



Part A. PERSONAL INFORMATION

CV date	12/1/2019
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First and Family name	José María Delgado García		
Social Security, Passport, ID number	28288562B	Age	73
Researcher numbers	Researcher ID		
	Author ID		
	ORCID code	0000-0001-7369-4195	

A.1. Current position

Name of University/Institution	Universidad Pablo de Olavide		
Department	Fisiología, Anatomía y Biología Celular		
Address and Country	Ctra. de Utrera, km. 1, Sevilla-4013, Spain		
Phone number	+34954349374	E-mail	jmdelgar@upo.es
Current position	Emeritus Professor	From	2015
UNESCO code	241111/240113		
Key words	Motor learning, cognitive processes, in vivo electrophysiology, neural regeneration, functional neural states, complex behaviors		

A.2. Education

Degree/PhD	University	Year
Medical Doctor	Faculty of Medicine, Seville University	1963-69
Residence in Psychiatry	Central of Barcelona and Seville University	1969-71
PhD degree	Faculty of Medicine, Seville University	1972

A.3. JCR articles, h Index, thesis supervised

1. Articles in Pubmed: 241; 2. Total number of papers and book chapters: 334; 3. Published books: 11; 4. Paper mentions: 9452; 4. h Index: 52; 5. Thesis supervised: 35

Part B. CV SUMMARY

I was born in Seville, in 1945, and graduated in Medicine at Seville University in 1969. I gained the PhD in 1972, with a study on the electrophysiology of the limbic system. I completed my scientific training in several European (Oxford, Prof. J. Stein; Paris, Prof. A. Berthoz) and American (Iowa and New York, Profs. R. Llinás and R. Baker) research centers. I returned to Spain in 1978, and founded the *Laboratorio de Neurociencia* at Seville University, a place where many Spanish young researchers have received training on different aspects related to neural motor control and regeneration capabilities of the CNS. I have published more than 330 papers in Neuroscience journals and books, as well as 11 books. I have directed 35 PhD Theses. I have presented more than 600 communications (conferences, symposia, and posters) and given 290 conferences at different research centers around the world. My main scientific contributions are related to the discovery of neural mechanisms underlying eye and postural position holding, as well as the relative roles of the nitric oxide, glutamate and acetylcholine in these processes. I have also contributed largely to the complete description of the complex pre-motor neural system controlling the generation of learned motor responses, using in vivo electrophysiology, and instrumental and pavlovian conditioning paradigms. **An electrophysiological study from my laboratory, carried out with behaving wild-type and transgenic mice during associative learning, has been recognized by Science (December 22, 2006 issue) as one of the ten year breakthroughs of the 2006.** Other important contributions of our group are related to the neural control of eye, facial and respiratory systems, and to the regenerative capabilities of the central nervous system of mammals. I think that I have contributed in an important way to the training of several generations of Spanish and Latin-American students interested in the Neurosciences with the different Master Courses and Doctorate Programs implemented at the Seville, La Rábida and Pablo de Olavide Universities, as well as in other Latin-American research centers. I has been President of the Spanish Society of Physiology and of the Spanish Society for Neuroscience, member of the Education Committee of IBRO, Chairman of the EU/Cost "Brain Regeneration

and Plasticity" Program, and member of the Steering Committee of the European Brain Research Institute at Rome.

Part C. RELEVANT MERITS

C.1. Publications (10 representative papers and a representative book)

