

Part A. PERSONAL INFORMATION		CV date	27/04/2019
First and Family name	José Manuel Entrena Fernández		
Social Security, Passport, ID number	74648990Y	Age	39
Researcher numbers	Researcher ID	I-3076-2015	
	Orcid code	0000-0001-9742-1968	

A.1. Current position

Name of University/Institution	Universidad de Granada		
Department	Animal Behaviour Research Unit		
Address and Country	Avda. del Conocimiento.s/n, Centro de Investigaciones Biomédicas, 18100, Armilla		
Phone number	(0034)958241373	E-mail: entrena@ugr.es	
Current position	Staff member of University of Granada as Head of Animal Behaviour Research Unit	From	2011
Espec. cód. UNESCO			
Palabras clave	Laboratory animals, behavioural animal		

A.2. Education

PhD	University	Year
Neuroscience	University of Granada	2009

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

Thesis supervised: 1

Total citation: 963

Average citations per year: 109/2013; 115/2014; 102/2015; 112/2016; 129/2017; 96/2018

H Index: 14

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

My scientific career in the University of Granada began in 2004 when I get a FPU (Formation of the University Staff) grant from Spanish government, which allowed me to do the Doctoral Thesis and two stays in foreign research centers such as the Department of Physiology of the National University of Ireland (Galway) and Department of Anesthesia Research Unit of McGill University (Montreal, Canada). My time predoctoral has provided me with an excellent background in the development of animal behavioral tests for test pain, stress, locomotive activity, learning and memory, surgical techniques, etc. Subsequently, I obtained a Research contract from the University of Granada under the "Support of the Technical Support Staff Program (Technological Technological Infrastructure Techniques Modality) (2008-2011)", with the goal to start an Animal Behavior Research Unit, and my current contractual relationship with the University of Granada is as Senior Technician for Teaching and Research Support acting as Manager of the Animal Behavior Research Unit since 2011. During these 14 years I have published 22 indexed scientific articles. Articles have been published in international journals located in Q1 and 9 of them in journals in the first decile. As indexes of the impact of my research, 7 of my articles have received more citations than 90% of the works published in the same area. In the same year, and I have already collected 963 citations (index h = 14) .

In addition, I have participated in the training of young researchers, having directed a doctoral thesis and a Master's Thesis. I have also participated in several public projects, funded through the Spanish National Research Plan, and Canadian Institutes of Health Research, and I have co-directed two projects obtained in the competitive calls (2013 and 2014) of the CEI-BioTic of University of Granada for young researchers. Although the nature of my research is eminently basic, I have always been aware of the importance of transferring the results of preclinical research to the productive fabric, and of its role in

translating the results of basic research in society (which is the ultimate goal of bio-sanitary research). For this, I would highlight my contributions to contracts / research projects with the pharmaceutical industry, including Esteve and the Genius Pharma consortium. In addition, I am the author of a world patent (PCT) and a Spanish one together with other scientists of the UGR. Lastly, I would like to highlight my participation as a reviewer in journals such as Pharmacology Biochemistry and Behavior Neuroscience letter and Psychopharmacology and as editor of the Anesthesiology section in the Scientifica journal.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1. Bautista-Aguilera ÓM, Budni J, Mina F, Medeiros EB, Deuther-Conrad W, **Entrena JM**, Moraleda I, Iriepa I, López-Muñoz F, Marco-Contelles J. Contilisant, a Tetratarget Small Molecule for Alzheimer's Disease Therapy Combining Cholinesterase, Monoamine Oxidase Inhibition, and H3R Antagonism with S1R Agonism Profile. **J Med Chem**. 2018 Aug 9;61(15):6937-6943.

Journal Impact Factor: 6.253 First quartile in "Chemistry medicinal"

2. Montilla-García Á, Tejada MÁ, Perazzoli G, **Entrena JM**, Portillo-Salido E, Fernández-Segura E, Cañizares FJ, Cobos EJ. Grip strength in mice with joint inflammation: A rheumatology function test sensitive to pain and analgesia. **Neuropharmacology**. 2017 Oct;125:231-242.

