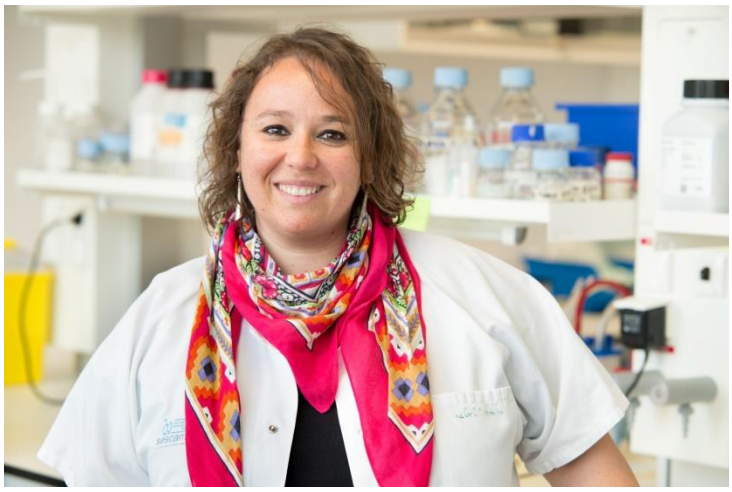

Isabel Machín Díaz

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Neuroinmuno-Repair Group (Lab i2-04)
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1. UNIVERSITY EDUCATION

- Bachelor in Food Science and Technology (2005). University of Ciudad Real, Castilla- La Mancha, Spain.
- Diploma in Chemistry (2003). University of Toledo, Castilla –La Mancha, Spain.
- Master in Workplace Hazzard Prevention. FEDETO 2007

2.- RESEARCH AND PROFESSIONAL EXPERIENCE

October 2023- Present: Lab Manager Neuroimmune-Repair Group (GNIR). Center for Cooperative Research in Neurodegenerative Diseases Network (CIBERNED). Madrid, (Spain)

October 2015- Present: Lab Manager Neuroimmune-Repair Group (GNIR). National Hospital of Paraplegics-SESCAM. Toledo, (Spain)

March 2007- October 2015: Lab Manager of the Developmental Neurobiology Group (GNDe). National Hospital for Paraplegics- SESCAM, Toledo (Spain)

May 2006- December 2006: Laboratory Technician, Product Quality Control Department. DELAVIUDA Group, Toledo (Spain).

September 2005- April 2006: Laboratory Technician, Microbiology and Food Technology Department. University of Castille-La Mancha, Toledo (Spain).

3.- PUBLICATIONS

3.1. Original papers

- Camacho-Toledano, C., **Machín-Díaz, I.,** Lebrón-Galán, R., González- Mayorga, A., Palomares, FJ., Serrano, MC:, Clemente, D.Graphene oxide as a novel immunotherapy toolfor the modulation of Myeloid- Derived Supressor Cell activity in the context of Multiple Sclerosis. 2023. *bioRxiv*. ColdSpring Harbor Laboratory

- Ortega, MC., Lebrón-Galán, R., **Machín-Díaz, I.,** Naughton, M., Pérez- Molina, I., García-Arocha, J., García-Domínguez, JM., Goicochea-Briceño, H., Vila-del Sol, V., Quintanero-Casero, V., García-Montero, R., Galán, V., Calahorra, L., Camacho-Toledano, C., Martínez- Ginés, ML., Fitzgerald, D., Clemente, D.Central and peripheral myeloid-derivedsuppressor cell-like cells are closely related to the clinical severity of multiple sclerosis. 2023. *Acta Neuropathologica*, 146(2):263-282.**IF: 15.88** (**D1** in Clinical Neurology)

- Camacho-Toledano, C., **Machín-Díaz, I.,** Calahorra, L., Cabañas, M., Castillo-Triviño, T., Villar, ML., Frossard, L., Comabella, M., Midaglia, L., García-Domínguez, JM., García-Arocha, J., Ortega, MC., Clemente, D.Peripheral Myeloid-Derived Suppressor Cells are goodbiomarkers of the efficacy of Fingolimod in Multiple Sclerosis. 2022. *Journal of Neuroinflammation*. 19(1):277**IF: 9.3** (**D1** in Neurosciences).

