual stage differentiation in P. falciparum; and b) a publication about the mechanism of allosteric coupling in ChoKα1 caused by a rationally designed inhibitor in Angew. Chem that was featured as "VIP". I am also a co-author 3 papers in non-indexed scientific journals with a relative quality index, **5 book chapters** in prestigious international publishers, **4 patents** and 81 contributions presented at international (51) and national (30) conferences.

My interests and scientific-technical objectives in the medium / long term is to continue working on the development of new antitumor drugs in the new line of research that is proposed in this project and that addresses the design, synthesis and biological evaluation of ChoK inhibitors.

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

C.1. Publications *(see instructions)*

1) Rubio-Ruiz B, Serrán-Aguilera L, Hurtado-Guerrero R*, **Conejo-García A***. Recent advances in the design of choline kinase α inhibitors and the molecular basis of their inhibition. *Med. Res. Rev.* 2020, DOI: 10.1002/med.21746. ISI 2019: 2/61 (**D1**) Medicinal Chemistry; IF 9.300

2) Brancucci NMB, Gerdt JP, Wang C, De Niz M, Philip N, Adapa SR, Zhang M, Hitz E, Niederwieser I, Boltryk SD, Laffitte MC, Clark MA, Grüring C, Ravel D, Blancke Soares A, Demas A, Bopp S, Rubio-Ruiz B, **Conejo-Garcia A**, Wirth DF, Gendaszewska-Darmach E, Duraisingh MT, Adams JH, Voss TS, Waters AP, Jiang RHY; Clardy J, Marti M. Lysophosphatidylcholine Regulates Sexual Stage Differentiation in the Human Malaria Parasite Plasmodium falciparum. Cell. 2017, 171 (7): 1544.e15. ISI 2017: 2/292 (**D1**) Biochemistry and Molecular biology; IF 31.957

3) Cruz-López O, Ramírez A, Navarro SA, García MA, Marchal JM, Campos JM, **Conejo-García A***. 1-(Benzenesulfonyl)-1,5-dihydro-4,1-benzoxazepine as a new scaffold for the design of antitumor compounds. Future Med Chem. 2017, 9 (11), 1129-1140. ISI 2017: 9/59 (**Q1**) Medicinal Chemistry; IF 3.969

4) Morales F, Ramírez A, Morata-Tarifa C, Navarro SA, Marchal JA, Campos JM, **Conejo-García A***. Antitumoral activity of 1,2-diaminocyclohexane derivatives in breast, colon and skin human cancer cells. Future Med Chem. 2017, 9 (3), 293-302. ISI 2017: 9/59 (**Q1**) Medicinal Chemistry; IF 3.969

5) Serrán-Aguilera L, Denton H, Rubio-Ruiz B, López-Gutiérrez B, Entrena A, Izquierdo L, Smith TK*, **Conejo-García A***, Hurtado-Guerrero R*. Plasmodium falciparum Choline Kinase Inhibition Leads to a Major Decrease in Phosphatidylethanolamine Causing Parasite Death. Sci Rep. 2016, 12;6:33189. doi: 10.1038/srep33189. ISI 2016: 10/64 (**Q1**) Multidisciplinary Sciences; IF 4.259

6) Ramírez A, Boulaiz H, Morata-Tarifa C, Perán M, Jiménez G, Picon-Ruiz M, Agil A, Cruz-López O, **Conejo-García A**, Campos JM, Sánchez A, García MA, Marchal JA. HER2-signaling pathway, JNK and ERKs kinases, and cancer stem-like cells are targets of Bozepinib. Oncotarget. 2014, 5(11):3590-606. ISI 2014: 21/211 (**D1**) Oncology; IF 6.359

7) Rubio-Ruiz B, Figuerola-Conchas A, Ramos-Torrecillas J, Capitán-Cañadas F, Ríos-Marco P, Carrasco MP, Gallo MÁ, Espinosa A, Marco C, Ruiz C, Entrena A*, Hurtado-Guerrero R*, **Conejo-García A***. Discovery of a new binding site on human choline kinase α1: design, synthesis, crystallographic studies, and biological evaluation of asymmetrical

bispyridinium derivatives. J Med Chem. 2014, 57(2):507-15. doi: 10.1021/jm401665x. ISI 2014: 3/59 (**D1**) Medicinal Chemistry; IF 5.447

8) Rubio-Ruiz B, Castillo-Acosta VM, Pérez-Moreno G, Espinosa A, González-Pacanowska D, Ruiz-Pérez LM, Entrena A*, **Conejo-García A***. In vitro antiplasmodial and cytotoxic activities of asymmetrical pyridinium derivatives. Eur J Med Chem. 2014, 85:289-92. doi: 10.1016/j.ejmech.2014.07.105. ISI 2014: 11/59 (**Q1**) Medicinal Chemistry; IF 3.447.

9) Chowdhury R, Candela-Lena JI, Chan MC, Greenald DJ, Yeoh KK, Tian YM, McDonough MA, Tumber A, Rose NR, **Conejo-Garcia A**, Demetriades M, Mathavan S, Kawamura A, Lee MK, van Eeden F, Pugh CW, Ratcliffe PJ, Schofield CJ. Selective Small Molecule Probes for the Hypoxia Inducible Factor (HIF) Prolyl Hydroxylases ACS Chem Biol. 2013, 8(7):1488-96. doi: 10.1021/cb400088q. ISI 2013: 51/291 (**Q1**) Biochemistry and Molecular Biology; IF 5.356.

10) Sahún-Roncero M, Rubio-Ruiz B, Saladino G, **Conejo-García A**, Espinosa A, Velázquez-Campoy A, Gervasio FL, Entrena A, Hurtado-Guerrero R. The Mechanism of Allosteric Coupling in Choline Kinase α1 Revealed by the Action of a Rationally Designed Inhibitor. Angew Chem Int Ed Engl. 2013; 52(17):4582-6. doi: 10.1002/anie.201209660. ISI 2013 11/148 (**D1**) Multidisciplinary Chemistry; IF 11.336

C.2. Research projects

1) Design, synthesis, biological evaluation and targeted release of CD44 inhibitors: a promising antitumor therapy (**Principal Investigator***).* Junta de Andalucía (P18-RT-1679). 2020-2022 140,500.00.

2) Nano3Devices: Multifunctionalized Nanosystem with Theranostic Application in Cancer Ministry of Science and Innovation and Universities, Carlos III Health Institute (DTS18 / 00121) 2018-2020. 78,650 euros

2) Development of a Theranostic Antitumour Nanosystem based on CD44 inhibitors (**Principal Investigator**). UGR Research and Transfer Plan. University of Granada (PR/17/006) 2018-2020. 15,000 euros

3) Improvement of the anticancer activity of bozepinib, bozinib and derivatives, by introducing the trifluoromethyl group. Junta de Andalucía (CS2016.1) 2017-2018. 15,000 euros

4) Innovative 5-Fluorouracil O, N-Acetals and di- and tri-substituted Purine derivatives as pharmacological tools for the treatment of Cancer Stem Cells. Ministry of Science and Innovation, Carlos III Health Institute (10/00592) 2011-2013. 93,775 euros

5) Design of Drugs with antiproliferative activity: new improved choline kinase inhibitors. Junta de Andalucía (Excellence Project P07-CTS-032190) 2008-2011. 297,668 euros

6) Choline Kinase: An Important Target for Cancer, Malaria and Filariasis. Ministry of Science and Innovation (HD2008-0028) 2009-2010. 11,700.00 euros

7) New high added value homochiral heterocycles obtained from ortho-substituted disubstituted benzenes: stereochemical binomial-antitumor activity. Ministry of Health and Consumption, Carlos III Health Institute. (PI070227) 2008-2010. 136,004 euros

C.3. Patents

1) Campos Rosa, J. M.; **Conejo García, A**.; López Cara, L. C.; Marchal Corrales, J. A.; Boulaiz, H.; Aránega Jiménez, A.; Gallo Mezo, M. A.; Espinosa Úbeda, A.; Rodríguez Serrano, F. Nuevas (RS)-7- ó 9-(1,2,3,5-tetrahidro-4,1-benzoxazepin-3-il)-7H ó 9H-purinas con actividad antitumoral. P200802431. España. 13-08-2008. University of Granada.

