

Date of the CVA

23/09/2020

Section A. PERSONAL DATA

Name and Surname			
DNI/NIE/Passport		Age	
Researcher's identification number	Researcher ID		
	Scopus Author ID		
	ORCID		

A.1. Current professional situation

Institution	University of Malaga		
Dpt. / Centre	Department of Psychobiology and Methodological Sciences / Faculty of Psychology		
Address			
Phone		Email	
Professional category	Emerging researcher. Proyectos de Generación de Conocimiento "Frontera", I+D+i, Programa Operativo FEDER Andalucía 2014-2020	Start date	2019
UNESCO spec. code	610601 - Brain function; 610604 - Experimental analysis of behaviour; 610610 - Physiological psychology		
Keywords	Learning; Processing language; Semantics and pragmatics; Speech; Reading; Experimental neuropsychology; Neuroimage; Cognitive neuroscience		

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
PhD in Biomedicine	University of Barcelona	2013
Master degree in Neurosciences	University of Barcelona	2009
Bachelor in Psychology	University of Malaga	2006

A.3. General quality indicators of scientific production

During my scientific career I have published **23 articles in high quality JCR international peer-reviewed journals and 3 book chapters**. I am the first author of 8/23 articles, senior author of 6/19, and corresponding author in 4. My work has been cited **745 times**, and I have an **h-index of 11** (Google scholar, date: 10/08/2020). I have presented my work in **more than 33 conferences** (26 are international), including oral sessions. I have been invited to give talks in different universities. I have participated in **7 research projects (2 as a PI)**, including one international Project from the European Research Council (ERC) in which I was a team member. At present I am the PI of 2 competitive Projects.

I have been **granted with different competitive grants** along my research career in different institutions of recognized international prestige in the area of basic and clinical neuroscience, including a 4-years predoctoral grant funded by Generalitat de Catalunya and the European Social Fund (FI) at the Brain Plasticity and Cognition Unit (University of Barcelona); 5 postdoctoral grants: Postdoctoral grant at the Brain and Spine Institute (Hospital de la Pitié-Salpêtrière, Paris, France) funded by Crédit Agricole d'Ile-de-France Mécénat (14 months); Juan de la Cierva Formacion Post-doctoral grant at the Cognitive Neurology and aphasia Unit (University of Malaga) (2 years); Postdoctoral Grant for Incorporation of Doctors (University of Malaga) (1 year); Juan de la Cierva Incorporation grant (Instituto de Investigación biomédica de Málaga) (10 months), and a Emergent researcher grant funded by Junta de Andalucía with Funds from the European Union (Fondos Feder). In addition, I have obtained two travel grants (BE) to develop two short research stays at different laboratories in United Kingdom: at the University of York (4 months, 2009) and at the King's College London (3 months, 2010).

Recently I have done a 2 months research stay at the Poeppel Lab (New York University) funded by the University of Malaga.

I have supervised 4 master thesis in different universities, 4 final degree projects and I am currently directing the doctoral thesis of one PhD student. In addition to my research labors, I teach in the Degree of Psychology (Department of Psychobiology (University of Malaga)) the subject "Fundamentos de Psicobiología II" and in a Master Degrees (two subjects: Psychopharmacology; and Neural bases of cognition) since 2016. I have been invited to lead teaching duties in several courses (UMA, UB). I was awarded with the prize of the best publication in 2013 granted by the Spanish Society for Experimental Psychology (SEPEX) for my article published in PNAS (López-Barroso et al. 2013), which currently has been cited 211 times. I am a regular reviewer for international peer-reviewed JCR journals; and I am a Guest Associate Editor of a research topic in Frontiers in Human Neuroscience called "The Neural Signatures of Plasticity in Developmental and Early Acquired Speech, Language and Reading Disorders". Finally, I am Editor Reviewer of Frontiers in Aging Neuroscience.