- Bribián, A., Medina Rodríguez, EM., Josa Prado, F. García Álvarez, I., **Machín-Díaz, I.,** Esteban, PF., Murcia- Belmonte, V., Vega-Zelaya, L., Pastor, J., Garrido, L., de Castro F.Functional heterogeneity of mouse and human brain OPCs: relevance for preclinical studies in MultipleSclerosis. 2020. *Journal of Clinical Medicine*, 9(6):1681. **IF: 3.3 (Q1** in Medicine, General & Internal)

- Malhotra, S.; Costa, C.; Eixarch, H.; Keller, C.W.; Amman, L.S.; Martínez-Banaclocha, H.; Migdalia, L.; Sarró, E.; **Machín-Díaz, I.;** Villar, L.M.; Triviño, J.C.; Oliver-Martos, B.; Navarro-Parladé, L.; Calvo-Barreiro, L.; Matesanz, F.; Vandenbroeck, K.; Urcelay, E.; Martínez-Ginés,M.L.; Tejeda-Velarde, A.; Fissolo, N.; Castilló, J.; Sánchez, A.; Robertson, A.A.B.; Clemente, D., Prinz, M.; Pelegrin, P.; Lünemann, J.D.; Espejo, C.; Montalbán, X.; Comabella, M. NLRP3 inflammasome as prognostic factor and therapeutic target in primary progressive multiple sclerosis. *Brain*, 143(5):1414-1430. **IF: 11.81.** (**D1** in Clinical Neurology and Neurosciences)**.**

- Melero-Jerez, C, Alonso Gómez, A., Moñivas, E., Lebrón-Galán, R., **Machín-Díaz, I.,** de Castro F., Clemente D. The proportion of myeloid-derived suppressor cells in the spleen is related to the severity of the clinical course and wetissue damage extent in a murine model of multiple sclerosis.2020 *Neurobiol. Dis.*140:104869**IF: 5.16.** (**Q1** in Neurosciences)**.**

- Melero-Jerez, C., Suardíaz, M., Lebrón-Galán, R., Marín-Bañasco, C., Oliver-Martos, B., **Machín-Díaz, I.,** Fernández, Ó., de Castro F., Clemente D.The presence and suppressive activity of myeloid-derived suppressor cells are potentiated after interferon-β treatment in a murine model of multiple sclerosis.2019 *Neurobiol. Dis.*. 127-13-31. **IF: 5.16.** (**Q1** in Neurosciences)**.**

- Mecha M, Feliú A, **Machín-Díaz I,** Cordero C, Carrillo-Salinas FJ, Mestre L, Hernández-Torres G, Ortega-Gutiérrez S, López-Rodríguez ML, de de Castro F, Clemente D, Guaza C.2-AG limits Theiler´s

virus induced acute neuroinflammation by modulating microglia and promoting MDSCs. 2018. *Glia* 66(7):1447-1463. **IF: 6.2.** (**D1** in Neurosciences)**.**

- Leonetti C, Macrez R, Pruvost M, Hommet Y, Bronsard J, Fournier, A., Perrigault M, **Machín I,** Vivien D, Clemente D, De Castro F, Maubert E, Docagne F. Tissue-type plasminogen activator exerts EGF-like chemokinetic effects on oligodendrocytes in white matter (re)myelination. 2017. *Mol Neurodeg*. 12: 20. **IF: 6.78.** (**D1** in Neurosciences)**.**

3.2 Conference Publication

- Carolina Melero Jerez; Rafael Lebrón Galán; Aitana Alonso Gómez; Esther Moñivas; **Isabel Machín Díaz;** Fernando de Castro Soubriet; Diego Clemente López. *Myeloid-derived suppressor cell peripheral load is an indicator of myelin/axonal damage in the murine model of multiple sclerosis*. 2017. GLIA. 65, pp. E-427 - E-427. WILEY.

4.- SCIENTIFIC COMMUNICATIONS IN NATIONAL/INTERNATIONAL CONFERENCES

2023

- Serrano-Regal, MP; Alonso-García, I; Camacho-Toledano, C; **Machín-Díaz, I**; Ortega, MC; Calahorra,L; Clemente, D. *Células mieloides supresoras como potencial bioindicador de la capacidad endógena de reparación de mielina en un modelo murino de esclerosis múltiple*: II Jornada de Investigación Sanitaria del Instituto de Investigación Sanitaria en Castilla La Mancha. Fundación del Hospital Nacional de Parapléjicos.

