

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	David		
Family name	Baglietto-Vargas		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web:	
Open Researcher and Contributor ID (ORCID) (*)			

(*) Mandatory

A.1. Current position

Position	Associate Professor		
Initial date	17-01-2024		
Institution	University of Malaga		
Department/Center	Cell Biology	Faculty of Science	
Country	Spain	Teleph. number	
Key words	Alzheimer's disease, obesity, diabetes, adipose tissue, animal models, tau		

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

Period	Position/Institution/Country/Interruption cause
2024-Present	Associate Professor/University of Malaga/Spain
2020-2024	Beatriz Galindo Senior/University of Malaga/Spain
2015-2019	Assistant Researcher Professor/University of California, Irvine/United States
2009-2015	Postdoctoral Researcher/University of California, Irvine

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD	University of Malaga/Spain	2008
Licensed	University of Malaga/Spain	2002

(Include all the necessary rows)

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

I had the privilege to be mentored by two outstanding leaders in the field of neurodegenerative diseases, Drs. A. Gutierrez (Spain; CIBERNED) and Frank LaFerla (USA; UCIMIND) with whom I developed a robust background on the cellular and molecular mechanisms underlying neurodegenerative disorders, with a special focus on Alzheimer's disease (AD) pathogenesis.

My research program is centered on elucidating how multiple risk factors such as genetic, environmental and comorbidities, are involved in the onset and progression of AD. I had a long track-record studying these risk factors and creating novel animal models for this brain disease, with over 56 peer-reviewed publications (21 publication as first or last author, 16 of them D1 and 47 of them Q1) in prestigious journals such as, Biol Psychiatry (I.F: 11.9), PNAS (I.F: 9.6), Aging Cell (I.F: 7.6), Trends in Neurosciences (I.F: 11.4), Acta Neuropathologica (I.F: 18.1), Nature Communication (I.F: 17.6), over 100

oral and poster communications, and h-index factor 31 with a total citation of 3657 (scopus). Over these years, I have created an important network of collaborators nationally and internationally such as Drs. Frank LaFerla, Charles Glabe, Mathew Blurton-Jones, Kim Green, Xiangmin Xu, Todd Golde, Agenor Limon in USA and Kristine Freude, Maria Laura Giuffrida, Antonia Gutierrez, Manuela García López in Europe.

In the recent years, I have developed a great interest to elucidate the underlying cellular and molecular mechanisms by which two of the most important comorbidities affecting the human population, diabetes and obesity, contribute to Alzheimer's disease pathogenesis by using novel animal models. My pioneering studies has contributed to understand how diabetes causes cognitive and synaptic impairments mediated by tau (Abbondante et al., 2014 and Trujillo-Estrada et al., 2019). In addition, I am developing a novel approach to understand how insulin resistant impact in the onset and progression of the disease. As such, I am using a genetic approach by developing new animals models and disrupting the insulin signaling in several key cells in the brain to determine the impact of insulin signaling in the physiology of these cells and in Alzheimer pathogenesis. Currently, I am developing a new line of research in my lab with the aim to investigate the relationship between the white adipose tissue, an important endocrine organ, and the brain. In this proposal, I will use novel animal models of AD and generated from the consortium MODEL-AD (<https://www.model-ad.org/>). Moreover, I had received multiple honors and awards during my research career and I obtained several competitive fellowship grants to support my undergraduate, graduate and postdoctoral research from national and international foundations and government programs (e.g. undergraduate and graduate research program from Spanish Government). I am currently developing a strong and productive research program as Principal Investigator, being funded by several prestigious foundations (Alzheimer Association, Larry L. Hillblom), Ministry of Science and Innovation, pharmaceutical companies (Visum Pharma, Inc) and Institutes (UCIMIND). In addition, I am responsible for the supervision and mentoring of junior level researchers (e.g Ph.D. students, and postdoctoral fellows), providing expert scientific input and critical evaluation to ongoing and newly established research projects. Currently, one of his Ph.D students has finished her doctoral thesis with maximum distinction (Cum Laude) and I have two more thesis ongoing. In addition, he supervised 15 undergraduate, 5 graduate students, and 4 master degree student. During the past ten years, I had provided review service over 90 times in 40 different journals such as Molecular Psychiatry, Acta Neuropathologica, Journal of Neuroinflammation, Stem Cell Reports, etc, grant review service in several respected foundations and national agencies (including Alzheimer's Association, Institute for Memory Impairment and neurological Disorder, Spanish Research State Agency, Rosetress Trust foundation in UK and Young International Academic for University of Luxembourg) and I am associated editor of Neuroscience Letter and Frontiers Neuroscience respectively. In addition, I am member of a group in CIBERNED (<https://www.ciberned.es/grupos/grupo-de-investigacion?id=28310>), IBIMA Institute (<https://ibima.eu/project/c-09/>), NEURORECA Network (<https://www.neuroreca.com/quienessomos>) and recently a member of a group of younger investigators created by the Teófilo Hernando Institute in Madrid. In regards of teaching experience, I have long track record as a professor in many different classes related with Cellular and Molecular Biology and Neuroscience, and a Master's program in Neuroscience in USA and Spain. Finally I am member of the advisory commission for the selection of Assistant Professors in the department of Cell Biology at the University of Malaga.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