Section B. SUMMARY OF THE CURRICULUM

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

- 1 Scientific paper.** Dávila, G; Moyano, MP; Berthier, ML; et al. 2020. Pharmacotherapy of Traumatic Childhood Aphasia: Beneficial Effects of Donepezil Alone and Combined with Intensive Naming Therapy Frontiers in Pharmacology. 11-1144.
- 2 Scientific paper.** Torres-Prioris MJ; Lopez-Barroso D; Càmara E; et al. 2020. Neurocognitive signatures of phonemic sequencing in expert backward speakers Scientific Reports. 10.
- 3 Scientific paper.** López-Barroso D; Thiebaut de Schotten M; Morais J; et al. 2020. Impact of literacy on the functional connectivity of vision and language related networks NeuroImage. 213-116722.
- 4 Scientific paper.** Berthier ML; Dávila G; Torres-Prioris MJ; et al. 2020. Developmental Dynamic Dysphasia: Are Bilateral Brain Abnormalities a Signature of Inefficient Neural Plasticity? Frontiers in Human Neuroscience. 14-73.
- 5 Scientific paper.** Edelkraut L; Roé-Vellvé N; Berthier ML; et al. (8/8). 2019. "Need to Know" or the Strong Urge to Find Names of Unique Entities in Acquired Obsessive-Compulsive Disorder Cognitive and Behavioral Neurology. 32-2.
- 6 Scientific paper.** Torres-Prioris, MJ; Lopez-Barroso, D; Paredes-Pacheco, J; et al. (6/1). 2019. Language as a Threat: Multimodal Evaluation and Interventions for Overwhelming Linguistic Anxiety in Severe Aphasia Frontiers in Psychology. 8-10.
- 7 Scientific paper.** María José Torres Prioris; Diana Lopez Barroso; Núria Roé Vellvé; et al. (6/1). 2019. Repetitive verbal behaviors are not always harmful signs: Compensatory plasticity within the language network in aphasia Brain and Language.
- 8 Scientific paper.** Berthier ML; Torres-Prioris MJ; López-Barroso D; et al. 2017. Are you a doctor? . . . Are you a doctor? I'm not a doctor! A reappraisal of mitigated echolalia in aphasia with evaluation of neural correlates and treatment approaches Aphasiology. Taylor & Francis Online. pp.1-30.
- 9 Scientific paper.** Berthier ML; Irene De Torres; Jose Paredes Pacheco; et al. 2017. Cholinergic Potentiation and Audiovisual Repetition-Imitation Therapy Improve Speech Production and Communication Deficits in a Person with Crossed Aphasia by Inducing Structural Plasticity in White Matter Tracts Frontiers in Human Neuroscience. 11-304.
- 10 Scientific paper.** Lopez-Barroso D; de Diego-Balaguer R. 2017. Language Learning Variability within the Dorsal and Ventral Streams as a Cue for Compensatory Mechanisms in Aphasia Recovery Frontiers in human neuroscience. 11, pp.476.
- 11 Scientific paper.** Froudist-Walsh S; Diana Lopez Barroso; María José Torres Prioris; et al. 2017. Plasticity in the Working Memory System: Life Span Changes and Response to Injury The Neuroscientist.

- 12 **Scientific paper.** Berthier ML; Torres-Prioris MJ; López-Barroso D. 2017. Thinking on treating echolalia in aphasia: recommendations and caveats for future research directions *Frontiers in human neuroscience*.
- 13 **Scientific paper.** Villa-Ballo A; Ernest Mas Herrero; Pablo Ripollés; et al. 2017. Unraveling the Role of the Hippocampus in Reversal Learning *Journal of neuroscience*. 12(37)-28, pp.6686-6697.
- 14 **Scientific paper.** López-Barroso D; David Cucurell; Antoni Rodríguez Fornells; et al. 2016. Attentional effects on rule extraction and consolidation from speech *Cognition*. Elsevier. 152, pp.61-69.
- 15 **Scientific paper.** López-Barroso, D; Ripollés, P; Marco-Pallarés, J; et al. 2015. Different brain networks underlying word learning revealed by independent component analysis *Neuroimage*. 110, pp.182-193.
- 16 **Scientific paper.** Miró, J; Ripollés, P; López-Barroso, D; et al. 2014. Atypical language organization in temporal lobe epilepsy revealed by a passive semantic paradigm *BMC Neurology*. 14-98.
- 17 **Scientific paper.** López-Barroso D; Catani M; Ripollés P; et al. 2013. Word learning is mediated by the left arcuate fasciculus *Proceedings of the National Academy of Sciences*. 110-32, pp.13168-13173.
- 18 **Scientific paper.** Oyarzún J; López-Barroso D; Fuentemilla L; et al. 2012. Updating fearful memories with extinction training during consolidation: a human study using auditory aversive stimuli *Plos One*. 7-6.
- 19 **Scientific paper.** López-Barroso D; De Diego-Balaguer R; Cunillera T; et al. 2011. Language learning under working memory constraints correlates with microstructural differences in the ventral language pathway *Cerebral Cortex*. 21-12, pp.2742-2750.
- 20 **Scientific paper.** De Diego-Balaguer R; López-Barroso D. 2010. Cognitive and Neural Mechanisms Sustaining Rule Learning from Speech *Language Learning*. 60-2, pp.151-187.
- 21 **Scientific paper.** Santín LJ; Bilbao C; Pedraza C; et al. 2009. Behavioral phenotype of maLPA1-null mice: increased anxiety-like behavioral and spatial memory deficit *Genes, Brain and Behaviour*. 8-8, pp.772-784.
- 22 **Scientific paper.** Matas-Rico E; García-Díaz B; Llebregz-Zayas P; et al. 2008. Deletion of lysophosphatidic acid receptor LPA1 reduces neurogenesis in the mouse dentate gyrus *Molecular and Cellular Neuroscience*. 39, pp.342-355.
- 23 **Scientific paper.** Rioja J; Santín LJ; López-Barroso D; et al. 2007. 5-HT1A receptor activation counteracted the effect of acute inactivation of noradrenergic neurons in the rat Locus Coeruleus *Neuroscience letters*. 412, pp.84-88.
- 24 **Popular science article.** López-Barroso; De Diego-Balaguer. 2017. Aprendiendo sin prestar atención: ¿Qué aprendemos realmente? *Ciencia Cognitiva*.
- 25 **Popular science article.** López-Barroso D; Rodríguez-Fornells A; De Diego-Balaguer R. (3/1). 2014. Conexión esencial para aprender palabras *Mente y Cerebro (INVESTIGACION Y CIENCIA- (The Spanish edition of the SCIENTIFIC AMERICAN JOURNAL))*. 68.
- 26 **Popular science article.** Lopez-Barroso; Rodriguez-Fornells; De Diego-Balaguer. 2014. El aprendizaje de palabras depende de una buena conexión entre regiones del hemisferio izquierdo *Ciencia Cognitiva*.
- 27 **Book chapter.** Torres-Prioris; López-Barroso; Edelkraut; et al. 2019. Importancia del sexo y las diferencias interindividuales en la representación cerebral del lenguaje *Tratado de Neuropsicología Clínica: Bases conceptuales y técnicas de evaluación*. Librería Akadia Editorial. ISBN 978-987-570-371-1.
- 28 **Book chapter.** Berthier ML; Davila G; Edelkraut L; et al. 2019. Pharmacological Treatment of Post-Stroke Cognitive Deficits *Neurovascular Neuropsychology, Second Edition*. Springer Science + Business Media. Behavioral Sciences.
- 29 **Book chapter.** De Diego-Balaguer R; Lopez-Barroso D. 2010. Cognitive and Neural Mechanisms Sustaining Rule Learning from Speech *The earliest stages of language learning*. Oxford: Blackwell Publishers..