- Serrano-Regal, MP; Alonso-García, I; Camacho-Toledano, C; **Machín-Díaz, I**; Ortega, MC; Calahorra,L; Clemente, D. *Circulating myeloid-derived suppressor cells as a potential bioindicator of the endogenous myelin repair capacity in experimental multiple sclerosis.* I Jornada IDISCAM

- Ortega MC; **Machín-Díaz, I**; Naughton, M; Pérez- Molina, I; García-Arocha, J; García-Domínguez, JM; Goicoechea-Briceño, H; Lebrón-Galán, R; Vila- del Sol, V; Quintanero-Casero, V; García- Montero, R; Galán, V; Calahorra, L; ; Camacho-Toledano, C; Martínez- Ginés, ML; Fitzgerald, D; Clemente, D. *myeloid-derived suppressor cells burden in the CNS and blood is associated with disease severity of multiple sclerosis patients.* 11th IBRO world Congress.

- Serrano- Regal, MP; Calahorra, L; Alonso-García, I; Boschert, U; Haselmayer. P; Ortega, MC; **Machín-Díaz, I**; Camacho Toledano, C; García-Arocha, J; Clemente, D. *Evobrutinib treatment reduces the damage to the CNS and increases the number of classical dendritic cells in experimental multiple sclerosis.* 11th IBRO world Congress.

- Serrano-Regal, MP; Alonso-García, I; Camacho-Toledano, C; **Machín-Díaz, I;** Ortega, MC; Calahorra,L; Clemente, D.*Circulating myeloid-derived suppressor cells as a potential bioindicator of the endogenous myelin repair capacity in experimental multiple sclerosis.* 11th IBRO world Congress.

- Calahorra, L; **Machín-Díaz, I;** Alonso-García, I; Pérez- Molina, I; García-Domínguez, JM; Lebrón-Galán, R; Vila- del Sol, V; Goicoechea-Briceño, H; García-Arocha, J; García- Montero, R; Galán, V; Martínez- Ginés, ML; Ortega, MC; Camacho-Toledano, C; Serrano- Regal, MP; Clemente, D. *Circulating monocytic myeloid-*

derived suppressor cells but not Treg are potential biomarkers of a full relapse recovery in untreated multiple sclerosis patients. 9th Joint ECTRIMS- ACTRIMS Meeting.

- Ortega MC; **Machín-Díaz, I**; Naughton, M; García-Arocha, J; Quintanero-Casero, V; Camacho- Toledano, C; Fitzgerald, D; Clemente, D. *The first full histopathological description of monocytic myeloid-derived suppressor cells in the human brain: relationship to the severity of the clinical course in PPMS patients*. 9th Joint ECTRIMS- ACTRIMS Meeting.

- Serrano- Regal, MP; Calahorra, L; Alonso-García, I; Grenningloh, R; Boschert, U; Haselmayer. P; Ortega, MC; **Machín-Díaz, I**; Camacho Toledano, C; García-Arocha, J; Clemente, D. *Evobrutiniv therapeutic response is associated with an increase in the number and maturation of peripheral and central classical dendritic cells.* ACTRIMS Forum. Estados Unidos de América.

2022

- Clemente, D; Camacho-Toledano, C; Ortega, MC; Serrano-Regal, MP; Calahorra, L; **Machín-Díaz, I;** Alonso-García, I; Cabañas-Cotillas, M. *Investigación preclínica orientada: una fuente de respuestas para la resolución de problemas de salud asociados a la esclerosis múltiple*. I Jornada de Investigación Sanitaria del Instituto de Investigación Sanitaria en Castilla La Mancha. Fundación del Hospital Nacional de Parapléjicos.

- Serrano- Regal, MP; Calahorra, L; Alonso-García, I; Grenningloh, R; Boschert, U; Haselmayer. P; Ortega, MC; **Machín-Díaz, I**; Camacho Toledano, C; García-Arocha, J; Clemente, D. *Evobrutiniv aumenta la cantidad y la maduración de las células dendríticas clásicas en la esclerosis múltiple experimental.* I Jornada científica HNP. Hospital Nacional de Parapléjicos.

