

**Part A. PERSONAL INFORMATION**

**CV date** 09/09/2025

First and Family name	Jorge Montesinos Selfa				
ID number	15418159V	Age	35	Gender	Male
Researcher codes	SCOPUS Author ID	55681616700			
	ORCID	0000-0002-9767-2246			
	Loop	463363			

**A.1. Current position**

Name of Institution	Centro de Investigaciones Biológicas-Margarita Salas (CSIC)			
Department	Biomedicine			
Address and Country	Ramiro de Maeztu, 9. Madrid (Spain)			
Phone number		E-mail	<a href="mailto:Jorge.montesinos@cib.csic.es">Jorge.montesinos@cib.csic.es</a>	
Current position	Group Leader		From	2025
Key words	microglia, cholesterol, metabolism, inflammation, neurodegeneration			

**A.2. Previous position**

Name of Institution	Centro de Investigaciones Biológicas-Margarita Salas (CSIC)				
Department	Biomedicine				
Address and Country	Ramiro de Maeztu, 9. Madrid (Spain)				
Current position	Postdoctoral Research Scientist		From 2022 to 2024		

Name of Institution	Columbia University Irving Medical Center				
Department	Neurology				
Address and Country	516 W 162nd Street, New York City, NY. USA				
Current position	Postdoctoral Research Scientist		From 2017 to 2022		

**A.3. Education**

PhD	University	Year
Programa Oficial de Doctorado en Neurociencias	Universitat de València-Centro de Investigación Príncipe Felipe	2017
Máster Universitario en Neurociencias Básicas y Aplicadas	Universitat de València	2012
Licenciado en Biotecnología	Universidad Politécnica de Valencia	2011

**A.3. Indicators of Quality in Scientific Production**

**Publications:** 28 (18 articles, 6 reviews, 3 book chapters, 1 editorial).

**Publications on Q1:** 20 **on D1:** 9

**First Author:** 14 (including 4 as a first co-author). Second author: 7. (Co-)corresponding: 3

**Scopus: h-index:** 19 **Citations:** 1744 **Average citations/year (2021-2024):**232

**Submitted under review manuscripts:** 2 (EMBO J. & EMBO Reports, co-corresponding)

**Part B. CV SUMMARY**

The central mission of the **Lipid Regulation of Immunometabolism Lab** is to understand how lipids influence microglial metabolism and function, with a particular focus on their relevance to ageing and neurodegenerative diseases such as Alzheimer's disease (AD). A key aspect of my research involves investigating the role of membrane contact sites (MCSs) as platforms for lipid exchange - particularly cholesterol - and regulatory hubs for metabolism. The foundation of my independent research line, focusing on how MCS regulate microglial function,

is outlined in a recent review I published as corresponding author (Navarro and Montesinos, 2025. *Contact*).

My passion for neuroscience began during my Ph.D. at the Principe Felipe Research Center, where I studied neuroinflammation in alcohol-induced neurodegeneration, earning a *cum laude* Ph.D. and the Outstanding Doctorate Award. As a postdoctoral researcher at Columbia University, I focused on the role of mitochondria-associated ER membranes (MAM) and their role in lipid homeostasis in glia and neurons. During this time, I was awarded a Pilot Grant from the AD Research Center and a competitive three-year Alzheimer's Association project, culminating in a first-author publication in *EMBO Journal* that linked cholesterol accumulation to MAM dysfunction in AD.

In 2022, I returned to Spain with a Juan de la Cierva-Incorporación and a Marie Skłodowska-Curie Postdoctoral Fellowship to expand my independent research line. In February 2025, I established my independent lab at CIB-Margarita Salas, currently comprising two Ph.D. student and one Research Assistant, supported by the Talento-César Nombela grant under the Madrid Government's program for research excellence and PID2024-161283OA-I00 from AEI.

Our research explores the impact of ER-mitochondria contact sites (MAM) and Lysosome-ER (LyER) on microglial bioenergetics and lipid homeostasis, particularly in the context of genetic risk factors for AD and ageing. Although recently established, my lab has already presented findings at national conferences (SEBBM, Cáceres, 2025; CellMet Madrid, 2025) and international meetings (EMBO Workshop on Membrane contact Sites, 2025). Our work has already yielded important insights into lipid-mediated bioenergetic regulation and organellar communication, promising a deeper understanding of microglial roles in neurodegeneration and ageing.

### **B.1. Research & development Activity Organization**

2022-2025	Gender Equality Committee, CIB-CSIC
2014-2015-2016	Organizing Committee for Congreso de Predoctorales de Valencia.
2015	Organizing Committee for 15 <sup>th</sup> European Society for Biomedical Research on Alcoholism Congress.

### **B.2. Reviewing Activities**

2025	Member of the PhD dissertation committee of Yolanda Orantos-Aguilera. Universidad de Extremadura. Badajoz. Spain.
2022-2025	Review Editor in Frontiers in Cellular Neuroscience and in Signaling.
2022	Evaluator of the EU-funded MSCA EMERALD Programme.
2021	External review panel member for Master en Neurociencias. Valencia International University. Valencia. Spain.
2021	Guest Associate Editor in Frontiers in Neuropharmacology.

