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.

Part A. PERSONAL INFORMATION

CV date	24 Feb, 2022

First name	JOSE LUIS		
Family name	VENERO RECIO		

(*) Mandatory

A.1. Current position

Position	Professor of Biochemistry			
Initial date	2010			
Institution	University of Seville			
Department/Center		Biochemistry and Molecular Biology/Institute of Biomedicine of Seville (IBIS)		
Country	Spain		Teleph. number	
Key words	Microglía, Neuroinflammation, Neurodegenerative diseases			

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

Period	Position/Institution/Country/Interruption cause
2014-present	Responsible Investigator. Institute of Biomedicine (IBIS). Seville
2017-present	Head of Department of Biochemistry and Molecular Biology. University of Seville
2021-present	Elected member of the Research Commission. University of Seville
2000-2010	Assistant Professor. Department of Biochemistry and Molecular Biology. University of Seville
1997-2000	Associate Professor. Department of Biochemistry and Molecular Biology. University of Seville
1994-1997	Spanish government Contract for scientist working abroad. Department of Biochemistry. University of Seville
1992-1993	Postdoctoral fellowship. Andrus Gerontology Center. University of Southern California, Los Angeles, USA

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Pharmacy	University of Seville. Spain	1990
B.A. in Pharmacy	University of Seville. Spain	1986

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

Dr. Jose L. Venero received his degree in pharmacy in 1986 and received his PhD in 1990 in the University of Seville, Spain. He joined Franz Hefti lab at the Andrus Gerontology Center at the University of Southern California to complete his postdoctoral training. Currently, Dr. Venero is Professor of Biochemistry and Molecular Biology at the University of Seville and Principal Investigator of the Neuronal Aging Group of the Institute of Biomedicine of Seville (IBIS). Dr. Venero has participated as a member of the Technical Commission within the Spanish National Program (area of Biomedicine; years 2016 and 2021). Dr. Venero was editor of Journal of Neurochemistry from 2009 to 2015. Since 2003, Dr. Venero has obtained uninterrupted Public Grant Funding from the Spanish Government, specifically from the Ministries of Science and Technology, Education and Science and Economy and Competitiveness. In addition, he has obtained Financing from the Junta de Andalucía within the Excellence Projects Program. At the international level, Dr. Venero has received two projects from the Michael J. Fox Foundation for Parkinson's Research. As a result of the collaboration with Dr. Joseph, we identified non-apoptotic functions of killer caspases 8, 3 and 7 in the control of pro-inflammatory neurotoxic activation of microglia, which gained international recognition with its publication as a "full article" in Nature. Dr. Venero's research work has been aimed at understanding the molecular basis of neurodegeneration and neuroinflammation. Overall, our group maintains intensive International and National collaborations with different research groups.

Talented researchers incorporated to the group through highly competitive contracts (2015-present): Dr. Miguel Ángel Burguillos García: Ramón y Cajal Contract (year of incorporation: 2019); Dr. Manuel Sarmiento Soto: Marie Curie Contract (year of incorporation: 2018); Dr. Antonio Boza Serrano: Juan de la Cierva Contract (incorporación) (year of incorporation: 2021); Rocío Talaverón Aguilocho: Juan de la Cierva Contract (incorporación) (year of incorporation: 2022); Juan García Revilla: Margarita Salas Contract (February 2022).

Field relevant bibliometric indicators: over 115 international research articles; h-index: 46 (Scholar), 41 (Scopus); Citations: 7207 (Scholar), 5149 (Scopus). Since 2011, 50 published articles acting as senior or corresponding author in: 1 Nature (I.F: 49.96), 1 Neurobiology of Disease (I.F: 5.99), 1 Cell Death and Differentiation (I.F. 15.82) , 2 Journal of Neuroinflammation (I.F: 8.32), 2 Cell Reports (I.F: 9.42), 1 Anal Biochem (I.F: 3.36) , 2 Front Cell Neurosci (I.F: 5.50), 1 Aging (I.F: 5.68), 1 Oncotarget (I.F: 5.16), 1 Cell Death and Disease (I.F: 8.46) , 1 J. Clin. Med (I.F: 4.54), 1 Prog Neuropsychopharmacol Biol Psychiatry (I.F: 5.06) and 1 Acta Neuropathologica (I.F: 17.08).