- Calahorra, L; **Machín-Díaz, I;** Alonso-García, I; Pérez- Molina, I; García-Domínguez, JM; Lebrón-Galán, R; Vila- del Sol, V; Goicoechea-Briceño, H; García-Arocha, J; García- Montero, R; Galán, V; Martínez- Ginés, ML; Ortega, MC; Camacho-Toledano, C; Serrano- Regal, MP; Clemente, D. *Las Células Mieloides Supresoras como potencial biomarcador de un perfil T anti-inflamatorio y su relación con la recuperación del brote en Esclerosis Múltiple.* I Jornada científica HNP. Hospital Nacional de Parapléjicos.

- Camacho-Toledano, C; **Machín-Díaz, I**; Calahorra, L; Cabañas, M; Otaegui, D; Castillo-Triviño, T; Villar, LM; Costa-Frossard, L; Comabella, M; Midaglia, L; García-Domínguez, JM; García-Arocha, J; Ortega, MC; Clemente, D. *Las células mieloides supresoras como biomarcador de la eficacia de Fingolimod en el tratamiento de la Esclerosis Múltiple.* I Jornada científica HNP. Hospital Nacional de Parapléjicos.

- Ortega, MC; García-Arocha, J; Lebrón-Galán, R; **Machín-Díaz, I**; Alonso-García, I; Wojtas, B; Nieto-Díaz, M; Camacho-Toledano, C; Serrano- Regal, MP; Calahorra, L; Kaminska, B; Clemente, D. *Papel de las células mieloides supresoras en la severidad de la Esclerosis Múltiple.* I Jornada científica HNP. Hospital Nacional de Parapléjicos.

- Calahorra, L; **Machín-Díaz, I;** Alonso-García, I; Pérez- Molina, I; García-Domínguez, JM; Lebrón-Galán, R; Vila- del Sol, V; Goicoechea-Briceño, H; García-Arocha, J; García- Montero, R; Galán, V; Martínez- Ginés, ML; Ortega, MC; Camacho-Toledano, C; Serrano- Regal, MP; Clemente, D. *Circulating Myeloid-Derived Suppressor Cells as a potential Biomarker of an anti-inflammatory T-Cell balance associated with improved*

relapse recovery in Multiple Sclerosis. 38th Congress of the European Committee for Treatment and Research in Multiple Sclerosis. ECTRIMS.

- Serrano- Regal, MP; Calahorra, L; Alonso-García, I; Grenningloh, R; Boschert, U; Haselmayer. P; Ortega, MC; **Machín-Díaz, I**; Camacho Toledano, C; García-Arocha, J; Clemente, D. *Evobrutinib exerts a therapeutic action on EAE by increasing the peripheral and central classical dendritic cell number and maturation.* 38th Congress of the European Committee for Treatment and Research in Multiple Sclerosis. ECTRIMS.

- Camacho-Toledano, C; **Machín-Díaz, I**; Calahorra, L; Cabañas, M; Otaegui, D; Castillo-Triviño, T; Villar, LM; Costa-Frossard, L; Comabella, M; Midaglia, L; García-Domínguez, JM; García-Arocha, J; Ortega, MC; Clemente, D. *Myeloid-Derived Suppressor Cells are good biomarkers of fingolimod efficacy in Multiple Sclerosis*. 38th Congress of the European Committee for Treatment and Research in Multiple Sclerosis. ECTRIMS.

- Ortega, MC; García-Arocha, J; Lebrón-Galán, R; **Machín-Díaz, I**; Alonso-García, I; Wojtas, B; Nieto-Díaz, M; Camacho-Toledano, C; Serrano- Regal, MP; Calahorra, L; Kaminska, B; Clemente, D. *Shedding light on the variability of the clinical course of multiple sclerosis: analysis of the influence of myeloid-derived suppressor cells on disease severity.* 38th Congress of the European Committee for Treatment and Research in Multiple Sclerosis. ECTRIMS.

- Camacho-Toledano, C., **Machín-Díaz, I.,** Calahorra, L., Cabañas, M., Otaegui, D., Villar, M.L., Comabella, M., García-Domínguez, J.M., García-Arocha, J., Ortega, M.C., Clemente, D. *Peripheral Myeloid-Derived Suppressor Cells are good biomarkers of response and efficacy for Fingolimod treatment in multiple sclerosis.* FENS Fourm 2022. 2022.Paris, France. Poster.