Selected from 58 peer-reviewed publications: <https://pubmed.ncbi.nlm.nih.gov/?term=baglietto-vargas+D&sort=date&size=50>

1. Bettinetti-Luque M, Trujillo-Estrada L, Garcia-Fuentes E, Andreo-Lopez J, Sanchez-Varo R, Garrido-Sanchez L, Gomez-Mediavilla A, Lopez MG, Garcia-Caballero M, Gutierrez A & **Baglietto-Vargas D**. Adipose tissue as a therapeutic target for vascular damage in Alzheimer's disease. British Journal of Pharmacology. 2024. Mar;181(6):840-878.. doi:10.1111/bph.16243. IF: **9.47 (11/11)**.
2. **Baglietto-Vargas D**, Forner S, Cai L & LaFerla FM. Generation of a humanized A β expressing mouse demonstrating aspects of Alzheimer's disease-like pathology. Nat Commun. 2021 Apr 23;12(1):2421. doi: 10.1038/s41467-021-22624-z. IF: **17.6. (1/35)**.

3. Trujillo-Estrada L, Sanchez-Mejias E, Sanchez-Varo R, & **Baglietto-Vargas D**. Animal and Cellular Models of Alzheimer's Disease: Progress, Promise, and Future Approaches. *Neuroscientist*. 2022 Dec;28(6):572-593. doi: 10.1177/10738584211001753. Epub 2021 Mar 26. IF: 7.23. (11/11).
4. Martini AC., Gomez-Arboledas A., Forner S., **Baglietto-Vargas D***, Medeiro R* & LaFerla FM*. (2019). Amyloid-beta impairs TOM1-mediated IL-1R1 signaling. *Proc Natl Acad Sci USA*. 2019 Sep 30. IF: 9.6. ***equal contribution**. (17/20).
5. Trujillo-Estrada L., Nguyen C., da Cunha C., **Baglietto-Vargas D*** & LaFerla FM*. (2019). Tau underlies synaptic and cognitive deficits for type 1, but not type 2 diabetes mouse models. *Aging Cell*. 2019 Jun 18(3):e12919. IF: 7.6. ***equal contribution**. (10/11).
6. **Baglietto-Vargas D.**, Prieto GA, Limon A, & LaFerla FM. (2018). AMPA signaling and acting cytoskeleton impairments underlie early synaptic dysfunction in a mouse model of Alzheimer's disease. *Aging Cell*. 2018 Jun 6:e12791. IF: 7.6. (1/16).
7. Sosna J., Philipp S., Albay III R., **Baglietto-Vargas D** & Glabe C. (2018). Early long-term administration of the CSF1R inhibitor PLX3397 ablates microglia and reduces accumulation of intraneuronal amyloid, neuritic plaque deposition and pre-fibrillar oligomers in 5xFAD mouse model of Alzheimer's disease. *Mol Neurodegeneration*. 2018 Mar 1;13(1):11. IF: 8.3. (5/7).
8. Forner S., **Baglietto-Vargas D.**, Martini AC., & LaFerla FM. (2017). Synaptic impairment in Alzheimer's disease: A dysregulated symphony. *Trends Neurosci*. S0166-2236(17)30069-3. IF: 11.4. (2/5).
9. **Baglietto-Vargas D.**, Shi J., Yaeger DM & LaFerla FM. (2016). Diabetes and Alzheimer's disease crosstalk. *Neuroscience and Biobehavioral Reviews*. 64: 272-87. IF: 8.3. (1/5).
10. Prieto GA., Snigdha S., **Baglietto-Vargas D** & Cotman CW. (2015). Synapse-specific IL-1 receptor subunit reconfiguration augment vulnerability to IL-1 β in the aged hippocampus. *Proc Natl Acad Sci USA*. 112(36): E5078-87. IF: 9.5. (3/7).

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)

The PI has over 100 communications in national and international meetings in Neuroscience as oral and poster. Here, it is selected the recent communications in 2024.

• 28 de Julio de 2024- 1 de Agosto de 2024: Congreso internacional de la Alzheimer's Association (AAIC).

- 1) The role of microglial cells in amyloid propagation and aggregation. Andreo-Lopez J, Bettinetti-Luque M, Do Huynh K, MinhThu Nguyen M, Cheung A, Pham Tran J, Da Cunha C, Trujillo-Estrada L, Campos-Moreno C, Garcia-Leon JA, Fatuarte-Juli I, Morales-Cabello M, Nuñez-Diaz C, Martini AC, Forner S, Gutierrez A, LaFerla FM and **Baglietto-Vargas D**. (Poster).
- 2) Exploring the relationship between adipose tissue and Alzheimer's Disease. Miriam Bettinetti-Luque, Trujillo-Estrada L, Andreo-Lopez J, Campos-Moreno C, Fatuarte-Juli I, Morales-Cabello M, Da Cunha C, Sanchez-Mejias E, LaFerla FM, Gutierrez A, and **Baglietto-Vargas D**. (Poster).