1. Moreno-López, B., Pastor, A., de la Cruz, R., and **Delgado-García, J.M.** Dose-dependent, central effects of botulinum neurotoxin type A: A pilot study in the alert behaving cat. *Neurology*, 48: 456-464, 1997.
 2. Gruart, A., Streppel, M., Guntinas-Lichius, O., Angelov, D.N., Neiss, W.F. and **Delgado-García, J.M.** Motoneuron adaptability to new motor tasks following two types of facial-facial anastomosis in cats. *Brain*, 126:1-19, 2003.
 3. **Delgado-García, J.M.** and Gruart, A. Building new motor responses: eyelid conditioning revisited. *Trends in Neurosciences*, 29:330-338, 2006.
 4. Gruart, A., Muñoz, M.D. and **Delgado-García, J.M.** Involvement of the CA3-CA1 synapse in the acquisition of associative learning in behaving mice. *Journal of Neuroscience*, 26: 1077-1087, 2006.
 5. Sánchez-Campusano R, Gruart A, and **Delgado-García JM.** The cerebellar interpositus nucleus and the dynamic control of learned motor responses. *Journal of Neuroscience*, 27: 6620-6632, 2007.
 6. Sánchez-Campusano, R., Gruart, A. and **Delgado-García, J.M.** Dynamic associations in the cerebellar-motoneuron network during motor learning. *Journal of Neuroscience*, 29:10750-10763, 2009.
 7. Clarke, J.R., Cammarota, M., Gruart, A., Izquierdo, I. and **Delgado-García, J.M.** Plastic modifications induced by object recognition memory processing. *Proc Natl Acad Sci U S A.*, 107:2652-2657, 2010.
 8. Márquez-Ruiz, J., Leal-Campanario, R., Sánchez-Campusano, R., Molaei-Ardekani, B., Wendling, F., Miranda, P.C., Ruffini, G., Gruart, A. and **Delgado-García, J.M.** Transcranial direct-current stimulation modulates synaptic mechanisms involved in associative learning in behaving rabbits. *Proc Natl Acad Sci U S A.*, 109:6710-6715, 2012.
 9. Hasan, M.T., Hernández-González, S., Dogbevia, G., Treviño, M., Bertocchi, I., Gruart, A. and **Delgado-García, J.M.** Role of motor cortex NMDA receptors in learning-dependent synaptic plasticity of behaving mice. *Nature Communications*, 4:2258, 2013. doi:10.1038/ncomms3258.
 10. Hernández-González, S., Andreu-Sánchez, C., Martín-Pascual, M.Á., Gruart, A., **Delgado-García, J.M.** A Cognition-Related Neural Oscillation Pattern Generated in the Prelimbic Cortex Can Control Operant Learning in Rats. *Journal of Neuroscience*, 37:5923-5935, 2017.
- **Book. *Languages of the Brain***, José M. Delgado García, Ed. Alegoría, Sevilla, Spain, 2011.

C.2. Main research projects and grants (past 10 years)

1. **Title:** Transformación de la actividad neuronal en los circuitos hipocámpico y cerebeloso durante el aprendizaje motor y cognitivo. **Supported by:** Ministerio de Educación y Ciencia. **Call:** Plan Nacional de I+D+I (2008-2011). **PI:** José María Delgado García, Universidad Pablo de Olavide, Sevilla. **Dates:** January 2009 - December 2011. **Amount:** 370.000 €. **Role:** PI. ALREADY RECEIVED AND FINISHED.
2. **Title:** Mecanismos neuronales que subyacen al aprendizaje y la memoria: un estudio en ratones silvestres y transgénicos. **Supported by:** Junta de Andalucía. **Convocatoria:** Ayudas a proyectos de excelencia. **IP:** José María Delgado García, Universidad Pablo de Olavide, Sevilla. **Dates:** January 2010 - December 2012. **Amount:** 477.668 €. **Role:** PI. ALREADY RECEIVED AND FINISHED.
3. **Title:** Hyper Interaction Viability Experiments. Grant agreement nº: 2222079. **Supported by:** European Commission. **Call:** 7th Framework Programme Theme 3 Information and Communication Technologies). **PI of the Seville group:** José María Delgado-García, Universidad Pablo de Olavide, Sevilla, Spain (Main Coordinador: Dr. Giulio Ruffini). **Dates:** January 2008 - December 2011. **Amount:** 283.329 € for the Seville's group. **Role:** Responsible of the Seville's group. ALREADY RECEIVED AND FINISHED.
4. **Title:** Generación y almacenamiento de respuestas motoras aprendidas en estructuras corticales de ratones y ratas silvestres o manipuladas genéticamente. **Supported by:** Ministerio de Ciencia e Innovación. **Call:** Ayudas para la realización de proyectos de

investigación, subprograma de proyectos de investigación fundamental no orientada. Convocatoria 2011. **PI:** José María Delgado García. **Entidad de afiliación:** Universidad Pablo de Olavide, Sevilla. **Dates:** January 2012 - December 2014. **Amount:** 574.740 € **Role:** PI. ALREADY RECEIVED AND FINISHED.