- Ortega, M.C., García-Arocha, J., Lebrón-Galán, R., **Machín-Díaz, I.,** García-Alonso, I., Wojtas, B., Nieto-Díaz, M., Camacho-Toledano, C., Serrano-Regal, M.P., Calahorra, L., Kaminska, B., Clemente, D. *Deciphering the impact of myeloid-derived suppressor cell function on disease progression and neural tissue damage in Multiple Sclerosis*. FENS Fourm 2022. 2022. Paris, France. Poster.

2021

- Camacho-Toledano, C., **Machín-Díaz, I.,** García-Arocha, J., Ortega, M.C., Clemente, D. *Myeloid Derived Suppressor Cells are biomarkers of milder relapses in a murine model of Relapsing Remitting Multiple Sclerosis.* 37th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS 2021). European Committee for Treatment and Research in Multiple Sclerosis. 2021. Online Poster.

- Camacho-Toledano, C., Serrano-Regal, M.P., Lebrón-Galán, R., **Machín-Díaz, I.,** García-Arocha, J., Ortega, M.C., Clemente, D. *Disease severity affects NG2 cell proliferation during the disease course of multiple sclerosis. XV European Meeting on Glial Cells in Health and Disease*. Glia Network. 2021. Online Poster.

- Ortega, M.C., García-Arocha, J., Lebrón, R., **Machín-Díaz, I**., Wojtas, B., Pérez-Garrido, V., Alonso, I., Nieto Díaz M, Camacho-Toledano, C., Kaminska, B., Clemente, D. *Searching for key factors involved in the severity of multiple sclerosis: functional determination/classification of Myeloid-Derived Suppressor Cells in vitro and in vivo.* XV European Meeting on Glial Cells in Health and Disease. Glia Network.

- **Machín-Díaz, I**., Pérez-Molina, I., García-Domínguez, J.M., Lebrón-Galán, R., Vila-delSol, V., Goicochea-Briceño, H., García-Arocha, J., García-Montero, M.R., Galán, V., Martínez-Ginés, M.L., Ortega, M.C., Camacho-Toledano, C., Clemente, D. *Myeloid Derived Suppressor Cells are biomarkers of relapse recovery in multiple sclerosis patients*. 15th ISNI Congress. International society of Neuroimmunology (ISNI).

- Camacho-Toledano, C., **Machín-Díaz, I.,** García-Arocha, J., Ortega, M.C., Clemente, D. *Myeloid derived suppressor cells are biomarkers for Fingolimod treatment efficacy in multiple sclerosis*. 15th ISNI Congress. International society of Neuroimmunology (ISNI).

- Ortega, M.C., García-Arocha, J., Lebrón-Galán, R., **Machín-Díaz, I.,** Wojtas, B., Nieto-Díaz, M., Camacho-Toledano, C., Kaminska, B., Clemente, D. *Myeloid-derived suppressor cell function is a key factor behind the clinical course severity in multiple sclerosis*. 15th ISNI Congress. International society of Neuroimmunology (ISNI).

2020

- C. Camacho-Toledano, R. Lebrón-Galán, **I. Machín-Díaz**, J. García-Arocha, MC. Ortega, D. Clemente. *Myeloid-Derived Suppressor Cells associated to a mild disease course are good bioindicators of a higher remyelinating capability in Multiple Sclerosis*. 8th Joint ACTRIMS-ECTRIMS Meeting.

- C. Camacho-Toledano, R. Lebrón-Galán, **I. Machín-Díaz,** J. García-Arocha, MC. Ortega, D. Clemente. *NG2 cells and the immunoregulatory environment in the CNS: key factors for multiple sclerosis severity*. 11/2020. 3rd Symposium on Physiology and Pathology of Neuroglia. Queretaro, Mexico.

