CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

First name	Fco. Javier		
Family name	Villadiego Luque		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
ID number		URL Web: https://www.ibis-sevilla.es/es/investigacion/neurociencias/terapia-celular-y-fisiologia-molecular/	
e-mail			
Open Researcher and Contributor ID (ORCID)		0000-0003-2131-9013	

A.1. Current position

Position	Associate Professor		
Initial date	30/12/2019		
Institution	University of Seville		
Department/Center	Medical Physiology & Biophysics	Instituto de Biomedicina de Sevilla (IBiS)	
Country	Spain	Teleph. number	
Key words	neurodegeneration, neuroinflammation, SARS-CoV-2, cell therapy		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country
2012-2019	Assistant Professor / University of Seville / Spain
2010-2012	Postdoctoral Researcher / Instituto de Biomedicina de Sevilla (IBiS) / Spain
2007-2009	Postdoctoral Researcher / LRI-Cancer Research UK / United Kingdom
2002-2007	PhD Student / University of Seville / Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD	University of Seville	2007
Advances Studies Diploma	University of Seville	2004
Licensed in Biology	University of Seville	2001

Part B. CV SUMMARY

Articles: 34 (5 as first author and 9 as corresponding author; 11/14 in the 1st quartile and 5/14 in the 1st decile. Respect to all articles: 23/34 - 1st quartile; and 13/34 - 1st decile).
Book Chapters: 4 (1 as corresponding author). **H index: 17**
Thesis supervised: 4 (1 in progress) **Patents: 2** (1 patent pending)
Recognized research activity periods: 3 (2005-2010; 2011-2016; 2017-2022)
Recognized technology transfer periods: 1 (2008-2016)

From the beginning of my scientific career, my main goal has been to advance in the knowledge of the cellular and molecular events underlying neurodegeneration. In addition, during my career I have always tried to develop and improve therapeutic strategies to reduce the course of the neurodegenerative process. I started my PhD thesis in 2001 under the supervision of the Drs. José López-Barneo and Juan José Toledo-Aral studying the trophic effect of striatal carotid body grafts in animal models of parkinsonism. During my PhD thesis I acquired a strong experience in microsurgery, management of genetically modified mice colonies and cellular and molecular biology techniques. I continued my scientific training as postdoctoral fellow in the lab of Dr. Axel Behrens in the London Research Institute. During this period, I acquired a strong background in the molecular mechanism of neurodegeneration and in generation of genetically modified mouse models. Following my postdoctoral training, I

joined to the Institute of Biomedicine of Seville (IBiS) as Postdoctoral Researcher. In 2012, I obtained a position of Assistant Professor in the Department of Medical Physiology & Biophysics of the University of Seville, reaching the position of Associate Professor in 2019. During all this time I have continued my research focus on two complementary topics: (i) study the cellular and molecular events that occur in the neurodegenerative process, and (ii) to develop new therapeutic strategies to reduce the natural course of neurodegeneration.
Indeed, since 2022 I have been the Director of the Centre for Animal Experimentation (CEA) of the University of Seville. In summary, with almost 25 years of research experience in neurobiology I have acquired a strong background and expertise in the field of neurodegeneration. Because of that, I have published 34 articles and 4 chapter books (in between all of them, 10 as corresponding author), led seven research project as principal investigator (FIS and Ministry of Science and Innovation projects, and regional projects) and supervised 3 PhD theses.

Part C. RELEVANT MERITS

C.1. Publications

1**. Villadiego J[#],** García-Arriaza J[#], Ramírez-Lorca R, García-Swinburn R, Cabello-Rivera D, Rosales-Nieves A, Álvarez-Vergara MI, Cala-Fernández F, García-Roldán E, López-Ogáyar JL, Zamora C, Astorgano D, Albericio G, Pérez P, Muñoz-Cabello AM, Pascual A, Esteban M, López-Barneo J, Toledo-Aral JJ[#]. Full protection from SARS-CoV-2 brain infection and damage in susceptible transgenic mice conferred by MVA-CoV2-S vaccine candidate. **Nat Neurosci.** 2023. 26:226-238.
Impact factor (JCR 2023): 21.3. *3/310 (D1)-Neuroscience*
[#]***Corresponding Author***

2. **Villadiego J**, García-Swinburn R, García-González D, Lebrón-Galán R, Murcia-Belmonte V, García-Roldán E, Suárez-Luna N, Nombela C, Marchena M, de Castro F, Toledo-Aral JJ. Extracellular matrix protein anosmin-1 overexpression alters dopaminergic phenotype in the CNS and the PNS with no pathogenic consequences in a MPTP model of Parkinson's disease. **Brain Struct Funct.** 2023. 228: 907-920.
Impact factor (JCR 2023): 2.7. *2/22 (D1)-Anatomy & morphology*