C.2. Participation in R&D and Innovation projects

- 1 Marcadores cerebrales de respuesta a los tratamientos de la afasia crónica post-ictus: hacia un enfoque individualizado de la potenciación de la neuroplasticidad Proyectos de Generación de Conocimiento “Frontera”, I+D+i en el marco del Programa Operativo FEDER Andalucía 2014-2020. Diana Lopez Barroso. (University of Malaga). 01/12/2019-14/11/2021. 72.740 €. Principal investigator.
- 2 PI16/01514, Estudio de la eficacia y reorganización cerebral tras el tratamiento combinado con Donepezilo, rehabilitación intensiva y estimulación transcraneal de corriente directa en la afasia crónica9 Ministerio de Economía y Competitividad, Gobierno de España. Marcelo Luís Berthier Torres. (Biomedical Research in Malaga (IBIMA).). 01/01/2017-31/12/2019. 131.648 €. Team member.
- 3 La lateralización de la vía dorsal como un predictor anatómico del aprendizaje de palabras mediado por estimulación cerebral no invasiva en sujetos sanos Projects for young researchers. Diana López Barroso. (University of Malaga). 01/03/2018-01/03/2019. 4.000 €. Principal investigator.
- 4 Tuning attention during Language Learning European Research Council. Ruth de Diego Balaguer. (University of Barcelona). 2013-2018. 1.485.600 €. Team member.
- 5 UNA APROXIMACIÓN DE NEUROIMAGEN MULTIMODAL PARA DELINEAR VIAS EMOCIONALES, MOTORAS Y COGNITIVAS CORTICO-ESTRIATALES Ministerio de Ciencia e Innovación. Universidades. Ruth De Diego Balaguer. (University of Barcelona). 2012-2016. 102.850 €. Team member.
- 6 The influence of non-conscious emotional processing in cognitive control. A functional neuroimaging approach Spanish Ministry of Science and Innovation. Antoni Rodriguez Fornells. (Bellvitge Biomedical Research Institute (IDIBELL)). 2012-2014. 141.570 €. Team member.
- 7 Neurodynamics of Cognition and Mental disorders (NECOM) AGENCIA DE GESTIO D'AJUTS UNIVERSITARIS I DE RECERCA. Antoni Rodriguez Fornells. (University of Barcelona). 2009-2013. 57.200 €. Team member.

C.3. Participation in R&D and Innovation contracts

Anatomical / functional correlates of Impulse Control Disorders in Parkinson s Disease Institut de Recerca Hospital de la Santa Creu i Sant Pau. Marcelo Berthier Torres. 15/01/2020-15/01/2024. 25.000 €.

C.4. Patents