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1.- ACADEMIC DEGREES

- Ph.D. in Neuroscience, *Cum laude* (2019). *Universidad del País Vasco (UPV/EHU)*. Leioa, Spain.
- M.D. in Teaching training in education (2015). *Universidad de Castilla-La Mancha*. Toledo, Spain.
- M.Sc. in Neuroscience (2014). *Universidad Autónoma de Madrid*. Madrid, Spain.
- Bachelor of Biology (2012). *Universidad Complutense de Madrid*. Madrid, Spain.

2.- RESEARCH AND PROFESSIONAL EXPERIENCE

- **2021:** Postdoctoral fellow, supported by *Consejería de Sanidad de Castilla-La Mancha* and *Fundación del Hospital Nacional de Paraplégicos (EXP_04)*. Neuroimmuno-Repair Group. *Hospital Nacional de Paraplégicos*. Toledo, Spain.
- **2020:** Postdoctoral fellow, supported by *Fundación Jesús de Gangoiti Barrera*. Laboratory of Neurobiology. Achucarro Basque Center for Neuroscience. Leioa, Spain.
- **2015-2019:** Ph.D. Student. Predoctoral fellow supported by *Ministerio de Economía y Competitividad*, Government of Spain (FPI; **BES-2014-070512**). Laboratory of Neurobiology. *Universidad del País Vasco (UPV/EHU)* and Achucarro Basque Center for Neuroscience. Leioa, Spain.
- **2014:** Secretary assistant fellow, supported by *Universidad Autónoma de Madrid*. Teaching unit of *Hospital La Paz*. Madrid, Spain.
- **2013-2014:** M.Sc. Student, *Universidad Autónoma de Madrid*. Neurovascular research group. *Instituto Cajal (CSIC)*. Madrid, Spain.

3.- PUBLICATIONS

- Original papers

2020

- **Serrano-Regal, MP**; Luengas-Escuza, I; Bayón-Cordero, L; Ibarra-Aizpurua, N; Alberdi, E; Pérez-Samartín, A; Matute, C and Sánchez-Gómez, MV. 2020. Oligodendrocyte differentiation and myelination is potentiated via GABA_B receptor activation. *Neuroscience*, 439: 163-180. doi: 10.1016/j.neuroscience.2019.07.014.

- Matute, C; Palma, A; **Serrano-Regal, MP**; Maudes, E; Barman, S; Sánchez-Gómez, MV; Domercq, M; Goebels, N and Dalmau, J. 2020. N-Methyl-D-Aspartate receptor antibodies in autoimmune encephalopathy alter oligodendrocyte function. *Ann Neurol*, 87: 670-676. doi: 10.1002/ana.25699.

- COVID-19 Basque Inter-institutional Group (coBIG) coordinators and participants: Guruzeaga, X; Sierra, A; Marino, D; Santin, I; Nieto-Garai, JA; Bilbao, JR; Lorizate, M; Aspichueta, P; coBIGparticipants; Mayor, U. 2020 (*preprint*). Fast SARS-CoV-2 detection protocol based on RNA precipitation and RT-qPCR in nasopharyngeal swab samples. *MedRxiv*. doi: <https://doi.org/10.1101/2020.04.26.20081307>.

2019

- Quintela-López, T; Ortiz-Sanz, C; **Serrano-Regal, MP**; Gaminde-Blasco, A; Valero, J; Baleriola, J; Sánchez-Gómez, MV; Matute, C and Alberdi, E. 2019. A β oligomers promote oligodendrocyte differentiation and maturation via integrin β 1 and Fyn kinase signaling. *CellDeathDis*, 10: 445. doi: 10.1038/s41419-019-1636-8.

2018

- Canedo-Antelo, M; **Serrano, MP**; Manterola, A; Ruiz, A; Llaverro, F; Mato, S; Zugaza, JL; Pérez-Cerdá, F; Matute, C and Sánchez-Gómez, MV. 2018. Inhibition of casein kinase 2 protects oligodendrocytes from excitotoxicity by attenuating JNK/p53 signaling cascade. *Front Mol Neurosci*, 11: 333. doi: 10.3389/fnmol.2018.00333.