5. Title: Restoring function in stroke via GPR17, a new receptor involved in adult brain self-repair (RENEW-IT). **Code:** PCIN-2013-045. **Supported by:** Secretaría General de Universidades, Investigación y tecnología. **Call:** ERA-NET NEURON-Ministerio de Economía y Competitividad. **PI:** José María Delgado García, Universidad Pablo de Olavide, Sevilla. **Dates:** Enero 2013 - December 2015. **Amount:** 100.000 € **Role:** PI of the Spanish team. ALREADY RECEIVED AND FINISHED.

6. Title: Mapping and interrogating top-down control of the memory engram of the posttraumatic stress disorder (topdownPTSD). **Code:** APCIN-2017-017. **Supported by:** Secretaría General de Universidades, Investigación y tecnología. **Call:** ERA-NET NEURON-Ministerio de Economía y Competitividad. **PI:** José María Delgado García, Universidad Pablo de Olavide, Sevilla (Main coordinator Mazhair Hasan). **Dates:** Enero 2013 - December 2015. **Amount:** 100.000 € **Role:** PI of the Seville's group. ALREADY RECEIVED AND ONGOING.

C.3. Contracts

1. Title: Two service contracts for the development of associative learning models in wildtype and transgenic mice. **Company:** Aventis-Pharma (Paris, France). **PI:** José María Delgado García, Universidad Pablo de Olavide, Sevilla, Spain. **Dates:** 2002-2005. **Amount:** 400.000 €

2. Title: Development of a Phenotyping Center for Behavioral studies in laboratory animals. **Company:** Agreement between the Universidad Pablo de Olavide with the Fundación Universidad-Sociedad. **PI:** José María Delgado García, Universidad Pablo de Olavide, Sevilla. **Dates:** 2007-2009. **Amount:** 150.000 €

3. Title: Six successive service contracts for learning studies in behaving rats treated with different probiotic products. **Company:** Abbot España-USA. **PI:** José María Delgado García, Universidad Pablo de Olavide, Sevilla, Spain: a) **1st**, 2008-2009, 100.000 € b) **2nd**, 2009-2010, 105.000 € c) **3rd**, 2011-2012, 100.000 € d) **4th**, 2013, 85.000 € e) **5th**, 2013-2014, 60.000 €; and f) **6th**, 2015-2016, 37.000 €

C.4. Patents

1. Autors: Matute Almu, C., Sánchez Gómez, M.V., Campos Esparza, R., Alberdi Alfonso, E., Gottlieb, M., Ibarretxe Bilbao, G., **Delgado García, J.M.**, Gruart i Massó, A. y Leal-Campanario, R. **Reference:** ES/30.12.05/ ESA 200503262. **Title:** Compounds having neuroprotective properties. **Countries:** AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR. **Date:** 187August/2008. **Property:** Universidad del País Vasco y la Universidad Pablo de Olavide, Sevilla. **Tranferred to:** Neuron Biopharma, S.A., Granada, Spain.

2. Autors: Martín Pascual, M.A., Andreu Sánchez, C., Santos Naharro, J.A., Gruart i Massó, A. y **Delgado García, J.M.** **Reference:** ES/19.07.11/ESP201131227. **Title:** Device for animal experimentation in Neuroscience Research. **Countries:** AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM Y TR. **Date:** 19/July/2011. **Property:** Universidad Pablo de Olavide, Sevilla y Universidad Autónoma de Barcelona. **Tranferred to:** Cibertec, Madrid, Spain.

3. Autors: Leal-Campanario, R., Gruart i Massó, A., **Delgado-García, J.M.**, Santos-Naharro, J.A. **Reference:** Número de solicitud: P201231369. **Title:** Caja de condicionamiento operante y aprendizaje instrumental para conejos. **Countries:** ES. **Date:** 13/April/2012. **Property:** Universidad Pablo de Olavide, Sevilla, Spain.

C.5. Organization of scientific events

1. President of the Organizing Committee of the *III Congreso Nacional de Neurociencias*, Sevilla 2-5 de octubre de 1989.

2. Organizer of the 15 editions of the *Curso Nacional de Neurociencia*. Since 1990 to 2018. Located at the Universidad Internacional de Andalucía (La Rábida, Huelva) and since 2000 at the Pablo de Olavide University in Carmona (Sevilla, Spain).

3. Co-organizer of the Workshop on Neural Control of Movement in Vertebrates, Fundación Juan March, Madrid. November 1991.