2019

- Rafael Lebrón Galán; Irene Sánchez de Lara; Manuel Nieto Díaz; Celia Camacho Toledano; **Isabel Machín Díaz**; Maria Cristina Ortega; Diego Clemente. *Peripheral myeloid-derived suppressor cells: a new tool to predict the severity of the clinical course and tissue damage extent in multiple sclerosis.* 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis. Stocholm. Sweden

- Maria Cristina Ortega; Rafael Lebrón Galán; Inmaculada Pérez Molina; Rosa García Montero; **Isabel Machín Díaz**; Diego Clemente. *Myeloid-derived suppressor cells in multiple sclerosis patients: putative bioindicators for the severity of the clinical course and neuro-repair ability of demyelinating lesions.* 18º Congreso de la Sociedad Española de Neurociencia SENC. Santiago de Compostela, Spain

- Irene Sánchez de Lara; Rafael Lebrón Galán; **Isabel Machín Díaz**; Celia Camacho Toledano; Maria Cristina Ortega; Diego Clemente. *Myeloid-derived suppressor cell peripheral load can predict a greater endogenous remyelination capacity in the murine model of multiple sclerosis* 18º Congreso de la Sociedad Española de Neurociencia SENC. Santiago de Compostela, Spain

- Maria Cristina Ortega; Rafael Lebrón Galán; Inmaculada Pérez Molina; Rosa García Montero; **Isabel Machín Díaz**; Diego Clemente. *Myeloid-derived suppressor cells as putative biomarker to predict the severity of the clinical course and the potential remyelination in multiple sclerosis.* XIV European Meeting on Glial Cells in Health and Disease, Oporto, Portugal

- Irene Sánchez de Lara; Rafael Labrón Galán; **Isabel Machín Díaz**; Celia Camacho Toledano; Maria Cristina Ortega; Diego Clemente.*The peripheral blood content of myeloid-derived suppressor cells is a bioindicator of a greater capacity for spontaneour remyelination in multiple sclerosis*. XIV European Meeting on Glial Cells in Health and Disease. Oporto, Portugal

2017

- Carolina Melero Jerez; Rafael Lebrón Galán; Aitana Alonso Gómez; Esther Moñivas**; Isabel Machín Díaz**; María Cristina Ortega Muñoz; Fernando de Castro Soubriet; Diego Clemente López. *Myeloid-derived suppressor cells: putative bioindicators of tissue damage and the aggressiveness of the clinical course in a murine model of Multiple Sclerosis.* 17th National Congress of the Spanish Society of Neuroscience. Alicante, España.

- Ana Bribian; Eva Medina Rodriguez; Isabel Garcia Alvarez; Sonia Nocera; **Isabel Machín Díaz**; Pedro Felipe Esteban Ruiz; Verónica Murcia Belmonte; Jesus Pastor; Leoncio Garrido; Fernando de Castro. *Systematic Demonstration of oligodendrocyte precursor cells functional heterogeneity depending on the animal species and age: a proof of concept for futher (re) myelinating therapies for Multiple Sclerosis.* European Glia Meeting. Edimburgh.

- Eric Maubert; Camille Leonetti; Richard Macrez; Mathilde Pruvost; Yannic Hommet; Jèremie Bronsard; Antoine Fournier; Maxime Perrigault; **Isabel Machin**; Denis Vivien; Diego Clemente; Fernando de Castro; Fabian Docagne. *Tissue-type plasminogen activator influences oligodendrocyte migration during myelination and remyelination.* European Glia Meeting.. Edimburgh.

2015

- Eva María Medina Rodríguez; Ana Bribián Arruego; Rafael Lebrón Galán; Iris Sánchez Raya; **Isabel Machín Díaz**; A Boyd; Anna Williams; Carlos Gil; A Martínez; Fernando de Castro Soubriet. *Phosphodiesterase-7 and GKS-3 Dual inhibition promotes remyelinitation after injury in the Central Nervous System.* 2015, 16th Congress of the Spanish Society of Neuroscience. Granada, Spain.

- Ana Bribian; Eva María Medina Rodríguez; Carolina Melero Jerez; **Isabel Machin Diaz**; Verónica Murcia Belmonte; Fernando de Castro Soubriet. *Oligodendrocyte Precursor Cells are physiologically heterogeneous: the essential ontogenetic lessons for brain repair.* 09/2015, 16th Congress of the Spanish Society of Neuroscience. Granada, Spain.

