

Part A. PERSONAL INFORMATION		CV date		25/03/2021
First and Family name	JOSE JAVIER FERNANDEZ CASTRO			
Social Security, Passport, ID number	42162787S	Age	60	
Researcher numbers	Researcher ID	AAA-3439-2019		
	Orcid code	0000-0002-0805-8317		

A.1. Current position

Name of University/Institution	UNIVERSIDAD DE LA LAGUNA		
Department	INSTITUTO UNIVERSITARIO DE BIO-ORGÁNICA ANTONIO GONZÁLEZ		
Address and Country	ASTROFÍSICO FRANCISCO SÁNCHEZ 2		
Phone number	+34922318586	E-mail	jjfercas@ull.edu.es
Current position	FULL PROFESSOR	From	1987
Espec. cód. UNESCO	230618; 230690; 230691; 239001; 230205; 3214		
Palabras clave	MARINE NATURAL PRODUCTS, MARINE BIOTOXINS, DINOFLAGELLATE, BIOSYNTHESIS, DSP TOXINS, RMN		

A.2. Education

PhD	University	Year
DEGREE IN PHARMACY	UNIVERSIDAD DE LA LAGUNA	1982
PH D. PHARMACY	UNIVERSIDAD DE LA LAGUNA	1987
PHARMACIST SPECIALIST IN ANALYSIS AND CONTROL OF DRUGS AND DRUGS	OFFICIAL SPECIALTY DEGREE GRANTED BY THE MINISTRY OF EDUCATION AND SCIENCE	2003

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

- 6 Sexenios (Last period 2014-2021; Statement date 09/06/2014)
- Thesis in progress: 3
- Total citations: 2695 (WOB); 3585 (Google Scholar); Since 2016= 1277
- Total average citation per article 19.10;
- H index: 29 (WOB), 35 (GS);
- i10 Index: 93; Since 2016= 46
- Publications 2020-2014 = 48; in Q1 = 34
- Publications total: 145
- https://www.researchgate.net/profile/Jose_Fernandez25
- https://scholar.google.es/citations?view_op=list_works&hl=es&user=e7SxLRMAAAAJ

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

José J. Fernández was born in La Palma, Spain, in 1961 and read Pharmacy at the Universidad de La Laguna (BSc in 1982). He received his PhD in the Organic Chemistry Department at the same university in 1987 under the supervision of Professors J. D. Martin and M. Norte. He became an Assistant Professor at the Universidad de La Laguna in 1989, Associate Professor in 1994, Professor in 1997 and Full Professor in Organic Chemistry at 2016. The research topic has been focused on the study of natural products from marine source with biological activity, attending to the isolation, structural determination, synthesis, analysis of structure-activity relationships and modes of action. Throughout the scientific trajectory both, macro and microorganisms from marine origin have been studied, identifying an important number of new metabolites with different chemical skeleton such as acetogenins,

alkaloids, polypropionates, terpenes, etc. In this topic, he focused on the marine biotoxins with polyether structures. Thus, he has identified new diarrhetic toxins (DSP) that are included in current analysis and control protocols. In order to achieve this goal, it has also been necessary to implement in her laboratory medium- and large-scale cultivation of microalgae, especially dinoflagellates. Significant contributions in this topic have been the biosynthetic studies using stable isotopes to establish the biogenetic origin of the DSP toxins group, and its action mode by a self-association mechanism to permeation of the cell membranes. In recent years he has addressed the study of highly functionalized polar molecules named super carbon chains (SCC). Due to the structural complexity of this type of molecules, he has developed new methodology for the resolution of the configuration of its stereogenic centers, functionalized five-member rings and the resolution of relative configuration between cyclic systems joined by flexible systems. Recently, new research topics on antifouling substances, antiparasitic activity and molecules that disturb the cell membranes has been implemented in his laboratory.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1.- José G. Napolitano, Manuel Norte, José M. Padrón, José J. Fernández, Antonio Hernández Daranas, Belizeanolide, a Cytotoxic Macrolide from the Dinoflagellate *Prorocentrum belizeanum*, *Angew. Chem. Int. Ed.* 2009, *48*, 796–799.