4. **Academic director** of the Iberoamerican Master courses (1996, 1997, 1998). Universidad Internacional de Andalucía, Huelva, Spain.
5. **Organizer** of the International Meeting on Neural Control of Movement, Sevilla, Spain. April 2001.
6. **Organizer** of a Satellite Meeting to the XI Congreso de la Society for Neural Control of Movement: "Neural basis of motor learning and performance: from cell to function", Carmona, Sevilla, Spain. March 2007.
7. **Organizer** of the Dynamic Brain Forum, International Meeting, Carmona, Sevilla, Spain. September 2012.
8. **President** of the Organizing Committee of the 6th edition of the International Conference on Cognitive Neurodynamics (ICCN2017) Carmona, Sevilla, Spain. August 2017.

C.6. Main invited lectures (2007-2018)

1. Neural mechanisms underlying motor and cognitive learning. Univ. Pierre/Marie Curie, Paris, France, 2007.
2. Learning as a distributed process: from synapse physiology to mental activities. EMBL, Rome, Italy, 2007.
3. Neural mechanisms underlying motor and cognitive learning, Iowa University, Aims, IA, USA, 2007.
4. Learning as a distributed process. University of Connecticut, Storrs, CT, USA, 2007.
5. Associative learning as a distributed process. Northwestern University, Chicago, IL, USA, 2007.
6. Role of cerebellum and brainstem motor centers in motor learning. Toulouse Univ., Toulouse, France, 2010.
7. Physiology and pathology of the eyelid motor system. Milan Study Univ., Milan, Italy, 2011.
8. Functional states underlying associative learning in mammals. The Max Planck Institute for Medical Research. Heidelberg, Germany, 2012.
9. Associative learning and long-term potentiation in rodents: Effects of nutrition. Abbott Laboratories, Columbus, OH, USA, 2013.
10. Learning as a functional state of the brain: studies in wild-type and transgenic mice. Concordia University, Montreal, Canada, 2014.
11. *El cerebro en vivo y en directo*. Universidad Cayetano Heredia, Lima, Perú, 2016.
12. Brain functions and free will. Pontificia University, Porto Alegre, Brasil, 2016.
13. Neural control of classically conditioned eyelid responses. East China University of Science and Technology, Shanghai, R.P.China, 2016.
14. *¿Es la cara el espejo del alma? Introducción al estudio del sistema motor facial*. Universidad Peruana Cayetano Heredia, Lima, Perú. 7-6-2018.
15. When, where and under which circumstances learning is taking place: studies in wild type and transgenic animals. Instituto de Fisiología Celular, UNAM, 16 de Mayo de 2018.

C.7. Reviewer for scientific journals

I am currently reviewing scientific papers for 60 journals including *Behavioral Brain Science*, *Brain Behavior and Evolution*, *Brain Research* and *Brain Research Review*, *European Journal of Neuroscience*, *Experimental Brain Research*, *Experimental Eye Research*, several *Frontiers* journals, *The Journal of Neurophysiology*, *The Journal of Neuroscience*, *The Journal of Physiology (London)*, *Learning & Memory*, *Nature Communications*, *Neuroscience*, *Neuroscience Letters*, *Neuropharmacology*, *PNAS USA*, and *The Cerebellum*.

C.8. Major collaborations

At present I have active scientific contacts, ongoing research, and joint publications with the following groups: M. Hasan (Charité Univ., Berlin, Germany), C. Gross (EMBL, Rome, Italy), A. Villa (Lausanne Univ., Lausanne, Switzerland), D. Bartsch (CIMH, Mannheim, Germany), B. Bettler (Basel University, Basel, Switzerland), I. Izquierdo (Portoalegre Univ., Portoalegre, Brazil), E. Soriano, Joan Guinovart, and J.A. del Río (Barcelona Central Univ., Barcelona, Spain), M. Dierssen (CRG, Barcelona, Spain), R. Trullás (IDIBAPS-CSIC, Barcelona, Spain) MP Abracchio (Milan Univ., Milan, Italy), F. Vozek (Charles Univ., Pilsen, Czech Republic), F. Calegari (DFG-Center, Dresden, Germany), R. Moratalla (Cajal-CSIC, Madrid, Spain), L. Dimou (LMY, Munich, Germany), M. Manto (ULB, Brussels, Belgium), L. Probert (Hellenic Pasteur Institute, Athens, Greece), and Y. Hérault (IGBMC-CNRS, Strasbourg, France).