2) Marchal Corrales, J. A.; Aránega Jiménez, A.; **Conejo García, A.;** García Chaves M.A.; Cruz López, O.; Boulaiz, H.; Rodríguez Serrano, F.; Cativiela Marín, C.; Perán Quesada, M.; Jiménez Sanz, A.I.; García Ruiz, J.M.; Choquesillo Lazarte, D.; Campos Rosa, J.M.

Enantiómeros de derivados benzoheteroepínicos y su uso como agentes anticancerígenos P201030415. España. 22-03-2010. University of Granada and Andalusian Health Service.

3) Conejo García, A.; Entrena, A.; Rubio-Ruiz, B.; Gallo, M.A., Espinosa, A. Inhibidores no simétricos de colina quinasa con actividad antitumoral y antimalárica. 201300033. IPR-413. España. 28-12-2012. University of Granada.

4) Campos Rosa, J.; **Conejo García, A.;** Marchal Corrales, J. A.; Morales Marín, F.; Morata Tarifa, C., Ramírez Rivera, A. Sulfonamidas derivadas de aminas secundarias con grupos 1,3-dioxolanilalquílicos y fenilmetilpurínicos, y su utilización como agentes anticancerígenos P201430048. IPR-524. España. 20-01-2014. University of Granada.

C.4. Member of Editorial Committees

1) Editorial Board Member of the *Anti-Cancer Agents in Medicinal Chemistry* since 2013; 39/61 in Medicinal Chemistry and 172/229 in Oncology. ISSN: 1875-5992 - eISSN: 1871-5206.

2) Review Editor of *Frontiers in Chemistry*, Medicinal and Pharmaceutical Chemistry section since 2013; 54/172 Multidisciplinary Chemistry. ISSN: 2296-2646.

C.5 Institutional responsibilities

1) Vicedean of Research, Development and Innovation of the Faculty of Pharmacy (UGR) Start date: May 18, 2017.

2) Elected member of the "Governing Council" of the Faculty of Pharmacy of the University of Granada, Start date: April 20, 2016.

3) Elected member of the "Faculty of Pharmacy Board" of the University of Granada, Start date: December 2, 2015.

4) Member of the Steering Committee of the Department of Medicinal and Organic Chemistry (UGR), Start date: October 27, 2010.

C.6. Conference Organisation

1) Member of the Organising Committee of IX SEQT workshop “New perspectivas and emerging Technologies in drug discovery” Baeza (Spain), 11-12 November 2010.

2) Member of the Organising Committee of the “Global Summit on Medicinal Chemistry 2018: Current Advancements and its Applications in Medicinal Chemistry” Amsterdam (Netherlands), 30-31 July 2018

3) Member of the Organising Committee of the “V Chemical Biology Group Meeting” Granada (Spain), 19-21 February 2020

C.7 Supervision of Research

The applicant has directed 2 doctoral theses, both obtained the highest qualification, an International Doctorate mention and within official Doctorate programs with a Quality Mention; 4 Bachelor's thesis in collaboration with the Universities of Vienna, Pavia and Milan and 9 Final Master's projects in Official Master's degrees from the UGR and with a quality mention (MCD2006-00064).

Fecha del CVA	Enero/2021

Name	Maria Ribagorda		
DNI/NIE/pasaporte		Edad	
Núm. identificación del investigador	Researcher ID	L-2883-2013/ Scopus ID 6602566796	
	Código Orcid	http://orcid.org/0000-0001-7185-4095	

A.1. Situación profesional actual

Name of Institution	Universidad Autónoma de Madrid		
Department	Facultad de Ciencias, Departamento de Química Orgánica (C-I)		
Address and Country	C/Francisco Tomás y Valiente 7, Madrid, Spain		
Phone number		email	maria.ribagorda@uam.es
Current position	Associate Professor		May 2010
Espec. cód. UNESCO	230616		
Key words	Molecular switches, Quinones, Quinols, azobenzenes, Sulfoxydes		

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

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciada Ciencias Químicas	Universidad Autónoma de Madrid	1995
TESIS DE LICENCIATURA	Universidad Autónoma de Madrid	1997
DOCTORADO Ciencias Químicas	Universidad Autónoma de Madrid	2001

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

Sexenios de investigación: **3** (último concedido 2013). **Tesis doctorales** dirigidas:**8**.
JCR articles: 51. Publications (Q1): 46, H-Index: 21.
Citations: 1571. Average citations per article 34,02.

Parte B. CV SUMMARY

EDUCATION, ACADEMIC APPOINTMENTS

Associate Professor, Universidad Autónoma de Madrid (UAM), 2010-present.
Assistant Professor, UAM, 2008-2010.
Ramon y Cajal Researcher, UAM, 2003-2009
Postdoctoral Research Associate, University of Pennsylvania, USA, Advisor: Prof. G. Molander. 2002/03
Assistant Professor UAM, 2001-2002.
Teaching Assistant, UAM, 1998-2000.

GRADUATE EDUCATION:

Ph.D (Oct. 2001), UAM, Spain. Thesis Advisor-Professor. M. Carmen Carreño. (Ministerio de Educación y Cultura Fellowship) Dissertation title*: "Asymmetric synthesis of Polycyclic structures from 4-Sulfinylmethyl-p-Quinols and p-Quinamines"*
Research Assistant, Johns Hopkins University Baltimore, Maryland. Advisor: Professor Gary H. Posner, July-Sept 1998.
MS, UAM, Research Advisor: Dra. M. Carmen Carreño, Febr. 1997.
Undergraduate Education: BS, Organic Chemistry, UAM, 1990-95.
MEMBERSHIPS: Spanish Royal Society of Chemistry
FELLOWSHIPS AND CREDITACIONES:
Predoctoral fellowship FPI, MEC (1997-2000)
Mobility PhD fellowship (MEC) (1998, 3 months, Universidad Johns Hopkins Baltimore, USA, Advisor: Prof. Gary Posner)
Visiting professor Mobility fellowship "Salvador de Madariaga", Universidad de Pennsylvania, Philadelphia, Group Prof. Gary Molander. Years: 2012, 2015, 2018 (3 moths each year).
Acreditación Positiva ACAP (2005) y ANECA(2006)
Evaluación Positiva Programa I3 (2007)
PUBLICATIONS and SYMPOSIUM PRESENTATIONS: 52 publications: 1 patent, 5 books chapters and 46 journals publications (Q1) (J*. Am. Chem. Soc.; Angew. Chem. Int. Ed.; Chem. Commun.; Chem. Sci.; Nanoscale; Org. Lett.; Chem. Eur. J.; Carbon; Eur. J. Org. Chem.; Eur. J.*