Journal Impact Factor: 4.249 First quartile in "Neurosciences"

3. Sánchez-Fernández C, **Entrena JM**, Baeyens JM, Cobos EJ. Sigma-1 Receptor Antagonists: A New Class of Neuromodulatory Analgesics. **Adv Exp Med Biol**. 2017;964:109-132.

Journal Impact Factor: 1.760 First quartile in "Biology".

4. González-Cano R, Tejada MÁ, Artacho-Cordón A, Nieto FR, **Entrena JM**, Wood JN, Cendán CM. Effects of Tetrodotoxin in Mouse Models of Visceral Pain. **Marine Drugs**. 21;15(6); 2017

Journal Impact Factor: 3.503 First quartile in "Chemistry Medicinal"

5. Cabeza L, Ortiz R, Prados J, Delgado ÁV, Martín-Villena MJ, Clares B, Perazzoli G, **Entrena JM**, Melguizo C, Arias JL. Improved antitumor activity and reduced toxicity of doxorubicin encapsulated in poly(ϵ -caprolactone) nanoparticles in lung and breast cancer treatment: An in vitro and in vivo study. **European Journal of Pharmaceutical Sciences** 1;102:24-34; 2017

Journal Impact Factor: 3.756 First quartile in "Pharmacology and Pharmacy"

6. **Entrena JM**, Sánchez-Fernández C, Nieto FR, González-Cano R, Yeste S, Cobos EJ, Baeyens JM. Sigma-1 Receptor Agonism Promotes Mechanical Allodynia After Priming the Nociceptive System with Capsaicin. **Scientific Reports**.25;6:37835; 2016

Journal Impact Factor: 4.259 Primer decil en "Multidisciplinary Sciences"

7. Morata-Tarifa C, Jiménez G, García MA, **Entrena JM**, Griñán-Lisón C, Aguilera M, Picon-Ruiz M, Marchal JA. Low adherent cancer cell subpopulations are enriched in tumorigenic and metastatic epithelial-to-mesenchymal transition-induced cancer stem-like cells. **Scientific Reports**. 11;6:18772; 2016.

Journal Impact Factor: 5.578 First quartile in "Multidisciplinary Sciences"

5. Cabeza L, Ortiz R, Arias JL, Prados J, Ruiz Martínez MA, **Entrena JM**, Luque R, Melguizo C. Enhanced antitumor activity of doxorubicin in breast cancer through the use of poly(butylcyanoacrylate) nanoparticles. **International Journal of Nanomedicine**. 13;10:1291-306; 2015

Journal Impact Factor: 4.383 Primer cuartil en "Pharmacology and Pharmacy"

6. Tejada MA, Montilla-García A, Sánchez-Fernández C, **Entrena JM**, Perazzoli G, Baeyens JM, Cobos EJ. Sigma-1 receptor inhibition reverses inflammatory hyperalgesia: Role of peripheral sigma-1 receptors. **Psychopharmacology**. 231:3855-3869; 2014

Journal Impact Factor: 3.988 First quartile in "Pharmacology & Pharmacy"

7. Sánchez-Fernández C, Montilla-García Á, González-Cano R, Nieto FR, Romero L, Artacho-Cordón A, Montes R, Fernández-Pastor B, Merlos M, Baeyens JM, **Entrena JM**, Cobos EJ. (2014). Modulation of peripheral μ -opioid analgesia by σ 1 receptors. **Journal of Pharmacology and Experimental Therapeutic**. 348(1):32-45; 2014