2.- José G. Napolitano, Manuel Norte, José Javier Fernández, Antonio Hernández Daranas, Corozalic Acid: A Key Okadaic Acid Biosynthetic Precursor with Phosphatase Inhibition Activity, *Chem. Eur. J.* 2010, *16*, 11576–11579

3.- José G. Napolitano, José A. Gavín, Celina García, Manuel Norte, José J. Fernández, Antonio Hernández Daranas, On the Configuration of Five-Membered Rings: A Spin–Spin Coupling Constant Approach *Chem. Eur. J.* 2011, *17*, 6338–6347.

4.- Francisco Cen-Pacheco, Jaime Rodríguez, Manuel Norte, José J. Fernández, Antonio Hernández Daranas, Connecting Discrete Stereoclusters by Using DFT and NMR Spectroscopy: The Case of Nivariol, *Chem. Eur. J.* 2013, *19*, 8525–8532.

5.- Humberto J. Domínguez, José G. Napolitano, M. Teresa Fernández-Sánchez, David Cabrera-García, Antonello Novelli, Manuel Norte, José J. Fernández, Antonio Hernández Daranas, Belizentrin, a Highly Bioactive Macrocyclic from the Dinoflagellate *Prorocentrum belizeanum* *Org. Lett.*, 2014, *16*, 4546-4549

6.- Francisco Cen-Pacheco, Manuel Norte, José J. Fernández, and Antonio H. Daranas. Zoaramine, a zoanthamine-like alkaloid with a new skeleton. *Org. Lett.* 2014, *16*, 2880–2883,

7.- A. Molina-Miras, A. Morales-Amador, C.R. de Vera, L. López-Rosales, A. Sánchez-Mirón, M.L. Souto, J.J. Fernández, M. Norte, F. García-Camacho, E. Molina-Grima. A pilot-scale bioprocess to produce amphidinols from the marine microalga *Amphidinium carterae*: Isolation of a novel analogue. *Algal Research* 2018, *31*, 87–98

8.- C. Espinoza, Miriam C. Rodríguez González, Guillermo Mendoza, Alberto Hernández Creus, Ángel Trigos, José J. Fernández. Exploring photosensitization as an efficient antifungal method. *Scientific Report* 2018 .doi 10.1038/s41598-018-32823-2

9.- Ana R. Díaz Marrero, Atteneri López Arencibia, Carlos J. Bethencourt Estrella, Francisco Cen Pacheco, Inés Sifaouil, Alberto Hernández Creus, María Clara Duque Ramírez, María L. Souto, Antonio Hernández Darana, Jacob Lorenzo Morales, José J. Fernández. Antiprotozoal activities of marine polyether triterpenoids. *Bioorganic Chemistry* 2019, *92*, 103276

10.- Ana R. Díaz-Marrero, Miriam C. Rodríguez González, Alberto Hernández Creus, Adriana Rodríguez Hernández, José J. Fernández. Damages at the nanoscale on red blood cells promoted by fire corals. *Scientific Reports* 2019, 9, 14298, doi.org/10.1038/s41598-019-50744-6

11.- Humberto J Domínguez, David Cabrera-García, Cristina Cuadrado, Antonello Novelli, M Teresa Fernández-Sánchez, José J Fernández, Antonio Hernández Daranas, Prorocentroidic Acid, a Neuroactive Super-Carbon-Chain Compound from the Dinoflagellate *Prorocentrum hoffmannianum* *Organic Letters* 2021, 23, 13-18

12.- Francisco Cen-Pacheco, Adrián J Santiago-Benítez, Ka Yi Tsui, Dean J Tantillo, José J Fernández, Antonio Hernández Daranas, Structure and Computational Basis for Backbone Rearrangement in Marine Oxasqualenoids, *The Journal of Organic Chemistry*, 2021, 86, 2437-2446.