Med. Chem.; Fron.Chem.). 32 National and international symposium presentations and 3 invited seminars.
OTHERS:Website: https://mribagordagroup.wordpress.com/

Parte C. MÉRITOS MÁS RELEVANTES

C.1. PUBLICATIONS (including books): (last 10 years)

- P. Reine, A. M. Ortuño, I. Mariz, M. Ribagorda, J. M. Cuerva, A. Gonzalez Campaña, E. Maçôas, D. Miguel **2020** "*Simple perylene diimide cyclohexane derivative with combined CPL and TPA properties" Front. Chem*. **2020**, *8,* 306.
- L. Ortiz-Rojano, J. Rojas-Martín, C. Rodriguez-Diaz, M. Carmen Carreño, M. Ribagorda (AC) **2019** "*Light-Induced Tetrazole-Quinone 1,3-Dipolar Cycloadditions" Chem. Eur. J.* **2019**, 25, 15050.
- S. Resa, P. Reiné, L. Álvarez de Cienfuegos, S. Guisán-Ceinos, M. Ribagorda, G. Longhi, G. Mazzeo, S. Abbate, A. J. Mota, D. Miguel (AC), J. M. Cuerva (AC), **2019** ***"****Optically active Ag(I):o-OPE helicates using a single homochiral sulfoxide as chiral inducer*" *Org. Biomol. Chem.,* **2019**, *17*, 8425. (5/11)
- S. O. Badir, J. Yi, L. M. Kammer, M. Ribagorda, G. A. Molander **2019** "*Deaminative Reductive Arylation Enabled by Nickel/Photoredox Dual Catalysis*" *Org. Lett.* **2019**, *21*, 3346-3351.
- P. Reiné, A. M. Mortuño, S. Resa, Longhi (AC), D. Miguel (AC), J. M. Cuerva (AC), **2018 "***OFF/ON switching of circularly polarized luminescence by oxophilic interaction of homochiral sulfoxide-containing o-OPEs with metal cations*" *Chem. Commun.,* **2018**, *54*, 13985. (12/17)
- P. Reiné, J. Justicia, S. P. Morcillo, D. Miguel (AC), J. M. Cuerva (AC) **2018 "***Pyrene-Containing ortho-Oligo(phenylene)ethynylene Foldamer as a Ratiometric Probe Based on Circularly Polarized Luminescence". J. Org. Chem.,* **2018**, *83*, 4455-4463. (6/12)
- L. Ortiz-Rojano, M. Martínez-Mingo, C. García-García, M. Ribagorda (AC), M. C. Carreño (AC) **2018** "*Domino Reaction of Naphthoquinone and β-Arylpyruvic Acids: Synthesis of 3-(Naphthoquinonyl)naphthofuran-2(3*H*)-ones*". *Eur. J. Org. Chem.* **2018**, 1034–1040.
- S. Resa, D. Miguel, S. Guisán-Ceinos, G. Mazzeo, L. Álvarez de Cienfuegos (AC), J. M. Cuerva (AC). **2018** "*Sulfoxide-Induced Homochiral Folding of* ortho-*Phenylene Ethynylenes (*o-*OPEs) by Silver(I) Templating: Structure and Chiroptical Properties*" *Chem. Eur. J.,* **2018**, 24, 2653. (10/14)
- J. Rojas-Martín, M. Veguillas, M. Ribagorda (AC), M. C. Carreño (AC) **2017** "*Synthesis of Functionalized Alkyl Substituted. Benzoquinones by Rh-Catalyzed Additions of Boronic Acids*" *Organic & Biomolecular Chemistry,* **2017**, *15*, 5386-5394.
- C. García-García, L. Ortiz-Rojano, S. Álvarez, R. Álvarez, M. Ribagorda (AC), M. C. Carreño (AC). **2016** *"Friedel-Crafts Alkylation of Indoles with p-Quinols. The role of hydrogen bonding of water for the desymmetrization of the cyclohexadienone system". Organic Letters,* **2016**, *18*, 2224-2227.
- S. P. Morcillo, D. Miguel, L. Álvarez de Cienfuegos, G. Longhi (AC), J. M. Cuerva (AC) **2016** "*Stapled helical o-OPE foldamers as new circularly polarized luminescence emitters based on carbophilic interactions with Ag(I)-sensitivity*". *Chem. Sci.* **2016**, *7*, 5663-5670. (7/16)
- E. Deni, A. Zamarrón, P. Bonaccorsi, M. Ribagorda (AC), A. Barattucci **2016** "*Glucose-functionalized amino-OPEs as biocompatible photosensitizers in PDT*". *Eur. J. Med. Chem.* **2016**, *111*, 58.
- C. García-García, M. C. Redondo, M. Ribagorda (AC), M. C. Carreño (AC) **2014** "*Reactions of p-Quinols with Aldehydes and Imines: Stereoselective Access to Polyheterobicyclic and Tricyclic Systems*". *Eur. J. Org. Chem.* **2014**, 7377-7388.
- A. Martín-Lasanta, L. Álvarez de Cienfuegos, A. Johnson, J. M. Cuerva (AC). **2014** "*Novel ortho-OPE metallofoldamers: binding-induced folding promoted by nucleating Ag(I)–alkyne interactions". Chem. Sci.* **2014**, *5*, 4582-4591. (9/12)
- J. Rojas-Martín, M. Veguillas, M. Ribagorda (AC), M. C. Carreño (AC). "*Synthesis of Indole Substituted Twistenediones from a 2-Quinonyl Boronic Acid" Org. Lett.,* **2013**, *15*, 5686-5689.
- I. Núñez, Estíbaliz Merino, M. Lecea, S. Pieraccini, G. Piero Spada, C. Rosini, G. Mazzeo, M. Ribagorda (AC), M. C. Carreño (AC) **2013** "*Control of the Z-Helical Chirality of Enantiopure Sulfinyl Azobenzene-based Photoswitches". Chem. Eur. J.,* **2013**, *19*, 3397-3406.
- N. Fuentes, A. Martin-Lasanta, L. Alvarez de Cienfuegos, J. M. Cuerva (AC). **2012** "*A versatile bottom-up approach to stapled π-conjugated helical scaffolds: Synthesis and chiroptical properties of cyclic o-phenylene ethynylene oligomers" Angew. Chem. Int. Ed.* **2012**, *51*, 13036-13040. (9/13)
- E. Merino, M. Ribagorda (AC) Control over molecular motion using the *cis–trans* photoisomerization of the azo group. *Beilstein J. Org. Chem.* **2012,** *8,* 1071-1090.
- N. Fuentes, L. A. Martín-Lasanta, A. de Cienfuegos, M. Ribagorda, A. Parra, J. M. Cuerva. Organic-based molecular switches for molecular electronics. *Nanoscale,* **2011***, 3,* 4003-4014.
- M. Veguillas, M. Ribagorda (AC), M. C.Carreño (AC). Regioselective Alkylation of Heteroaromatic Compounds with 3-Methyl-2-Quinonyl Boronic Acids. *Org. Let.,* **2011**, *13*, 656-659.