### **B.3. Teaching Activities**

- 2024-Training of Cristina Antón, Trabajo Final de Máster en Neurociencias, Universidad Complutense de Madrid (UCM). Grade: 10. Title: Modelling neurodegeneration in vitro: CNS-derived insults trigger inflammatory responses in microglial-like cells.
- 2024-Training of Irene Aguado, Trabajo Final de Grado, UCM, Grado en Bioquímica. Grade: 9,5. Title: Cholesterol regulation in microglia as a pathological mechanism in Alzheimer's Disease.
- 2024-Training and supervision of Ariadna Rodríguez, Trabajo Final de Grado, Universidad Autónoma de Madrid, Grado en Biología. Grade:9,5. Title: Analysis of mitochondria-associated to the ER as immunometabolic platforms in neuroinflammation.
- 2023-Supervision of Álvaro Hidalgo, Trabajo Final de Grado, UCM, Grado en Bioquímica. Grade: 8,9. Title: Study of the lipid regulation of microglia and its relationship with Alzheimer's disease.
- 2024-2025. Microscopy Course in CIB-Margarita Salas.

### **B.4. Honors and Awards**



- 2021 Juan de la Cierva-Incorporación Fellowship
- 2018 ADRC Pilot Grant Award. 1 year fellowship (only 3 grantees/year) pilot grants for emerging new AD researchers in Columbia University Medical Center. **PI. \$50,000**
- 2017 Outstanding Doctorate Award, University of Valencia. Spain
- 2015 International Travel Fellowship, Program Fundació Ramón Areces-CIPF. Spain. Three months stay. Advisor: Dr. Neil Harrison. Dept. of Anesthesiology. Columbia University.

## **Part C. RELEVANT MERITS**

**C.1. Publications.** (nº x / nº y): authorship position/ total authors. IF: impact factor.

- 1 **Research Article.** **J Montesinos**; M Pera; D Larrea; et al. (1/13). 2020. The Alzheimer's disease-associated C99 fragment of APP regulates cellular cholesterol trafficking. *EMBO Journal*. 39-20 (e103791). IF, 11.59.
- 2 **Review.** E Navarro; **J Montesinos** (Corresponding author). 2025. Mitochondria-Associated endoplasmic reticulum membranes in microglia: one contact site to rule them all. *Contact (Thousand Oaks)* 29; 8:25152564241312807.
- 3 **Research Article.** D Larrea; KA Tamucci; K Kabra; KR Velasco; TD Yun; M Pera; **J Montesinos**; et al. (7/16). 2025. Altered MAM function shifts mitochondrial metabolism in amyotrophic lateral sclerosis. *Nat Commun* 16(1):379.
- 4 **Research Article.** F Ibanez; **J Montesinos\***; E Area-Gomez; C Guerri; M Pascual\* (2/5). \*co-corresponding authors. 2021. Ethanol induces extracellular vesicle secretion altering lipid metabolism through the mitochondria-associated ER membranes and sphingomyelinases. *Int J Mol Sci*. 22 (16):8438. IF, 5.92.
- 5 **Research Article.** J Chen; RK Soni; Y Xu; S Simoes; F Liang; L DeFreitas; R Hwang; **J Montesinos**; et al. (8/13). 2023. Juvenile CLN3 disease is a lysosomal cholesterol storage disorder: similarities with Niemann-Pick type C disease. *eBiomedicine*. 92:104628. IF, 9.7.
- 6 **Research Article.** M Etxebeste-Mitxelorena, H Flores-Romero, S Ramos-Inza, E Masiá, M Nenchova, **J Montesinos**; et al;. (6/14). 2025. Modulation of MERCs by small molecules as a new strategy for restoring lipid metabolism in amyotrophic lateral sclerosis model. *J Med Chem* 68(2):1179-1194.
- 7 **Research Article.** M Pera; D Larrea; C Guardia-Laguarta; **J Montesinos**, et al;. (4/17). 2017. Increased localization of APP-C99 in mitochondria-associated ER membranes causes mitochondrial dysfunction in Alzheimer disease *EMBO Journal*. 36-22, pp.3356-3371. IF, 10.56.
- 8 **Research Article.** **J Montesinos**; M Pascual; M Rodriguez-Arias; J Miñarro; C Guerri. (1/5). 2016. Involvement of TLR4 in the long-term epigenetic changes, rewarding and anxiety effects induced by intermittent ethanol treatment in adolescence. *Brain, Behavior and Immunity*. 53, pp.159-171. IF, 6.35.
- 9 **Research Article.** **J Montesinos**; M Pascual; A Pla; C Maldonado; M Rodriguez-Arias; J Miñarro; C Guerri. (1/7). 2015. TLR4 elimination prevents synaptic and myelin alterations and long-term cognitive dysfunctions in adolescent mice with intermittent ethanol treatment. *Brain, Behavior and Immunity*. 45, pp.233-244. IF, 6.53.
- 10 **Research Article.** **J Montesinos**; A Gil; C Guerri. (1/3). 2017. Nalmefene prevents alcohol-induced neuroinflammation and alcohol drinking preference in adolescent female mice: role of TLR4. *Alcoholism: Clinical and Experimental Research*. 41-7, pp.1257-1270. IF, 3.22.

## **C.2. Invited Lectures, conferences and scientific divulgation**

- 2025 SEBBM. Cáceres. Madrid. Spain
- 2024 Membrane Contact sites in health and disease. Fusion Meeting. Cancún. Mexico.
- 2024 European Researcher's Night. Madrid. Spain.
- 2023 Current Trends in Biomedicine Workshop. Membrane Contact Sites. UNIA. Spain.
- 2022 New insights into metabolism and mitochondria Congress. Madrid. Spain.
- 2021 Centro de Investigaciones Príncipe Felipe. Valencia. Spain
- 2020 Neurology Department. Columbia University. New York City. USA. Annual Retreat.
- 2018 Taub Institute for Alzheimer's Research Center Annual Retreat. New York. USA.
- 2016 European Society for Biomedical Research on Alcoholism. ESBRA Congress. Valencia. Spain. 2015