- Journal Impact Factor: 3.855 First quartile in "Pharmacology & Pharmacy"
8. Nieto FR, Cobos EJ, **Entrena JM**, Parra A, García-Granados A, Baeyens JM. Antiallodynic and analgesic effects of maslinic acid, a pentacyclic triterpenoid from *Olea europaea*. **Journal of Natural Products**. 26;76(4):737-40; 2013.
- Journal Impact Factor: 3.798 First quartile in "Pharmacology & Pharmacy"
9. Sánchez-Fernández C, Nieto FR, González-Cano R, Artacho-Cordón A, Romero L, Montilla-García Á, Zamanillo D, Baeyens JM, **Entrena JM**, Cobos EJ. Potentiation of morphine-induced mechanical antinociception by σ_1 receptor inhibition: role of peripheral σ_1 receptors. **Neuropharmacology**.70:348-58; 2013
- Journal Impact Factor: 4.819 First quartile in "Neurosciences"
10. **Entrena JM**, Cobos EJ, Nieto FR, Cendán CM, Gris G, Del Pozo E, Zamanillo D, Baeyens JM. Sigma-1 receptors are essential for capsaicin-induced mechanical hypersensitivity: studies with selective sigma-1 ligands and sigma-1 knockout mice. **Pain** 143, 252-261; 2009
- Journal Impact Factor: 5.371 First Journal in "Anesthesiology"
11. **Entrena JM**, Cobos EJ, Nieto FR, Cendán CM, Baeyens JM, Del Pozo E. Antagonism by haloperidol and its metabolites of mechanical hypersensitivity induced by intraplantar capsaicin in mice: role of sigma-1 receptors. **Psychopharmacology (Berl)** 205, 21-33; 2009
- Journal Impact Factor: 4.103 First quartile in "Neurosciences"
12. de la Puente B, Nadal X, Portillo-Salido E, Sánchez-Arroyos R, Ovalle S, Palacios G, Muro A, Romero L, **Entrena JM**, Baeyens JM, López-García JA, Maldonado R, Zamanillo D, Vela JM. Sigma-1 receptors regulate activity-induced spinal sensitization and neuropathic pain after peripheral nerve injury. **Pain** 145(3):294-303; 2009
- Journal Impact Factor: 5.371 First Journal in "Anesthesiology"
13. Price TJ, Rashid MH, Millicamps M, Sanoja R, **Entrena JM**, Cervero F. Decreased nociceptive sensitization in mice lacking the fragile X mental retardation protein: role of mGluR1/5 and mTOR. **Journal of Neuroscience**. 27(51):13958-67; 2007
- Journal Impact Factor: 7.490 First quartile in "Neurosciences"
14. Nieto FR, **Entrena JM**, Cendán CM, Pozo ED, Vela JM, Baeyens JM. Tetrodotoxin inhibits the development and expression of neuropathic pain induced by paclitaxel in mice. **Pain** 31;137(3):520-31;2008
- Journal Impact Factor: 6.030 First Journal in "Anesthesiology"
15. Pitcher MH, Price TJ, **Entrena JM**, Cervero F. Spinal NKCC1 blockade inhibits TRPV1-dependent referred allodynia. **Molecular Pain** 30;3:17; 2007
- Índice de Impacto (ISI): 4.127 First quartile in "Neurosciences"

C.2. Research projects and grants

1. CEI2014-MPBS11, Effects of ozone therapy in the treatment with 5-fluorouracil in colon cancer. CEI BioTic (University of Granada). Principal Investigator. **José Manuel Entrena** (University of Granada). 01/01/2013 - 31/12/2013. Funding: 3.000€
2. Papel de los receptores sigma-1 en el dolor inflamatorio. CEI BioTic (University of Granada). Principal Investigator. **José Manuel Entrena** (University of Granada). 01/01/ 2013 - 31/12/2013. Funding: 3.000€
3. SAF2013-47481-P, Role of sigma-1 receptors in inflammatory pain. MINECO and FEDER funds. Principal Investigator. Enrique J Cobos (University of Granada, with the collaboration of the Institute of Molecular Biotechnology Austria -IMBA). 01/01/2014 - 31/12/2016. Funding: 83,490 €
4. P11-CTS-7649, Paclitaxel Nanoparticles: Antitumor Efficacy, Toxicity and Influence of Blocking of Sigma-1 Receptors. Government of Andalusia. Principal Investigator. José Manuel Baeyens (University of Granada). 27/03 /2013 - 26/03/2017. Funding: 233.242 €
5. NEOGENIUS PHARMA: identification of new drugs for the treatment of inflammatory pain. Ministry of Industry, Commerce and Tourism. Center for Technological and Industrial Development (CDTI), CENIT Program. Principal Investigator. José Manuel Baeyens (University of Granada). 01/01/ 2010 - 31/12/2012. Funding 1.036.000 €
6. GENIUS PHARMA Project, Development of new analgesics based on sigma-1 receptor ligands. Ministry of Industry, Commerce and Tourism. Center for Technological and Industrial Development (CDTI), CENIT Program. Principal Investigator. José Manuel Baeyens (University of Granada). 12/01/2006 - 11/01/2010. Funding: 556.800 €