C.2. RESEARCH PROJECTS AND GRANTS

▪ Photo and bioactive compounds, molecular switches and luminescent upconversion nanoparticles. Entidad financiadora: MEC, REF: CTQ2017-85454-C2-2-P. From January 2018 to October 2020. Amount: 82.280 €. IP: **M. Ribagorda**

▪ RED MADRILEÑA DE NANOMEDICINA EN IMAGEN MOLECULAR. Entidad financiadora: Comunidad de Madrid (B2017/BMD-3867 RENIM-CM), cofinanciado con Fondos Estructurales de la Unión Europea From January 2018 to Dec 2021. IP: Manuel Desco.

▪ Diseño de interruptores moleculares quirales como ligandos fotoreactivos. Entidad financiadora: UAM, Convocatoria Financiación TFM. January-July 2016 y 2017. Amount: 1200 y 600 €. IP: **M. Ribagorda**.

▪ Síntesis y estudio de propiedades de compuestos bio, electro y fotoactivos. Entidad financiadora: MEC, REF: CTQ2014-53894-R. From: 2015 to October 2017. Amount: 181.500 €. IP: M. C. Carreño. Nº Participants: 5

▪ Nuevos derivados de quinona y quinol: aplicaciones en síntesis y nuevos materiales Entidad Financiadora: MICINN, REF: CTQ2011-24783. From: 11/2011 to 10/2013. Amount: 262.570 €. IP: M. C. Carreño. Nº Participants: 12

▪ Aprovechamiento Térmico de la Energía Solar de Manera Gestionable, eficiente y modular en sistemas de alta concentración. Entidad: Consejería de Educación de la Comunidad Autónoma de Madrid. Programa de actividades de I+D entre grupos de investigación de la CAM. REF: S2009/ENE-1617. From: 1//01/2010 to: 31/12/ 2012. Amount: 46.270 €. IP: M. C. Carreño. Nº Participants: 6

▪ Síntesis y nuevas aplicaciones de sulfinil azobencenos enantiopuros y ácidos 2quinonil borónicos. Entidad Financiadora: UAM (REF: CCG08-UAM/PPQ-3980). From January 2009- December 2009. Amount: 33.000 €. IP: **María Ribagorda**. Nº Participants: 8

▪ Synthesis and photochromic properties of chiral aromatic azocompounds. Entidad Financiadora: MEC (Acción Integrada Hispano Italiana HI2004-0027) From March 2005-to: March-2007. Amount: 10.820 €. IP: M. Ribagorda. Nº Participants: 5

▪ Síntesis y nuevas aplicaciones de quinonas, quinoles, azobencenos y sulfoxidos enantiopuros. Entidad Financiadora: Ministerio de Educación y Ciencia (REF: CTQ2008-04691/BQU) From: 11/2009 to 10/2011. Amount: 187.000 €. IP: M. C. Carreño.

▪ Síntesis enantioselectiva de moléculas complejas: Productos naturales y compuestos con quiralidad helicoidal. Entidad Financiadora: MEC (REF: CTQ2005-02095/BQU). From: Nov 2005 to Oct. 2008. Amount: 153.000 € IP: M. C. Carreño. Nº Participants: 8

C.4. Patents

INVENTORES: R. Díaz, S. Isikli, J. Palma, M. C. Carreño, M. Ribagorda, M. A. Guillamón, S. Barradas, M. Lecea. TÍTULO: Baterías de flujo acuosas con pares redox orgánicos
REFERENCIA: P201330186(3). Patente española registrada el 13 de febrero de 2013
INSTITUCIONES PARTICIPANTES: Instituto IMDEA Energía y UAM.

C.5 SYMPOSIUM PRESENTATIONS (2020-2019

▪ Silvia Simón de la Fuente, Laura Ortiz Rojano, Jingke Yao, Gabriel López-Peña, Dirk H. Ortgies, Emma Martín Rodríguez, Francisco Sanz-Rodríguez, María Ribagorda. "Functionalized upconverting nanoparticles by light induced tetrazole-alkene 1,3-dipolar cycloadditions for antitumor photodynamic therapy" PARTICIPATION: **Poster**. Symposium: EFMC International Symposium on Medicinal Chemistry, Place: Virtual Event from Louvain-la-Neuve, Belgium. Date: 7-11 Sep, **2020**

▪ Maria Ribagorda "Preparación y Estudio de Compuestos Orgánicos Bio, Electro y Fotoactivos" PARTICIPATION **: Invited Oral communication.** Symposium: InnoUAM_QuímicaVerde: innovaciones en síntesis química, Place: Madrid, Date: Febrero **2019**

▪Gabriel López-Peña, Laura Ortiz Rojano, Dirk H. Ortgies, Raúl Zazo, María Ribagorda, Francisco Sanz-Rodríguez, Emma Martín Rodríguez "Eosin Y and rare-earth-doped nanoparticles for deep-tissue photodynamic therapy" PARTICIPATION **Oral communication**. Symposium: (SBAN) 2nd Spanish conference of biomedial Applications of nanomaterials. Place: Madrid, Date: Junio **2019**

▪ L. Ortiz-Rojano, Jaime Rojas-Martína, Ciro Rodrígueza, M. Carmen Carreño, M. Ribagorda "Photoclick reactions between quinones and 2,5-diaryltetrazoles: Synthesis and properties of novel fluorescent heterocyclic quinones" PARTICIPATION: **Poster**. Symposium: 26th International symposium: Synthesis in Organic Chemistry . PLACE: Cambridge, England Date: Junio **2019**

▪ L. Ortiz-Rojano, F. Sanz-Rodríguez, M. Carmen Carreño, M. Ribagorda TÍTULO: "Visible-light Photoactivatable Indazol-4,7-diones Derivatives PARTICIPATION: **Flash Communication**. Symposium: XXXVII Reunión Bienal de la RSEQ. Place: San Sebastian, Spain, Date: Mayo 2019

C.6 Visiting Fellowships and Professorships:

■ Predoctoral fellowship: University Johns Hopkins (group: Prof. Gary H. Posner), *Baltimore. USA.* Date*: June-August 1998. Domino reactions using p-quinamines systems.*

■ Postdoctoral stay University of Pennsylvania (group Prof. Gary A. Molander, Philadelphia, USA. Date: 2002-2003*. Improvement and novel Applications of the Suzuki coupling Reaction Using Potassium Alkyltrifluoroborates. Expanding Organoboron Chemistry. Epoxidation of Potassium Organotrifluoroborates.*

■ Professorships mobility program: Ministerio de Educación y Formación Profesional. Destiny: University of Pennsylvania, Group: Prof. Gary A. Molander, Philadelphia USA. Dates: Junio-Sept **2012**, Junio-Sept **2015**, Junio-Sept **2018**.

C.7. INSTITUTIONAL RESPONSIBILITIES

2009-2019 Member of the Security and safety program in the Department Organic Chemistry, UAM.

2009-Present: Member of the UAM Doctoral Program in Organic Chemistry with "Mención de Calidad" from MEC (Spain) and Master in Organic Chemistry.

2019-present Member of the social network program of the Department Organic Chemistry, UAM.