- Ana Bribian Arruego; Eva María Medina Rodríguez; Carolina Melero Jerez; **Isabel Machín Díaz;** Verónica Murcia Belmonte; Jesus Pastor; Fernando de Castro Soubriet. *Physiology of oligodendrocyte precursor cells: ontogenetic lessons for brain repair.* Cortical Evolution. Toledo, Spain

2013

- Pedro Esteban Ruiz; Veronica Murcia Belmonte**; Isabel Machín Díaz**; Fernando de Castro Soubriet. *Erk1/2 are the intracellular pathways activated by anosmin-1 and fgf2 in fgfr1-mediated OPC migration.* 2013. 15th Congress of the Spanish Society of Neuroscience. Oviedo, Spain.

- Ana Bribian Arruego; Eva Medina Rodriguez; **Isabel Machín Díaz**; Fernando de Castro Soubriet. *Roles of Anosmin-1 and FGF-2 in the biology of adult murine and human oligodendrocyte precursor cells.* 2013. 15th Congress of the Spanish Society of Neuroscience. Oviedo, Spain.

2011

- Diego Clemente López; Maria Cristina Ortega Muñoz; **Isabel Machín Díaz**; Francisco Javier Arenzana Sanagérico; Fernando de Castro Soubriet. *Endogenous remyelination: pathways for future therapies in multiple sclerosis. .* European Glia Meeting. Praha.

- Diego Clemente López; Maria Cristina Ortega Muñoz**;** **Isabel Machín Díaz**; Francisco Javier Arenzana Sanagérico; Fernando de Castro Soubriet*. FGF-2 and Anosmin-1 in multiple sclerosis: actors in pathology, targets for therapy?* European Glia Meeting.. Praha.

5.- GRANTED RESEARCH PROJECTS

Competitive R&D projects

2023-2026: The role of IMMUnity in tackling PARKinson's disease through a Translational NETwork (IMMUPARKNET). COST ACTION CA21117. European Union. **Total amount:** 600,000 for the whole network **Role:** AR. **PI:** Dr. Diego Clemente (International Coordinator: Dr. Cristoforo Comi).

2023-2025: Spanish Network of Multiple Sclerosis. Funded by the "Research Networks" program of the Ministry of Science and Innovation. (Reference number: RED2022-134425-T). **Total amount**: 19,100 €. **Role**: AR: **PI:** Dr. Diego Clemente (Coordinator of the network: Dr. Fuencisla Matesanz).

2023- Today: Research Group of the Center for Networked Biomedical Research on Neurodegenerative Diseases (CIBERNED). Carlos III Health Institute. Ministry of Science and Innovation (Reference number: CB22/05/00016). **Total amount:** 96,000 €. **Role:**AR. **PI:** Dr. Diego Clemente.

2022-2024: Immunoregulation in the severity of multiple sclerosis: predictive value and therapeutic perspectives. Health Research Fund, Instituto de Salud Carlos III (ISCIII), Ministry of Science and Innovation (Reference: PI21/00302). **Total amount:** 196,020 €. **Role:** AR. **PI**: Diego Clemente.

2022-2025: A new preclinical strategy with extracellular vesicles to treat severe multiple sclerosis: new insight into myelin repair. Consejería de Educación de Castilla-La Mancha. **Total amount:** 113,147.65 €. **Role**: AR. **PIs**: Diego Clemente and María Cristina Ortega.

2020-2023: Analysis of the immune-regulatory component of the peripheral and central immune response as biomarker of the clinical course severity in multiple sclerosis. Merck Salud Foundation. **Total amount:** 30,000€. **Role:** AR **PI:** Diego Clemente**.**

2020-2022: Analysis of the immune-regulatory component of the peripheral and central immune response as biomarker of the clinical course severity in multiple sclerosis. Merck Salud Foundation. **Total amount:** 30,000€. **Role:** AR **PI:** Diego Clemente

2019-2020: Myeloid-derived suppressor cells as bioindicators of the severity of the clinical course and response to treatments in multiple sclerosis. *Health Research Fund, Carlos III Institute. Spanish Ministry of Science, Innovation and Universities.***Total amount:** 255,310€. **Role:** AR **PI:** Diego Clemente

2017-2021: Spanish Network for Multiple Sclerosis-REEM (thematic program networks for cooperative research- RETICS) *Health Research Fund, I Carlos III Institute. Spanish Ministry of Science, Innovation and Universities.***Total amount:** 112,500€. **Role:** AR. **PI:** Diego Clemente