3. **Villadiego J[#]**, Muñoz-Manchado AB, Sobrino V, Bonilla-Henao V, Suárez-Luna N, Ortega-Sáenz P, Pardal R, López-Barneo J, Toledo-Aral JJ[#]. Protection and Repair of the Nigrostriatal Pathway with Stem-Cell-Derived Carotid Body Glomus Cell Transplants in Chronic MPTP Parkinsonian Model. **Int. J. Mol. Sci**. 2023. 24: 5575.
Impact factor (JCR 2023): 4.9. *66/313 (Q1)-Biochemistry & Molecular Biology*
[#]***Corresponding Author***

4. Gadomski S, Fielding C, García-García A, Korn C, Ashraf S, **Villadiego J,** del Toro R, Domingues O, Skepper JM, Michel T, Zimmer J, Sendtner R, Dillon S, Poole K, Holdsworth G, Sendtner M, Toledo-Aral JJ, De Bari C, McCaskie AW, Robey PG, Méndez-Ferrer S. A cholinergic neuroskeletal interface promotes bone formation during postnatal growth and exercise. **Cell Stem Cell**. 2022. 29:1-17.
Impact factor (JCR 2022): 23.9. *9/191 (D1)-Cell Biology*

5. Alvarez-Vergara MI, Rosales-Nieves AE, March-Diaz R, Rodriguez-Perinan G, Lara-Ureña N, Ortega-de San Luis C, Sanchez-Garcia MA, Martin-Bornez M, Gómez-Gálvez P, Vicente-Munuera P, Fernandez-Gomez B, Marchena MA, Bullones-Bolanos AS, Davila JC, Gonzalez-Martinez R, Trillo-Contreras JL, Sanchez-Hidalgo AC, Del Toro R, Scholl FG, Herrera E, Trepel M, Körbelin J, Escudero LM, **Villadiego J**, Echevarria M, de Castro F, Gutierrez A, Rabano A, Vitorica J, Pascual A. Non-productive angiogenesis disassembles Aß plaque-associated blood vessels. ***Nat Commun***. 2021. 12:3098.
Impact factor (JCR 2021): 17.694. *6/73 (D1)-Multidisciplinary Sciences*

6**. Villadiego J**, Ramírez-Lorca R, Cala F, Labandeira-García JL, Esteban M, Toledo-Aral JJ, López-Barneo J. Is carotid body infection responsible for silent hypoxemia in COVID-19 patients? ***Function***. 2021.2: zqaa032.
Impact factor (JCR 2022): 6.2. *12/83 (Q1)-Physiology*

7. García-García A, Korn C, García-Fernández M, Domingues O, **Villadiego J,** Martín-Perez D, Isern J, Bejarano-García JA, Zimmer J, Pérez-Simón JA, Toledo-Aral JJ, Michel T, Airaksinen MS, Méndez-Ferrer S. Dual cholinergic signals regulate daily migration of hematopoietic stem cells and leukocytes. **Blood.** 2019;133:224-236.
Impact factor (JCR 2019): 17.794. *1/73 (D1)-Hematology.*

8. Trillo-Contreras JL, Ramírez-Lorca R, Hiraldo-González L, Sánchez-Gomar I, Galán-Cobo A, Suárez-Luna N, Sánchez de Rojas-de Pedro E, Toledo-Aral JJ, **Villadiego J#**, Echevarría M**#**. Combined effects of aquaporin-4 and hypoxia produce age-related hydrocephalus. **Biochim Biophys Acta Mol Basis Dis**. 2018; 1864: 3515-3526.
Impact factor (JCR 2018): 4.328. *13/72 (Q1)-Biophysics*
#*Corresponding Author*

9. **Villadiego J#,** Romo-Madero S, García-Swinburn R, Suárez-Luna N, Bermejo-Navas A, Echevarría M, Toledo-Aral JJ#. Long-term immunosuppression for CNS mouse xenotransplantation: effects on nigrostriatal neurodegeneration and neuroprotective carotid body cell therapy. **Xenotransplantation**. 2018; 25:e12410.
Impact factor (JCR 2018): 3.484. *9/25 (Q2)-Transplantation*
#*Corresponding Author*

10. **Villadiego J**, Labrador-Garrido A, Franco JM, Leal-Lasarte M, De Genst EJ, Dobson CM, Pozo D, Toledo-Aral JJ, Roodveldt C. Immunization with α-synuclein/Grp94 reshapes peripheral immunity and suppresses microgliosis in a chronic Parkinsonism model. **Glia.** 2018; 66:191-205.
Impact factor (JCR 2018): 5.829. *35/267 (Q1)-Neuroscience*

C.2. Congress.

1. Rodríguez-Gil A, Domínguez-García NI, Espadas-Villanueva I, Morón-Márquez L, Conde-Naranjo C, García-Guerrero E, Pérez-Simón JA, **Villadiego J,** Toledo-Aral JJ. alpha-Synuclein specific CAR-Treg cell therapy for Parkinson's Disease. ESGCT 32nd Annual Congress. 2025. Poster. Seville. Spain.