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

C.1. Publications: a selection from 47 articles published since 2011. For full track of records, see https://pubmed.ncbi.nlm.nih.gov/?term=venero+jl&sort=date&size=100

1. Stratoulias V., Ruiz R., Kanatani S., ……**Venero JL**., Joseph B. (2021). Arg1+ microglia are critical for shaping cognition in female mice. **bioRxiv.** 456225. https://doi.org/10.1101/2021.08.15.456225 (under revision at ***Nature Neuroscience***)

We expect to complete a second revision within weeks to be sent to Nature Neuroscience. Overall, the editor's and reviewer´s tone was quite positive. This is a 5-year study leaded by Bertrand Joseph and Jose Luis Venero. This study has been the seed for the creation of a Consortium named MICRODIVE (www.microdive.org), leaded by Bertrand Joseph (Karolinska Institutet, Sweden), Per Uhlen (Karolinska Institutet, Sweden) and Jose Luis Venero (IBIS and University of Seville) aimed at deciphering the distinct microglia subtypes that coexist within the developing brain, characterize the programs that regulate their distinctive phenotypes and unique functions and establish how they

contribute to brain disorders throughout life. We have recently applied for grant support to ERC (synergy call).

2. Stratoulias V, **Venero JL**, Tremblay ME, and Joseph B. Microglial subtypes: diversity within the microglial community. **EMBO Journal** 2019 38(17):e101997. doi: 10.15252/embj.2019101997. Impact Factor: 11.59

This article ranks 4th among the most cited ones published in EMBO Journal considered for the elaboration of the 2020 Impact Factor (source: Journal of Citation Reports). The article was on the top 10 most read article on the journal website for over a year.

3. Carrillo-Jimenez A, Deniz O, Niklison-Chirou M,….. **Venero JL***, Branco MR*, Burguillos MA*. TET2 regulates the neuroinflammatory response in microglia. **Cell Reports** 29; 1-17 (2019)**;** https://doi.org/10.1016/j.celrep.2019.09.013. *, Shared Senior Authorship. Impact Factor: 9.42

This article was leaded by Miguel Branco, Miguel Ángel Burguillos and Jose Luis Venero, all of them acting as senior authors. First author of this article (Alejandro Carrillo Jimenez) and Irene García Dominguez, Juan García Revilla and Ana María Espinosa Oliva belong to our Research group. All in vivo studies were performed in our laboratory.

4. Boza-Serrano A, Ruiz R, Sanchez-Varo R, ……Vitorica J*, **Venero JL***, Deierborg T*. Galectin-3, a novel endogenous TREM2 ligand, detrimentally regulates inflammatory response in Alzheimer's disease. **Acta Neuropathologica** 2019, 138(2):251-273. doi: 10.1007/s00401-019-02013-z. *, Shared Senior Authorship. Impact Factor: 17.08

Role in this article. A consortium was created leaded by Tomas Deierborg (Lund University), Javier Vitorica (IBIS) and Jose Luis Venero (IBIS) to determine the role of galectin-3 in Alzheimer´s disease pathology. All experiments and conclusions were leaded by the three PIs and senior authorship shared.
Editor´s choice Science: https://science.sciencemag.org/content/364/6442/747.4
Editor's choice Science Translational Medicine: https://stm.sciencemag.org/content/11/491/eaax8310
This article has been cited/commented in several media: Alzorum, AlphaGalileo, Eurekalert, Seeking Alpha, Science Daily, Long Room, The Medical News, Fight Aging, etc
This article ranks 15th among the most cited ones published in Acta Neuropathologica considered for the elaboration of the 2020 Impact Factor (source: Journal of Citation Reports).

5. Hajji N, Garcia-Revilla J, Sarmiento Soto M, Perryman R, Symington JJ, Quarles CC, Healey DR, Guo Y, Orta-Vázquez ML, Mateos-Cordero S, Shah K, Bomalaski J, Anichini G, Tzakos AG, Crook T, O'Neill K, Scheck AC, **Venero JL**, Syed N. Arginine deprivation alters microglia polarity and synergises with radiation to eradicate non arginine auxotrophic glioblastoma tumors. **Journal of Clinical Investigation** 2022:e142137. doi: 10.1172/JCI142137. Impact Factor: 14.80

All in vivo experiments of this article were performed in our laboratory. Two members of our lab: Juan García Revilla and Manuel Sarmiento share first authorship with Nabil Hajji. This article has been cited/commented in several media: AlphaGalileo, MedicalXPress, Health Europa, Bionity, Pharmatutor, The Medical News, EurekAlert, etc. Human Clinical Trial are expected to start soon based on the promising results of this study.