C.8 PHD SUPERVISED (8)

■ Nuevas aplicaciones de los sulfóxidos en síntesis orgánica: Reacciones de Diels-Alder y de adición conjugada**.** *DOCTORANDO:* Mª Jesús Sanz Cuesta, *UAM,* **2005**. *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. C. Carreño y María Ribagorda

■Sulfinil metil *p*-quinoles y *p*-quinaminas como intermedios versatiles en síntesis orgánica.*DOCTORANDO:* Montserrat Ortega Guerra, UAM, **2008** *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. Carmen Carreño y María Ribagorda

■ El Grupo sulfinilo como inductor de quiralidad en interruptores moleculares:Síntesis y propiedades fotocrómicas de Sulfinil azobencenos. *DOCTORANDO:* Irene Núñez González, UAM, **2012**. *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. Carmen Carreño y María Ribagorda

■ Ácidos 2-quinonil borónicos. Síntesis y reactividad en reacciones de cicloadición [4+2] y adición conjugada. *DOCTORANDO:* Marcos Veguillas Hernando, UAM, **2013**. *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. Carmen Carreño y María Ribagorda.

■ Extending the synthetic utility of p-Quinols: hetero Michael-type additions and Friedel-Crafts reations reactividad en reacciones de cicloadición [4+2] y adición conjugada. Reactividad de quinoles. *DOCTORANDO:* Carolina García García, UAM, **2014**. *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. Carmen Carreño y María Ribagorda.

■ Síntesis y Reactividad de nuevos derivados de quinona *DOCTORANDO:* Jaime Rojas, UAM, **2017**. *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. Carmen Carreño y María Ribagorda

■ New reactivity of *p*-quinols and *p*-quinones. Synthesis and properties of photoactivatable pyrazolequinones. *DOCTORANDO:* Laura Ortiz Rojano, UAM, **2019**. *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. Carmen Carreño y María Ribagorda.

■ Síntesis y propiedades de nuevos azocompuestos como interruptores moleculares quirales y nuevos inhibidores de la fluorescencia. *DOCTORANDO:* Santiago Guisán Ceinos, UAM, **2019**. *CALIFICACION: Sobresaliente Cum-Laude.* Directoras: M. Carmen Carreño y María Ribagorda.

Dirección de proyectos de investigación para la obtención del titulo de doctor en curso.
Silvia Simón de la Fuente *Preparación de compuestos fluorescentes y funcionalización de nanopartículas para su aplicación como sensores biológicos.*

C.9 MASTER SUPERVISED (16)

Diploma de Estudios Avanzados: 1. Álvaro Somoza, Julio 2000; **2**. Carmen García Luzón, Marzo 2001. **3**. Estíbaliz Merino Marcos, Septiembre 2002. **4**. Montserrat Ortega Guerra, septiembre 2005. **5.** Irene Núñez, Septiembre 2007. **6.** Marcos Veguillas, Septiembre 2008.
Master Química Orgánica: **7.** Jaime Francisco Rojas Martín, Julio 2012. **8.** Santiago Guisán Ceinos. Septiembre 2013. **9.** Eduarado de Pedro. Julio 2015. **10.** Laura Ortiz, Julio 2015. **11**. Andrea Pereira, Julio 2016. **12**. Mario Martínez Mingo, Julio 2016. **13**. Ciro Rodríguez, Julio 2017. 14. Juan Antonio Núñez, Julio 2018.**15.** Pablo Ruedas 2019.**16**. Aimar González 2019.

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C.10 TEACHING EXPERIENCE [UAM, Facultad de Ciencias].

Periodos y categoría: 2010-presente **Profesor Titular**. 2008-2009; **Profesor contratado Doctor**, 2003-2008 **Contratado Ramón y Cajal**; 2001-2002 **Profesor Asociado**; 1999-2001 **Becario predoctoral**
Asignaturas: Grado: Química Orgánica Industrial, Seminarios: Química Orgánica (2º), Síntesis Orgánica (3º), Determinación Estructural (3º), Experimentación Avanzada (4º) Experimentación en Síntesis Orgánica (2º y 3º), Materias Primas y Procesos Industriales. Máster: Quimica Orgánica Avanzada (Master química Aplicada), Procesos Industriales orgánicos y sostenibilidad (Master Química Orgánica)

Fecha del CVA	11/02/2022

Parte A. DATOS PERSONALES

Nombre y apellidos	Antonio Martínez Rodríguez		
Núm. identificación del investigador		Researcher ID	H-6710-2014
		Código Orcid	0000-0001-8880-211X

A.1. Situación profesional actual

Organismo	Universidad de Granada		
Dpto./Centro	Dpto. Química Orgánica / Facultad de Ciencias		
Dirección	Facultad de Ciencias. Fuentenueva, s/n, 18071		
Categoría profesional	Catedrático de Universidad	Fecha inicio	27/12/2018
Espec. cód. UNESCO	2306.07; 2306.15; 2306.16; 2306.18; 2306.90; 2306.91; 2306.92		
Palabras clave	Terpenos; reactividad; bioactividad; mecanismo; elucidación		

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

Licenciatura/Grado/Doctorado	Universidad	Año
Lcdo. en Ciencias Químicas	Universidad de Granada	1981
Doctor en Ciencias Químicas	Universidad de Granada	1986

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

Sexenios de investigación acreditados: 4
Fecha del último sexenio: 31/12/2015
Número de Tesis Doctorales Dirigidas: 4
Citas Totales: 890; Promedio Citas/año: 56 (últimos 5 años)
Publicaciones: 70; Primer Cuartil: 46
Índice h: 19
Otros:
- Tramos docentes: 6
- Tramos Autonómicos: 5
- 60 Asistencias a Congresos nacionales e internacionales tipo poster o comunicación oral

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

El Prof. Dr. ANTONIO MARTÍNEZ RODRÍGUEZ, es Doctor en Ciencias Químicas por la Universidad de Granada desde 1986 cuando leyó su Tesis Doctoral en el Grupo de Investigación “Biotecnología y Química de Productos Naturales” (grupo FQM-139 del PAIDI de la Junta de Andalucía) dirigido por el Profesor Dr. Andrés García-Granados López de Hierro, en el campo de los Productos Naturales con la que obtuvo la calificación de “Sobresaliente Cum Laude”, y le concedieron el Premio Extraordinario de Doctorado. Desde el año 1983 está vinculado al Departamento de Química Orgánica de la Universidad de Granada. En 1989 obtuvo la Plaza de Profesor Titular de Universidad, y desde entonces viene ejerciendo de Profesor-Investigador. Ha desarrollado su investigación en el área de los Productos Naturales tomando como materias primas la flora de la región andaluza y los residuos de molturación de la aceituna. Su trabajo experimental ha incidido fundamentalmente en varias líneas de investigación como son: estudio fitoquímico de diversas especies de Sideritis, estudios de biotransformación de compuestos terpénicos aislados de plantas andaluzas, síntesis biomiméticas de sesquiterpenos y estudio estructural y de reactividad de triterpenos pentacíclicos naturales y sus derivados. Como consecuencia de esta dilatada trayectoria docente e investigadora el Dr. MARTÍNEZ tiene acreditados 4 tramos de investigación, 6 tramos docentes y 5 tramos autonómicos, y ha intervenido de forma continuada desde el año 1983, como investigador en un total de 15 Proyectos de Investigación I+D. Ha publicado un total de 70 publicaciones en revistas internacionales de medio y alto índice de impacto, ha presentado 60 comunicaciones a distintos Congresos nacionales e internacionales, ha participado en 14 Patentes titularizadas por la Universidad de Granada, ha dirigido 4 Tesis Doctorales, 11 Tesinas de Licenciatura, 2 trabajos Fin de Master y 9

trabajos Fin de Grado. En lo que respecta a la actividad docente, el Dr. MARTÍNEZ ha impartido docencia universitaria en enseñanzas universitarias regladas de forma continua desde el año 1983 con dedicación completa en una gran variedad de asignaturas de primer y segundo ciclo en titulaciones diversas como: Licenciado en Ciencias Químicas, Grado en Química. También ha participado en programas de doctorado y másteres como: Doctorado en Química, Doctorado en Biotecnología y Máster Universitario en Química.

