Curriculum Vitae

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Experimental Neurophysiology
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ACADEMIC DEGREES

- M.Sc degree in Secondary Education and Baccalaureate, Vocational Training and Language Teaching. Castilla-La Mancha University (UCLM). Toledo, Spain (2011).
- BSc. In Environmental Sciences. Castilla-La Mancha University (UCLM). Toledo, Spain (2008)

RESEARCH AND PROFESSIONAL EXPERIENCE

- Current Position: Research Technician, Experimental Neurophysiology, Hospital Nacional de Parapléjicos, SESCAM, Toledo, Spain.
- 2012 - 2014: Research technician, Foundation for Research in Paraplegia (P1220), Hospital Nacional de Parapléjicos FUHNPAIIN, Toledo, Spain.
- 2011 - 2012 Research technician, Fundación para la Investigación Sanitaria en Castilla-La Mancha (PI-2010/026), Hospital Nacional de Parapléjicos FUHNPAIIN, Toledo, Spain.
- 2010 - 2011: Master student, in Secondary Education and Baccalaureate, Vocational Training and Language Teaching. Castilla-La Mancha University (UCLM). Toledo, Spain
- 2007 - 2008: Lab technician in Agrary Laboratory of Caja Rural de Toledo, Toledo, Spain

SCIENTIFIC PUBLICATIONS

2023

1. Alonso-Calviño E*, **Fernández-López E***, Zaforas M, Rosa JM, Aguilar J. Increased excitability and reduced GABAergic levels in somatosensory cortex under chronic spinal cord injury. Exp Neurol. 2023 Nov;369:114504. doi: 10.1016/j.expneurol.2023.114504. Epub 2023 Aug 15. PMID: 37591355. (IF 5.33)

2. Miguel-Quesada C*, Zaforas M*, Herrera-Pérez S*, Lines J, Fernández-López E, Alonso-Calviño E, Ardaya M, Soria FN, Araque A, Aguilar J, Rosa JM. Astrocytes adjust the dynamic range of cortical network activity to control modality-specific sensory information processing. Cell Rep. 2023 Aug 29;42(8):112950. doi: 10.1016/j.celrep.2023.112950. Epub 2023 Aug 5. PMID: 37543946. (IF 9.42)

2022

3. Brocca ME, Mora-Rubio A, Alonso-Calviño E, **Fernández-López E**, Díez-Revuelta N, Martos-Puñal D, Aguilar J, Higuero AM, Abad-Rodríguez J. Normal Cortical Myelination in Galectin-4-Deficient Mice. Cells. 2022 Nov 3;11(21):3485. doi: 10.3390/cells11213485. PMID: 36359880; PMCID: PMC9658391. (IF 6.0)

2021

4. Rosa, JM*; Farré-Alins, V; Ortega, MC; Navarrete, M; Lopez-Rodriguez, A; Palomino-Antolin, A; **Fernández-Lopez, E**; Decouty, C; Narros-Fernández, P; Vila-del Sol, V; Clemente, D; Egea, Javier*. TLR4-pathway impairs synaptic number and cerebrovascular functions through astrocyte activation following traumatic brain injury. *British Journal of Pharmacology*, DOI: 10.1002/BPH.15488,*corresponding (IF 9.47)

5. Zaforas M, Rosa JM, Alonso-Calviño E, **Fernández-López E**, Miguel-Quesada C, Oliviero A, Aguilar J. Cortical layer-specific modulation of neuronal activity after sensory deprivation due to spinal cord injury. J Physiol. 2021 Oct;599(20):4643-4669. doi: 10.1113/JP281901. Epub 2021 Sep 28. PMID: 34418097; PMCID: PMC9292026. (IF 6.22)

2019

6. **Fernández-López E**, Alonso-Calviño E, Humanes-Valera D, Foffani G, Aguilar J. "Slow-wave activity homeostasis in the somatosensory cortex after spinal cord injury". Exp Neurology (2019) 322:113035. doi: 10.1016/j.expneurol.2019.113035. (IF 4.562)

2016

7. Humanes-Valera D, Foffani G, Alonso-Calviño E, **Fernández-López E**, Aguilar J. Dual Cortical Plasticity After Spinal Cord Injury. Cereb Cortex. 2017 May 1;27(5):2926-2940. doi: 10.1093/cercor/bhw142. PMID: 27226441. (IF 8.665)

8. Alonso-Calviño E, Martínez-Camero I, Fernández-López E, Humanes-Valera D, Foffani G, Aguilar J. Increased responses in the somatosensory thalamus immediately after spinal cord injury. Neurobiol Dis. 2016 Mar;87:39-49. doi: 10.1016/j.nbd.2015.12.003. Epub 2015 Dec 17. PMID: 26706597. (IF 5.078)

PROJECTS AS TEAM MEMBER

1. Piezo4Spine: Piezo driven theramesh: A revolutionary multifaceted actuator to repair the injured spinal cord (GA No. 101098597). HORIZON-EIC-2022.PATHFINDEROPEN-01. Start-End Date: 01/01/2023-31/12/2026. PI WP4 leader: Juliana M Rosa (in vivo evaluation).

2. Deciphering the role of GABAergic neuronal populations in the cortical reorganization after spinal cord injury. (GABAInCoRe). de Economía y Competitividad. 2020-2024. PI: Juan Aguilar.

3. Unmyelinated axonal segments as regulators of axonal plasticity associated with memory and learning. Molecular and functional characterization in the hippocampus. Ref: SBPLY/17/180501/000250. Consejería de Educación, Cultura y Deporte. Junta de Comunidades de Castilla-La Mancha. 2018-2021. PI: Juan Aguilar & José Abad.

4. Spatial and temporal heterogeneity of neuronal plasticity caused by a spinal cord injury in the somatosensory cortex. Ref: BFU2016-08665-P. Ministerio de Economía y Competitividad. 2017-2019. PI: Juan Aguilar Lepe.