6. Buchrieser J, Oliva-Martin MJ, Moore MD, Long JCD, Cowley SA, Perez-Simón JA, James W and **Venero JL**. RIPK1 is a critical modulator of both tonic and TLR-responsive inflammatory and cell death pathways in human macrophage differentiation. **Cell Death and Disease** 2018 9:973, doi 10.1038/s41419-018-1053-4 Impact Factor: 8.46

7. Shen X, Burguillos MA, Osman AM, ……. **Venero JL**, Blomgren K and Joseph B. Glioma-induced caspase-3 inhibition in microglia promotes a tumour-supportive phenotype. **Nature Immunology** 2016; 17(11):1282-1290. doi: 10.1038/ni.3545. Impact Factor: 25.60

8. Burguillos MA, Svensson M, Schulte T, …… **Venero JL***, Joseph B* and Deierborg T* Microglia-secreted Galectin-3 acts as a Toll-Like Receptor-4 ligand and contributes to microglial activation. **Cell**

Reports 2015 pii: S2211-1247(15)00140-0. doi: 10.1016/j.celrep.2015.02.012. *, Shared Senior Authorship. Impact Factor: 9.42

Article of the month Lund University April 2015:
http://www.med.lu.se/lmfm/news_archive/article_of_the_month_april_issue_2015

9. Viceconte N, Burguillos MA, Herrera AJ, de Pablos RM, Joseph B and **Venero JL** Neuromelanin activates proinflammatory microglia through a caspase-8-dependent mechanism. **Journal of Neuroinflammation** 2015 12:5 doi:10.1186/s12974-014-0228-x Impact Factor: 8.32

10. Burguillos MA, Deierborg T, Kavanagh E,.....**Venero JL*** and Joseph B*. Caspase signaling controls microglia activation and neurotoxicity. **Nature** 2011; 472, 319–324. *, Shared Senior Authorship. Impact Factor: 49.96

This article was leaded by Bertrand Joseph and Jose Luis Venero, both of them acting as senior authors. First author of this article (Miguel Ángel Burguillos) was a predoctoral student from my group at that time (recently awarded with a Ramon y Cajal contract). A short-term stay in Bertrand Joseph´s lab was the first step finally leading to the finding that killer caspases regulate proinflammatory microglia activation. This article was the beginning of a long-lasting and fruitful collaboration (18 articles published so far). Note; for several years, this article was consider as highly cited article and included among the selected 1% of best articles according to its academic field and number of citations (source: Essential Science Indicators).

C.3. Research projects

1. Papel de la galectina-3 en la respuesta inmune asociada a enfermedades del sistema nervioso central. Implicación en enfermedades neurodegenerativas y glioblastoma multiforme. Ministerio de Ciencia, Innovación y Universidades. RTI2018-098645-B-I00. (Instituto de Biomedicina de Sevilla). 01/01/2019-31/12/2021. 193.600 €.
2. Modulación de la activación microglial asociada a neurodegeneración. Relevancia en enfermedades neurodegenerativas. (Instituto de Biomedicina de Sevilla). Junta de Andalucía (Consejería de Conocimiento, Investigación y Universidad) (P18-RT-1372). 01/01/2021-31/12/2023. 140.352 €.
3. GB-AP2, a novel blood- to- brain innumotherapy for breast cancer brain metastases. METAPREMIO 21. (Instituto de Biomedicina de Sevilla)11/01/22-10/01/2024
4. Papel de la galectina-3 en el envejecimiento neuronal. Junta de Andalucía (Consejería de Economía y Conocimiento). (Instituto de Biomedicina de Sevilla). 01/02/2020-31/01/2022. 70.000 €.
5. A novel immunotherapy against brain metastasis. Horizon 2020 Framework Programme, European Commission, Research Executive Agency. Marie Curie Actions. Grant Agreement (GA) No: 795695 (University of Seville). 01/02/2019-31/01/2021. 170.121,6 €.
6. Funciones apoptóticas y no apoptóticas de las caspasas asesinas en el sistema nervioso central en condiciones normales y patológicas. Ministerio de Economía y Competitividad. SAF2015-64171-R (Instituto de Biomedicina de Sevilla). 01/01/2016-31/12/2018. 275.880 €.
7. Role of galectin 3 in Parkinson's disease pathogenesis. The Michael J. Fox Foundation for Parkinson's Research. (Instituto de Biomedicina de Sevilla). 22/12/2015-21/12/2016. 92.950 €.
8. Estudio de los mecanismos moleculares que regulan la inflamación cerebral y la longevidad. Proyectos de excelencia, Junta de Andalucía. Consejeria de Economía, Innovación y Ciencia. P10-CTS-6494 (University of Seville). 01/09/2011-30/04/2016. 294.652 €.
9. Papel de la caspasa-8 en el proceso de inflamación cerebral asociado a la neurodegeneración. Ministerio de Economía y Competitividad. SAF2012-39029 (Instituto de Biomedicina de Sevilla). 01/01/2013-31/12/2015. 131.000 €. principal investigator.
10. Caspase-8 control microglia activation and neurotoxicity in Parkinson’s disease. The Michael J. Fox Foundation for Parkinson’s Research (University of Seville). 01/12/2011-06/2013. 189.077,5 €.

C.4. Contracts, technological or transfer merits

Search for novel therapeutic targets for clinical intervention in Alzheimer´s disease. Fundación ACE. 26/05/21-26/05/2024. 21000€