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

C.1. Publicaciones

1.- Jannus, J., Medina-O´Donnell, M., Neubrand, V.E., Marín, M., Saez-Lara, M.J., Sepulveda, M.R., Rufino-Palomares, E.R., Martínez, A., Lupiañez, J.A., Parra, A., Rivas, f., Reyes-Zurita, F.J., 2021. Efficient in vitro and in vivo anti-inflammatory activity of a diamine-pegylated oleanolic acid derivative. International Journal of Molecular Sciences, 22, 8158-8180.
DOI: org/10.3390/ijms22158158
2.- Vega-Granados, K., Medina-O´Donnell, M., Rivas, F., Reyes-Zurita, F.J.,Martínez, A., Alvarez de Cienfuegos, L., Lupiañez, J. A., Parra, A. 2021. synthesis and biological activity of triterpene−coumarin conjugates. Journal of Natural Products, 84, 1587-1597
DOI: org/10.1021/acs.jnatprod.1c00128
3.- Medina-O´Donnell, M., Rivas, F., Reyes-Zurita, F.J., Cano-Muñoz, M., Martínez, A., Lupiañez, J. A., Parra, 2019, Oleanolic acid derivatives as potential inhibitors of hiv-1 protease. Journal of Natural Products, 82, 2886-2896. DOI: .org/10.1016/j.saa.2019.02.014
4.- Molina-Bolivar, J.A., Galisteo-González, F., Carnero Ruiz, C., Medina-O´Donnell, M., Martínez, A., Parra, A., 2019. Maslinic acid conjugate with 7-amino-4-methylcoumarin as probe to monitor the temperature dependent conformational changes of human serum albumin by fret. Spectrochimica Acta part A: Molecular and Biomolecular Spectroscopy, 214, 161-169. DOI: org/10.1016/j.saa.2019.02.014.
5.- Medina-O´Donnell, M., Rivas, F., Reyes-Zurita, F.J.,Martínez, A., Lupiañez, J. A., Parra, A. 2018, Diamine and pegylated-diamine conjugates of triterpenic acids as potential anticancer agents. European Journal Of Medicinal Chemistry, 148, 325-336
DOI: org/10.1016/j.ejmech.2018.02.044
6- Fernández-Pastor, I., Martínez-García, M., Medina-O´Donnell, M, Rivas, F., Martínez, A., Pérez-Victoria, J.M., Parra, A., 2018. semisynthesis of ω-hydroxyalkylcarbonate derivatives of hydroxytyrosol as antitrypanosome agents, Journal of Natural Products, 81, 2075-2082. DOI: 10.1021/acs.jnatprod.8b00431.
7.- Medina-O´Donnell, M., Rivas, F., Reyes-Zurita, F.J.,Martínez, A., Galisteo-González, F., Lupiañez, J. A., Parra, A. 2017. Synthesis and in vitro antiproliferative evaluation of pegylated triterpene acids. European Journal Of Medicinal Chemistry, 120, 25-40
doi.org/10.1016/j.fitote.2017.05.006
8.- Fernández-Pastor, I, Fernández-Hernández, A., Pérez Criado, S., Rivas, F., Martínez, A., García-Granados, A., Parra, A. 2017. Microwave-assisted extraction vs. soxhlet extraction to determine triterpene acids in olive skins. Journal of Separation Science, 40 (5), 1209-1217
DOI: 10.1002/jssc.201601130
9.-. Rivas, F.; Medina-O'Donnell, M.; Reyes-Zurita, F.J.; Martinez, A.; Martin-Fonseca, S.; Garcia-Granados, A.; Ferrer-Martín, R. M.; Lupiañez, J.A.; Parra; 2016. Semi-synthesis and antiproliferative evaluation of PEGylated pentacyclic triterpenes. European Journal Of Medicinal Chemistry. 118: 64-78. DOI: org/10.1016/j.ejmech.2016.04.016.
10. Basso, A. V.; Nicotra, V. E.; Parra, A.; Martinez, A.; Fernández-Vivas, A.. 2016. Biotransformation of Salpichrolides A, C, and G by Three Filamentous Fungi. Journal of Natural Products. 79: 1658-1667. DOI: 10.1021/acs.jnatprod.6b00310.

C.2. Proyectos

1.-Título del proyecto: Aprovechamiento de residuos de la industria oleica para la obtención de compuestos bioactivos
Referencia: B1-FQM-217-UGR18
Entidad financiadora:. Junta de Andalucia. Proyectos de I+D+I FEDER Andalucía 2014-2020
Duración, 2020-2021 Cuantía de la subvención: 6.300 €
Investigador responsable: Francisco Rivas Sánchez
Número de investigadores participantes: 4
2.-Título del proyecto: Incremento de la Biodisponibilidad y la Actividad Biológica de Ácido Maslínico e Hidroxitirosol, dos Compuestos Procedentes de los Residuos de Molturación de la Aceituna, por Acilación y Pegilación mediante Técnicas de Síntesis Orgánica en Fase Sólida.
Referencia:P11-FQM07372.
Entidad financiadora: Junta de Andalucia
Duración: 2013- 2017.
Cuantía de la subvención: 176.228 €
Investigador Principal: Andrés Parra Sánchez
Número de investigadores participantes: 8
3.-Título del proyecto: Semisíntesis en Fase Sólida y por Vía Microbiológica de Derivados de Ácidos Triterpénicos Naturales como Agentes Anti-HIV, y Reguladores de la Apoptosis y de la Proliferación Celular. Estudio SAR.
Referencia: CTQ2009-13898.
Entidad financiadora: Ministerio de Ciencia e Innovación
Duración: 2010-2013.
Cuantía de la subvención: 133.100 €
Investigador Principal: Andrés García-Granados López De Hierro
Función: Investigador
Número de investigadores participantes: 6
4.-Título del proyecto: Cálculo Molecular de la Interacción de Ácido Maslínico con Serín Proteasas y BCL-2/BAX como Moléculas Reguladoras de Apoptosis: Diseño, Semisíntesis de Derivados y su Evaluación Biológica.
Referencia: CTQ2006-15649-C02-01.
Entidad financiadora: D.G.I. – S.D.P.I
Duración: 2006-2009.
Cuantía de la subvención: 145.200 €
Investigador Principal: Andrés García-Granados López De Hierro
Función: Investigador
Número de investigadores participantes: 9
5.-Título del Proyecto de Excelencia: Diseño, Síntesis y Evaluación de Inhibidores de Serín Proteasas a partir de Ácido Maslínico y sus Derivados.
Referencia: P05-FQ-1228.
Entidad financiadora: Junta de Andalucia
Duración: 2006- 2009
Cuantía de la subvención: 115.000 €
Investigador Principal: Andrés García-Granados López De Hierro
Función: Investigador
Número de investigadores participantes: 9
6. Título del Proyecto: Estudio Fitoquímico de Sideritis Marroquíes y Biotransformación de los Terpenos Aislados.
Referencia: AM25/04
Entidad financiadora: Junta de Andalucia.
Duración: 2005-2006.
Cuantía de la subvención: 24.000 €
Investigador Principal: Antonio Martínez Rodríguez
Número de investigadores participantes: 6