2017

- **Serrano, MP***; Herrero-Labrador, R*; Futch, HS; Serrano, J; Romero, A; Fernández, AP; Samadi, A; Unzeta, M; Marco-Contelles, J and Martínez-Murillo, R. 2017. The proof-of-concept of ASS234: peripherally administered ASS234 enters the central nervous system and reduces pathology in a male mouse of Alzheimer disease. *J Psychiatry Neurosci*, 42: 59-69. doi: 10.1503/jpn.150209. **These authors contributed equally to this work.*

- Reviews

2020

- **Serrano-Regal, MP**; Bayón-Cordero, L; Ordaz, RP; Garay, E; Limon, A; Arellano, R.O; Matute, C and Sánchez-Gómez, MV. 2020. Expression and function of GABA receptors in myelinating cells. *Front Cell Neurosci*, 14: 256. doi: 10.3389/fncel.2020.00256.

- Book chapters

2018

- Sánchez-Gómez, MV; **Serrano, MP**; Alberdi, E; Pérez-Cerdá, F and Matute, C. 2018. Isolation, expansion and maturation of oligodendrocyte lineage cells obtained from rat neonatal brain and optic nerve. *Myelin: Methods and Protocols*, 1791: 95-113. Humana Press. ISBNN: 978-1-4939-7861-8. doi: 10.1007/978-1-4939-7862-5_8.

4.- GRANTED RESEACH PROJECTS

- Competitive R&D projects
 - **2020-2021**: *Aplicación del test RT-PCR para la detección de coronavirus SARS-CoV-2 desde laboratorios de la UPV/EHU (CONV 20/05)*. Universidad del País Vasco (UPV/EHU), CONVENIOS 2020. PI: Ugo Mayor Martínez, Universidad del País Vasco (UPV/EHU), Ikerbasque Research Foundation. **Role**: COVID-19 Basque Inter-institutional Group (coBIG) Participant.
 - **2019-2021**: *Relevancia de la glía al daño cerebral neurodegenerativo crónico y agudo (IT1203-19)*. Basque Government (Modalidad Grupos Consolidados, A), 2018. PI and affiliation: Carlos Matute Almu, Universidad del País Vasco (UPV/EHU), Achucarro Basque Center for Neuroscience, CIBERNED. **Role**: Predoctoral researcher.
 - **2017-2019**: *Regulación de los procesos de mielinización y remielinización por neurotransmisores (SAF2016-75292-R)*. Ministerio de Economía, Industria y Competitividad, Government of Spain, 2016. PI and affiliation: Carlos Matute Almu and Elena Alberdi Alfonso, Universidad del País Vasco (UPV/EHU), Achucarro Basque Center for Neuroscience, CIBERNED. **Role**: Predoctoral researcher.
 - **2014-2016**: *Relevancia terapéutica de la señalización por receptores de neurotransmisores de la glía (SAF2013-45084-R)*. Ministerio de Economía y Competitividad, Government of Spain, 2013. PI and affiliation: Carlos Matute Almu and Elena Alberdi Alfonso, Universidad del País Vasco (UPV/EHU), Achucarro Basque Center for Neuroscience, CIBERNED. **Role**: Predoctoral researcher.

- Projects supported by private entities

- **2020-2022:** Analysis of the effect of Evobrutinib over myeloid-derived suppressor cells. Collaborative agreement with the pharmaceutical company Merck. PI and affiliation: Diego Clemente López, Hospital Nacional de Paraplégicos. **Total amount:** 200.000€. **Role:** Postdoctoral researcher.

- **2018-present:** Estudio de las células mieloides supresoras como biomarcadores del curso clínico de la esclerosis múltiple y su implicación en estrategias reparadoras de la vaina de mielina dañada. Asociación Española para la lucha contra la Esclerosis Múltiple, Asociación Torrijeña de Esclerosis Múltiple, Asociación de Esclerosis Múltiple de Toledo (ADEM-TO). **Total amount:** 31.768€.

- **2017-present:** Células mieloides supresoras: diana terapéutica endógena para el tratamiento de la esclerosis múltiple. *Galletas Coral, Aciturri Aeronáutica S.L., Vesubius Ibérica LA, Embutidos y Jamones España e Hijos.* **Total amount:** 16.400€.

- **2016-present:** Métodos complementarios para la inmunomodulación de la actividad inflamatoria asociada a la esclerosis múltiple como herramienta neuro-reparadora. Asociación de Esclerosis Múltiple de Toledo (ADEMTO). **Total amount:** 7.000€.

5.- TEACHING AND STUDENT SUPERVISION

- **2019:** Teaching collaboration in the Bachelor of Medicine. Courses: *Introducción a la investigación biomédica* and *Proyectos de investigación* (5,21ECTS). Department of Neurosciences, Universidad del País Vasco (UPV/EHU). Leioa, Spain.

- **2019:** Trainee student supervision in the Bachelor of Biochemistry and Molecular Biology (405 hours). Universidad del País Vasco (UPV/EHU). Leioa, Spain.