2019-2020: Morpho-functional analysis of myeloid-derived suppressor cells in the central nervous system of patients with progressive forms of multiple sclerosis and their relationship with disease severity and neural repair.Competitive Call from the Spanish Multiple Sclerosis Association (*Esclerosis Múltiple España*) in collaboration with the the Spanish Network for Multiple Sclerosis. **Total amount**: 25,000€. **Role:** AR **PI:** Diego Clemente

2019-2020: Myeloid-derived suppressor cells as bioindicators of the severity of the clinical course and response to treatments in multiple sclerosis. *Health Research Fund, Carlos III Institute. Spanish Ministry of Science, Innovation and Universities.***Total amount:** 255,310€. **Role:**AR **PI:** Diego Clemente

2018-2019: Study of monocytic-myeloid-derived suppressor cells in primary progressive multiple sclerosis, within the coordinated grant "Study of the pathophysiological mechanisms with an important role in the progressive forms of multiple sclerosis". Competitive Call from the Spanish Multiple Sclerosis Association (*Esclerosis Múltiple España*) in collaboration with the *Spanish Network for Multiple Sclerosis*. **Total amount:** 7,647.06€. **Role**: AR. **PI:** Diego Clemente

2017-2018: Myeloid-derived suppressor cells and disease aggressiveness: a novel cell therapy to accelerate myelin repair in multiple sclerosis. *Fondation pour l´aide à la recherche sur la sclèrose en plaques* (ARSEP Foundation, in the frame of the *Special Call for Propossals "Myelin: from lesion to repair"*). **Total amount**: 110,000€. **Role:** AR **PI:** Diego Clemente

2017-2021: Spanish Network for Multiple Sclerosis-REEM (thematic program networks for cooperative research- RETICS) *Health Research Fund, I Carlos III Institute. Spanish Ministry of Science, Innovation and Universities.***Total amount:** 112,500€. **Role**: AR **PI:** Diego Clemente

2017: Myeloid-derived suppressor cells as novel biomarkers of the multiple sclerosis: the relation with tissue damage and neuro-repair. *Health Research Fund, Carlos III Institute. Spanish Ministry of Science, Innovation and Universities.***Total amount:** 98,615€. **Role:** AR **PI:** Diego Clemente

<u>Research contracts</u>

2020-2024: Effect of Evobrutinib on Myeloid-derived suppressor cell activity. Research agreement with EMD Serono R&D. **Total amount:** 308,991 €. **Role:** AR. **PI:** Diego Clemente

2021-2022: Research on Neurodegenerative and Demyelinating Neurological Diseases. Umbrella Grant by Bristol Myers Squibb. **Total amount:** 10,000 €. **Role:** AR. **PI:** Diego Clemente

2018-2020: Analysis of myeloid-derived suppressor cells as biomarkers of multiple sclerosis clinical course and their implication in repair strategies of the myelin sheath. Multiple Sclerosis Association of

Toledo and Multiple Sclerosis Association of Torrijos, Spanish Association Against Multiple Sclerosis. **Total amount**: 24,168€. **Role**: AR. **PI:** Diego Clemente

2017-2020: Myeloid-derived suppressor cells: endogenous therapeutic target for multiple sclerosis treatment. *Aciturri Aeronáutica S.L., Vesuvius Ibérica LA , Galletas Coral y Embutidos y Jamones España e hijos*. **Total amount**: 16,400€. **Role**: AR **PI:** Diego Clemente

Awards

- 2021: Research Award "*Esperanza*". Spanish Multiple Sclerosis Foundation in Toledo for the paper Malhotra et al., 2020, Brain. 2020 145:1414-30.

- 2020: The paper "Functional Heterogeneity of Mouse and Human Brain OPCs: Relevance for Preclinical Studies in Multiple Sclerosis", was selected as one of the 10 most meritorious papers for JCM. Academic Editors from JCM.

- 2018: Second prize in the Neuroart Awards from the Spanish Society of Neurosciences, for the photograph Rainbow tree

- 2017: XII Juanelo Turriano Awards for the Professional Ingenuity

- 2010: Research Award "*Esperanza*". Spanish Multiple Sclerosis Foundation in Toledo.