C.3. Contratos

C.4. Patentes

1. Título: Stevioside extraction and purification from Stevia by using calcium bicarbonate
Inventores: Garcia-Granados Lopez de Hierro, A.; Rosua Campos, J. L.; Martinez Rodriguez, A.; Serrano Bernardo, F.
Referencia: WO2012089861
Fecha de aplicación: 07/2011

2. Título: Use of Maslinic Acid in Treatment of Inflammatory and Neurogenic Pain
Inventores: Nieto Lopez, F.R.; Baeyens Cabrera, J.M.; Garcia-Granados Lopez de Hierro, A.; Entrena Fernandez, J.M.; Cobos del Moral, E.J.; Martinez Rodriguez, A.; Parra Sanchez, A.; Rivas Sanchez, F.
Referencia: WO2011015692
Fecha de aplicación: 02/2011

3. Título: Method for Preparation of Products having High Triterpene Content
Inventores: Garcia-Granados Lopez de Hierro, A.; Parra Sanchez, A.; Martinez Rodriguez, A.; Rivas Sanchez, F.
Referencia: WO 2010086480
Fecha de aplicación: 01/2010

4. Título: Uso del ácido maslínico para el tratamiento de patologías y sus síntomas mediante la inhibición de cox-2
Inventores: Prados Osuna, J.; Garcia-Granados Lopez de Hierro, A.; Parra Sanchez, A.; Martinez Rodriguez, A.
Referencia: WO 2009121992
Fecha de aplicación: 03/2009.

5. Título: Use of Maslinic Acid as Inhibitor of Serine Proteases for Treatment of Diseases Caused by Cryptosporidium Parasites
Inventores: Garcia-Granados Lopez de Hierro, A.; Parra Sanchez, A., Martínez Rodriguez, A., Rivas Sanchez, F., Osuna, A., Mascaró, C., Rodríguez, N., Kalifa, L.
Referencia: ES 2131467
Fecha de aplicación: 05/1997

6. Título: Aplicación de ent-11β,16-dihidroxi-18-nor-4α-carboximetil óxido de manoilo como inhibidor de la adenilatociclasa.
Inventores: Garcia-Granados Lopez de Hierro, A.; Martínez Rodriguez, A., Arias Peñalver, J.M. y Flavia, M
Referencia: ES 2065843
Fecha de aplicación: 03/1993

7. Título: Aplicación de ent-3β,6β,12β-trihidroxi-13-epi-óxido de manoilo como activador de la adenilatociclasa.
Inventores:Garcia-Granados Lopez de Hierro,A.; Martínez Rodriguez, A., Rivas,F.,y Flavia, M
Referencia: ES 2065842
Fecha de aplicación: 03/1993

CV date	21/12/2021

Part A. PERSONAL INFORMATION

First and Family name	Diego Jesús Cárdenas Morales		
Social Security, Passport, ID number			
Researcher codes	WoS Researcher ID *(*)*	H-4415-2013	
	SCOPUS Author ID*(*)*	7004841443	
	Open Researcher and Contributor ID (ORCID) **	0000-0002-1707-6445	

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad Autónoma de Madrid		
Department	Química Orgánica		
Address and Country	Av.Tomás y Valiente 7, Cantoblanco, 28049, Madrid, Spain		
Phone number	E-mail	diego.cardenas@uam.es	
Current position	Catedrático de Universidad	From	02/15/2010
Key words	Organometallic chemistry, catalysis, transition metals, organic synthesis, organometallic complexes, computational chemistry, reaction mechanisms		

A.2. Education

PhD	University	Year
Graduate in Chemistry	Universidad de Granada	1990
Doctorate in Chemistry	Universidad Autónoma de Madrid	1994

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

- Number of research activity periods (every 5 years) = 5 (last granted date: 31-12-2015)
- Number of research activity periods (every 6 years) = 4 (last granted date: 31-12-2014)
- Number of thesis supervised = 14
- Co-author of 112 JCR articles and 1 book chapter.
- Number of papers classified into the first quartile (Q1 99, Scimago)
- h Index = 40 Sum of times cited = 6341 (Scopues

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

Diego J. Cárdenas obtained his PhD at the la “Universidad Autónoma de Madrid” (UAM) in 1994. After a postdoctoral stay during 1995 and 1996 at Louis Pasteur University with Prof. Jean-Piere Sauvage, he joined the UAM as an Assistant Professor. He became Associate Professor in 2002, and Full Professor of the Department of Organic Chemistry in 2010. He has performed two more stays at the U. of Cambrige (2007) and the U. of Michigan (2012). He was worked in organometallic and in supramolecular chemistry. During the first years, he centered his studies in the organometallic chemistry of Pd, Pt and Au directed towards the development of synthetic methodology. Lastly, he focuses in the development of novel high efficient eco-friendly and economical synthetic methods based on first-row transition metal catalysts, and in the determination of the reaction mechanisms. In addition, he has also worked in proton-coupled electron transfer processes, as well as molecular electronics. He has authored over 110 papers (h=40), has supervised 14 PhD Theses and has been PI of 6 Spanish Government Projects and 2 Madrid Regional Projects, and has participated in UE COST actions, and 3 Excellence Projects of Junta de Andalucía. He occupies the Chair of the Department of Organic Chemistry of UAM since September 2015, and was the Scientific Coordinator of the Consolider-Ingenio Program between 2009 and 2011. He has received

several research awards by public and private institutions, including the Lilly Award (2007) and the Young Researchar Award of the Spanish Royal Society of Chemistry (2001) .

Part C. RELEVANT MERITS

C.1. Publications (including books)