C.2. Research projects and grants

- 1.- Project reference: Ref. PID2019-1094776RB-C21
Title: MOLECULAS BIOACTIVAS DE MICROALGAS MARINAS
Financing Entity: MCEI
Institution: Universidad de La Laguna
Project timeline: 6/2020 12/2022
IP and coordinator ULL: Dr. José Javier Fernández Castro
- 2.- Project reference: Biotransfer 2 (BT2)
Title: *Biotransfer 2. Transferencia de la investigación biotecnológica orientada a la rentabilidad empresarial y movilización de flujos de negocio*
Financing Entity: IINTERREG PC MAR UE
Institutions: Universidad de La Laguna; Cabildo de Tenerife
Project timeline: 11/ 2017- 11/2020
IP, ULL: Drs. José Javier Fernández Castro and Enrique Martínez Carretero
- 3.- Project reference: Ref. CTQ2014-55888-C03-01
Title: Compuestos bioactivos de origen marino: aprovechamiento de metabolitos secundarios de dinoflagelados
Financing Entity: MICIIN
Institution: Universidad de La Laguna
Project timeline: 1/ 2015 12/2018
IP and coordinator ULL: Dr. José Javier Fernández Castro
- 4.- Project reference: Ref. BIO17
Title: Alcaloides marinos en el tratamiento y prevención de la osteoporosis
Financing Entity: Fundación Caja Canarias
Institutions: Universidad de La Laguna
Project timeline: 1/2016 hasta 12/2018
IPs: Dr. José Javier Fernández Castro and Dr. Antonio Manuel Hernández Daranas
- 5.- Project reference: SAF2011-28883-C03-01
Title: Búsqueda, caracterización y diseño de nuevos compuestos bioactivos de organismos marinos.
Financing Entity: MINECO
Institution: Universidad de La Laguna
Project timeline: 01/01/2012-31/12/2015
IP and coordinator: José Javier Fernández
6. Project: KBBE-3-245137

Title: Exploring Marine Resources for Bioactive Compounds: From Discovery to Sustainable Production and Industrial Applications (MAREX)
IP: Coordinador Heikki Vuorela; IP ULL Manuel Norte
Financing Entity: UE-FP7, Collaborative Project: Novel Marine Bioactive compounds for European Industries
Project timeline: 01/08/2010-31/08/2014

7. Project reference: FP7-REGPOT-2012-CT2012-316137
Title: Improving Biomedical Research and Innovation in the Canary Islands (IMBRAIN)
Financing Entity: UE-FP7
IP: Rafael Alonso Solis
Institutions: IUBO -CIBICAN -Universidad de La Laguna
Project timeline: 11/01/2013-31/12/2015

C.4. Patents

Title: HPLC y MPLC whit biologic detection
Titular: Universidad de La Laguna
Number : P200902287
Country: España
Tetent date: 30/11/2009

C.5 Others

- Honorary Member of the Argentine Society of Research in Organic Chemistry (SAIQO), 2011
- Academic Director of the "Master in Chemical Research" at the University of La Laguna (2010 to 2013)
- Subdirector of the University Institute of Bio-Organic Chemistry Antonio González from 2011 to 2019.
- From 2000 to 2011 Head of the Mass Spectrometry Service of the High Resolution in ULL of the General Research Support Services of the ULL (SEGAI)
- From 2011 to date Head the Toxicological Patterns Laboratory of the General Research Support Services of the ULL (SEGAI)
- Editorial Board Member of *Anticancer Agent in Medicinal Chemistry* (2009-2016).
- Invited to join of Editorial Board Member of MDPI at *Marine Drugs* (October 2019 -)
- Special Issue Editor at MDPI *Molecules* of "*Bioactive Compounds Isolated from Microalgae*" (https://www.mdpi.com/journal/molecules/special_issues/molecules_micrialgae)
- President of the Natural Products Chemistry Group of Spanish Royal Society of Chemistry (January 2019 to date)

- Ph.D. mentorship I co-directed Ph.D. Theses from 2010. The training acquired by the former students has allowed them to continue their careers. Francisco Cen Pacheco, Guillermo Díaz Crespín are currently Associate Professors in foreign universities (University of Veracruz in México, and University of El Salvador in Salvador). Tamara Vilches and Alberto Jonathan Martín holds a postdoctoral positions in Atlanta, USA and Karolinska Institute (Sweden). José Napolitano is working in pharmaceutical industry as senior NMR spectroscopists (Abbvie, Chicago). Caterina Rodríguez is working in Archeological AmbiLab Group at La Laguna in an ERC project. Humberto Domínguez decided to work as Titular Pharmacist despite he published 4 papers.