2. **Villadiego J**, García-Arriaza J, Ramírez-Lorca R, García-Swinburn R, Cabello-Rivera D, Rosales-Nieves AE, Álvarez-Vergara MI, Cala-Fernández F, García-Roldán E, López-Ogáyar JL, Zamora C, Astorgano D, Albericio G, Pérez P, Muñoz-Cabello AM, Pascual A, Esteban M, López-Barneo J, Toledo-Aral JJ. Full protection from SARS-CoV-2 brain infection and damage in susceptible transgenic mice conferred by MVA-CoV2-S vaccine candidate. XXIV International Poxvirus, Asfarvirus, and Iridovirus Conference. 2023. Poster. Düsseldorf, Germany.

3. Domínguez-García I, García-Guerrero E, Pérez-Simón JA, Toledo-Aral JJ, Rodríguez-Gil A, **Villadiego J**. Pathophysiological alterations of regulatory T cells in Parkinson's disease and generation of aSyn-CAR-Tregs as a novel therapeutic approach. SETGYC Biennial Congress. 2022. Oral presentation. Seville, Spain.

C.3. Scientific Research Projects.

C.3.1. Research projects.

1. PID2023-146386NB-I00. Sistema nervioso e infección por SARS-CoV-2, mecanismos y relevancia fisiopatológica en neurodegeneración: envejecimiento y enfermedad de Parkinson. Ministerio de Ciencia, Innovación y Universidades. 425.000,00€. 01/09/2024-31/12/2028. Principal Investigators (PIs): Juan José Toledo Aral y **Fco. Javier Villadiego Luque.**

2. PID2019-105995RB-I00. Envejecimiento y Regulación de la Expresión de GDNF en el Cuerpo Carotídeo: Relevancia Neuroprotectora. Ministerio de Ciencia e Innovación. 167.706,00€. 01/06/2020-31/05/2024. PIs: Juan José Toledo Aral y **Fco. Javier Villadiego Luque.**

3. PECOVID-0078-2020. Infección del cuerpo carotideo por SARS-CoV-2 como causa de la hipoxemia silenciosa en la enfermedad COVID-19. Consejería de Salud y Familias, Junta de Andalucía. 122.800,00€. 29/10/2021-31/12/2023. PIs: **Fco. Javier Villadiego Luque** y Mª Reposo Ramírez-Lorca.

4. US-1380891. Aging dependent regulation of carotid body GDNF expression: relevance in antiparkinsonian cell therapy. Consejería de Economía, Conocimiento, Empresas y Universidad, Junta de Andalucía. 90.000,00€. 01/01/2022-31/05/2023. PIs: Juan José Toledo-Aral y **Fco. Javier Villadiego Luque.**

5. P20_01130. Aplicabilidad terapéutica de linfocitos CAR-Treg en la enfermedad de Parkinson. Consejería de Economía, Conocimiento, Empresas y Universidad. 129.000,00€. 05/10/2021-31/03/2023. PI: **Fco. Javier Villadiego Luque.**

6. PI16/00493. Participación de las acuaporinas en la hidrocefalia asociada a hipoxia y envejecimiento: fisiopatología, biomarcadores y estrategias terapéuticas. Instituto de Salud Carlos III. Ministerio de Economía y Competitividad. 82.885,00 €. 01/01/2017-31/12/2019. PIs: Miriam Echevarría y **Fco. Javier Villadiego Luque.**

C.3.2. Scientific infrastructure projects.

1. EQC2024-008383-P. Dotación de resonancia magnética y plataforma quirúrgica para una Unidad de Imagen y Cirugía Traslacional. Ministerio de Ciencia, Innovación y Universidades. 1.999.500,00 €. 01/01/2024-31/12/2026. PI: **Fco. Javier Villadiego Luque.**

C.4. Contracts, technological or transfer merits.

1. Patent: ES2396814 / WO2013/001113. Process for detecting X-gal precipitate or other opaque precipitates by means of confocal microscopy. Levitsky K, **Villadiego J**, Toledo-Aral JJ, López-Barneo J. 26/03/2014.

2. Patent in Progress: Register nº: 2024/17 (Oficina de Transferencia de Tecnología SSPA). "Receptores de antígenos quiméricos específicos contra agregados de alfa-sinucleína". **Villadiego J**, Rodríguez-Gil A, Pérez-Simón JA, Toledo-Aral JJ, García-Guerrero E, Domínguez-García I.

C.5. Scientific or institutional positions.

1. Director of the Centre for Animal Experimentation (CEA-Oscar Pintado) of the University of Seville (https://citius.us.es/web/servicio.php?s=CEA).

2. Member of CIBERNED, Centro Investigación Biomédica en Red Enfermedades Neurodegenerativas.

3. Review Editor within the section of Neurodegeneration in Frontiers in Neuroscience.

4. Acting as reviewer in: NPJ-Parkinson's Disease, Lab Animal, Scientific Reports, Frontiers in Neuroscience, Cell Transplantation, Frontiers in Neurology, Xenotransplantation, Cells, Brain and Behaviour, Frontiers in Aging Neuroscience, etc. (WoS Researcher ID: F-2594-2015).