● N. Cabrera-Lobera; M. T. Quirós; E. Buñuel; D. J. Cárdenas "*Ni-catalyzed Cyclization of Enynes and Alkynylboronates: Atom-economical Synthesis of Boryl-1,4-dienes.*" *Chem. Eur. J.* 10.1002/chem.201903405 (2019).
● N. Cabrera-Lobera; M. T. Quirós; W. W. Brennessel; M. L. Neidig; E. Buñuel; D. J. Cárdenas "*Atom-Economical Ni-Catalyzed Diborylative Cyclization of Enynes: Preparation of Unsymmetrical Diboronates*" *Org. Lett*., *21*, 6552-6556 (2019).
● N. Cabrera-Lobera; M. T. Quirós; E. Buñuel; D. J. Cárdenas J. *"Atom-economical regioselective Ni-catalyzed hydroborylative cyclization of enynes: development and mechanism" Catal. Sci. Technol.*, *9*, 1021-1029 (2019).
● E. Buñuel, D. J. Cárdenas, "*Towards Useful Boronates through Atom-Economical Catalyzed Cascade Reactions*" *Chem. Eur. J.*, *24*, 11239-11244 (2018).
● N. Cabrera-Lobera, P. Rodríguez-Salamanca, J. C. Nieto-Carmona, E. Buñuel, D. J. Cárdenas, "*Iron-Catalyzed Hydroborylative Cyclization of 1,6-Enynes*", *Chem. Eur. J*., *24*, 752 (2018).
● M. Guisán-Ceinos, V. Martín-Heras, R. Soler-Yanes, Diego J. Cárdenas, M. Tortosa *"Copper-catalysed cross-coupling of alkyl Grignard reagents and propargylic ammonium salts: stereospecific synthesis of allenes", Chem. Commun 54*, 8343. (2018).
● R. Soler-Yanes, M. Guisán-Ceinos, E. Buñuel, D. J. Cárdenas. "*Ni(I) Catalyzes the Regioselective Cross-Coupling of Alkylzinc Halides and Propargyl Bromides to Allenes*", *Chem. Eur. J.*, *23*, 1584–1590 (2017).
● E. Buñuel, D. J. Cárdenas. "*Borylative Cyclization Reactions*", Eur. J. Org. Chem. 5446–5464 (2016).
● C. Jarava-Barrera, A. Parra, A. López, F. Cruz-Acosta, D. Collado-Sanz, Diego J. Cárdenas, M. Tortosa "Copper-Catalyzed Borylative Aromatization of *p*-Quinone Methides: Enantioselective Synthesis of Dibenzylic Boronates", *ACS Catalysis*, *6*, 442-446 (2016).
● D. Miguel, S. Morcillo, A. Martín-Lasanta, N. Fuentes, L. Martínez-Fernández, I. Corral, M. J. Ruedas-Rama, D. J. Cárdenas, L. Álvarez de Cienfuegos, A. Orte, J. M. Cuerva, *"Development of a New Dual Polarity and Viscosity Probe Based on the Foldamer Concept"*, *Org. Lett., 17*, 2844-2847 (2015)**.**
● D. Miguel, L. Álvarez de Cienfuegos, A. Martín-Lasanta, S. P. Morcillo, L. A. Zotti, E. Leary, M. Bürkle, Y. Asai, R. Jurado, D. J. Cárdenas, G. Rubio-Bollinger, N. Agrait, J. M. Cuerva, M. T. González, *"Toward Multiple Conductance Pathways with Heterocycle-Based Oligo (phenyleneethynylene) Derivatives" J. Am. Chem. Soc. 117*, 13818-13826 (2015).
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● Diego J. Cárdenas, Juan M. Cuerva, Miriam Alías, Elena Buñuel, Araceli G. Campaña, *"Water-based Hydrogen-Atom Wires as Mediators in Long-Range Proton-Coupled Electron Transfer in Enzymes: a New Twist on Water Reactivity*", *Chem. Eur. J., 17*, 8318-8323 (2011).

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C.2. Research projects and grants

● "*Desarrollo y aplicaciones de reacciones catalizadas por metales de la primera serie de transición económicas y medioambientalmente benignas".* CTQ2016-79826-R
Funding entity: Ministerio de Economía y Competitividad. Programa estatal de fomento de la investigación científica y técnica de innovación 2016-2019.
Principal Investigators: Dr. D. J. Cárdenas Morales, and Dr. M. E. Buñuel Magdalena (Universidad Autónoma de Madrid)
Date: 01/01/2017 -12/31/2019 Funding: 129000 €

• *Reacciones de formación de enlaces C-C y C-B catalizadas por metales de transición de la primera serie, económicas y benignas con el medio ambiente* (EFICAT). CTQ2013-42806-R
Funding entity: Ministerio de Economía y Competitividad. Programa estatal de fomento de la investigación científica y técnica de innovación 2013-2016.
Main researchers: Dr. D. J. Cárdenas Morales, and Dr. M. E. Buñuel Magdalena (Universidad Autónoma de Madrid)
Contribution: main researcher.
Date: 01/01/2014 - 31/12/2016. Funding: 187550 €

• Nanodispositivos orgánicos para electrónica molecular: diseño, síntesis y evaluación. FQM-04571
Funding entity: Junta de Andalucía (Proyectos de Excelencia)
Main researcher: Dr. J. M. Cuerva (Universidad de Granada)
Contribution: researcher
Date: 01/01/2010 - 01/01/2014 Funding: 293000 €

• *Aplicaciones sintéticas de complejos de metales de transición con ligandos carbeno N-Heterocíclicos. Reacciones de formación de enlaces C-C, C-B y activación C-H de alcanos.* CTQ2010-15927
Funding entity: Ministerio de Ciencia e Innovación
Main researcher: Dr. D. J. Cárdenas Morales (Universidad Autónoma de Madrid)
Contribution: researcher
Date: 01/01/2011 - 31/12/2013. Funding: 180290 €

• *Desarrollo de métodos catalíticos altamente eficientes* (AVANCAT). S2009/PPQ-1634.

Funding entity: CAM (Network of several research groups)
Main researcher: Dr. M. A. Sierra (Universidad Complutense de Madrid)
Contribution: researcher.
Date: 01/01/2010 - 31/12/2013 Funding: 10035000 € (77870 € to our group)
• *El agua como fuente de hidrógeno atómico y molecular. Implicaciones en química, biología y energías alternativas.* FQM-03213.
Funding entity: Junta de Andalucía (Proyecto de Excelencia)
Main researcher: Dr. E. Oltra Ferrero (Universidad de Granada)
Contribution: researcher
Date: 01/03/2008 - 31/03/2012 Funding: 168000 €
• *Nuevas reacciones de organoboranos catalizadas por metales de transición mediante ciclación y activación de enlaces C-H alifáticos.* CTQ2007-60494/BQU.
Funding entity: Ministerio de Educación y Ciencia
Main researcher: Dr. D. J. Cárdenas Morales (Universidad Autónoma de Madrid)
Contribution: researcher
Date: 01/02/2008 - 30/11/2010 Funding: 104000 €

C.3. Contracts

Research contract with MAXAM Company (2016-17) coordinated by Prof.. Manuel Alcamí

C.4. Patents

C.5. Stays in foreign research centers.
University of Michigan, 202 (3 months) “Salvador de Madariaga” Program
University of Cambridge, 2007 (2 weeks)
University Louis Pasteur (Strasbourg, France) 1995-1996 (24 months), Spanish Government and UE postdoctoral fellow.

C.5 Supervision of researchers
Supervisor of 14 Doctorate Thesis, and many Graduate and Master Thesis

C.6. Assessment tasks
- Member of “Comisión de Evaluación de Programas de Doctorado de la AQU” (Cataluña) since June 2017.
- Member of the Evaluation Committee of “Juan de la Cierva y Ramón y Cajal”.
- Usual reviewer of ANEP Research projects.
- Member of the Scientific Committee “Contratos JAE” CSIC.

C.7. Scientific activity management
- Scientific Coordinator of Consolider Program, (MICINN, 1/3/2009 to 31/12/2011).
- Chair of the Department of Organic Chemistry, UAM since 01/09/2014.
- Treasurer of the Organic Chemistry Division of the Spanish Royal Society of Chemistry (RSEQ) since 2006.

C.8 Organization of R+D activities
- Member of the Scientific Committee of the XXV “Reunión Bienal de Química Orgánica” de la RSEQ (2014).
- Member of the Organizing Committee of the Annual Meeting of the European Chemistry Thematic Network Association (Madrid, 2014).

C.9 Communications to meetings and invited lectures
62 communications to scientific meetings
11 invited lectures in Universities (Michigan, Stockholm, 8 Spanish Universities) and pharmaceutical companies.

C.10 Awards
- Special Degree and Doctorate Awards (1990, U. of Granada, and 1994 UAM, respectively).
- Degree Award by the Academy of Sciences of Granada, 1990
- Young Researchar Award of the Spanish Royal Society of Chemistry (RSEQ) 2001.
- Lilly Research Award, 2007.