C.3. Contracts

1. Evaluation of analgesic drugs: mechanisms of action and adverse effects (Contract No. C-3529 of the Fundación Empresa-Universidad de Granada). Esteve Laboratories. Principal Investigator. José Manuel Baeyens (University of Granada) 01/02/2012 - 31/12/2016. Funding: 410.000 €
2. Evaluation of analgesic drugs: mechanisms of action and adverse effects (Contract OTRI-3000 and its extensions, of the Office for the Transfer of Research Results). Esteve Laboratories. Principal Investigator. José Manuel Baeyens (University of Granada) 01/02/2011 - 31/01/2017. Funding: 400.000 €
3. Effects of paclitaxel and sigma-1 receptor ligands on the ultrastructure of peripheral nerve fibers. Esteve Laboratories. Principal Investigator. Javier Cañizares García (University of Granada). 01/01/2008 - 30/09/2010. Funding: 25.000 €
4. Modulation of the antineoplastic effect of paclitaxel by sigma-1 receptor antagonists in the treatment of solid tumors. Esteve Laboratories. Principal Investigators. Antonia Aránega Jiménez; José Carlos Prados Salazar (University of Granada). 01/10/2008 - 31/07/2009. Funding: 80.000 €

C.4. Patents

1. F.R. Grandchild; A. Parra; J.M. Baeyens; A. García-Granados; J.M. Entrena; E.J. Cobos; A. Martínez; F. Rivas. WO2011015692. World Patent (PCT). Use of pharmaceuticals for treating nociceptive, inflammatory and neurogenic pain. 02/10/2011. University of Granada.
2. F.R. Grandchild; J.M. Baeyens; A. García-Granados; J.M. Entrena; E.J. Cobos; A. Martínez; A. Parra; F. Rivas. ES 2333638. Spain. Use of maslinic acid for the treatment of pain of a nociceptive, inflammatory and neurogenic nature. 24/02/2010. University of Granada.

C.5. Supervised doctoral thesis

1. Title: Differential modulation by sigma-1 receptors of μ -opioid-induced antinociception and side effects: role of peripheral sigma-1 receptors.

Doctoral candidate: Cristina Sánchez Fernández.

C.6. Supervised final Master's project

1. Maria Teresa Madico Borrego, 2012. Qualification: Sobresaliente.

C.7. Journal Referee

Journal of Pharmacy and Pharmacology" (April, 2012) y "Neuroscience letters" (August, 2014).

C.8. Awards

1. VII Meeting of Young Pharmacologists of Andalusia (Granada, 2015)
2. XII Congress of the Spanish Pain Society / XIII Ibero-American Pain Meeting (Sevilla, 2015)
3. Bioiberica Award. XXXV National Congress of the Spanish Society of Pharmacology (Madrid, 2014)
4. XXXIV National Congress of the Spanish Society of Pharmacology (Murcia, 2013)
5. Award from the Social Council of the University of Granada to the CTS-109 Research Group in Pain Neuropharmacology, of which I have been part since 2003 (Granada, 2013).

C.9. Memberships of scientific societies

1. Member of the Spanish Society for Laboratory Animal Sciences (2015)
2. Institute of Neurosciences Federico Olóriz of the University of Granada (desde 2008).
3. Spanish Society of Pharmacology (desde 2004).
4. Research Group of the Junta de Andalucía CTS-109 "Neuropharmacology of Pain", directed by José Manuel Baeyens Cabrera. University of Granada (since 2003).