• 4 de Julio de 2024- 5 de Julio de 2024: III Simposio de Jóvenes Investigadores organizado por la Real Academia Nacional de Medicina y la Fundación Teófilo Hernando (Madrid, España)

- 1) Impacto del tejido adiposo en la progression de la enfermedad de Alzheimer. **Baglietto-Vargas D**. (Oral Communication-Invited).
- 2) Extractos cerebrales de modelos transgénicos y de pacientes de Alzheimer modulan de forma diferencial la patología A β y Tau. Andreo-Lopez J, Bettinetti-Luque M, Morales-Cabello M, Fatuarte-Juli I, Campos-Moreno C, Garcia-Leon JA, Gutierrez A and **Baglietto-Vargas D**. (Poster).

• 25 de Junio de 2024- 29 de Junio de 2024: Congreso internacional Federation of European Neuroscience Societies (FENS Forum 2024) (Viena, Austria).

- 1) Exploring the relationship between adipose tissue and Alzheimer's disease pathogenesis. Bettinetti-Luque M, Trujillo-Estrada L, Andreo-Lopez J, Campos-Moreno C, Fatuarte-Juli I, Morales-Cabello M, Da Cunha C, Sanchez-Mejias E, LaFerla FM, Gutierrez A y **Baglietto-Vargas D**. (Poster).

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

Selected from 20 research projects, including 9 of them as PI and 11 of them as a co-investigator.

1. Pilot project for Beatriz Galindo. University of Malaga (PI: Dr. Baglietto-Vargas D).

Title: "The role of vascular insulin signaling in Alzheimer's disease".

Dates: 01/03/2023-31/03/2025. Support: 10.000€.

2. Visum Pharma, Inc. 8.06/5.02.6174 (PI: Dr. Baglietto-Vargas D).

Title: "Study the therapeutic efficacy of a compound that target microglia-mediated synaptic removal in Alzheimer's disease".

Dates: 01/03/2022-30/09/2023. Support: 108.000€.

3. Alzheimer's Association AARG-22-928219 (PI: Dr. Baglietto-Vargas D).

Title: "Impact of white adipose tissue on tau pathology in transgenic mice".

Dates: 01/06/2022-31/05/2025. Support: \$150.000.

4. Ministry of Science, University and Innovation, Spain PID2019-108911RA-100 (PI: Dr. Baglietto-Vargas D).

Title: "Amyloid seeding and propagation in sporadic Alzheimer's disease: deciphering novel pathogenic mechanisms and therapeutic targets". Dates: 01/06/2020-31/05/2025. Support: 163.000€.

5. Research project, Junta de Andalucía P18-RT-2233(PI: Dr. Gutierrez A and Co-Investigator: Dr. Baglietto-Vargas D).

Title: "Astrocyte as pathogenic mechanisms in Alzheimer's diseases: new therapeutic options". Dates: 01/01/20-01/31/23. Support: 140.352€.

6. National Institute of Aging (NIA) U54-AG054349-01 (PI: Dr. Frank LaFerla and Andrea Tenner Co-Investigator: Dr. Baglietto-Vargas D).

Title: "UC Irvine AD Translational Center for Disease Model Resources". Dates: 09/15/17-08/31/22. Support: \$11.355.415.

7. UCIMIND Pilot project (PI: Dr. Baglietto-Vargas D).

Title: Investigating A β seed propagation in a novel humanized mouse model of sporadic AD. Dates: 03/2018-02/2019. Support: \$30.000.

8. Alzheimer's Association NIRG-15-363477 (PI: Dr. Baglietto-Vargas D).

Title: "Molecular mechanisms of synaptic degeneration in Alzheimer's disease". Dates: 08/2015-08/2017. Support: \$100.000.

9. Brightfocus Foundation A2015535S (PI: Dr. Frank LaFerla Co-Investigator: Dr. Baglietto-Vargas D).

Title: "Impact of diabetes on tau pathology and cognition in AD transgenic mice". Dates: 01/07/15-31/07/18. Support: \$250.000.

10. Larry Hillblom Foundation 2013-A-016-FEL (PI: Dr. Baglietto-Vargas D)

Title: "Molecular mechanisms linking Diabetes mellitus and Alzheimer's disease". Dates: 06/2013- 06/2016. Support: \$180.000

C.4. Contracts, technological or transfer merits, Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any.

1. Visum Pharma, Inc. 8.06/5.02.6174. (PI: Dr. Baglietto-Vargas D).

Title: "Study the therapeutic efficacy of a compound that target microglia-mediated synaptic removal in Alzheimer's disease". Dates: 01/03/2022-30/09/2023. Support: 108.000€.