

CV Date	06/02/2022
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Part A. PERSONAL INFORMATION

First Name	Aida		
Family Name	Platero Luengo		
Sex	Female	Date of Birth	
ID number Social Security, Passport			
URL Web	https://bibliometria.us.es/prisma/investigador/7213		
Email Address	aplatero@us.es		
Open Researcher and Contributor ID (ORCID)	0000-0002-4693-7654		

A.1. Current position

Job Title	Junior Principal Investigator PAIDI		
Starting date	2020		
Institution	University of Seville		
Department / Centre	Fisiología Médica y Biofísica / Instituto de Biomedicina de Sevilla		
Country	Spain	Phone Number	
Keywords			

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2020 - 2020	Contratado Juan de la Cierva Incorporación / University of Seville
2018 - 2020	Marie Curie Fellow / King's College London
2014 - 2017	Postdoctoral Fellow / Salk Institute for Biological Studies
2006 - 2014	PhD student / University of Seville / Spain
2004 - 2006	Pre-graduate student / University of Seville

A.3. Education

Degree/Master/PhD	University / Country	Year
PhD Program in Biomedical Research	University of Seville	2014
Master Thesis in Biomedical Research	University of Seville	2008

Part B. CV SUMMARY

I performed my PhD at University of Seville in 2014, mentored by José López Barneo and Ricardo Pardo. My thesis is about the physiology of neurogenesis in the peripheral nervous system and describes a novel communication mechanism between stem cells and their neuronal progeny. I published five manuscripts in this subject, two of them as a first author (Platero-Luengo et al. *Cell* 2014; Navarro-Guerrero* and Platero-Luengo* et al. *Stem Cell* 2016). The work published in *Cell* was chosen "Paper of the Month" by the Spanish Society of Biochemistry and Molecular Biology (SEBBM) and awarded with the "University of Seville Prize for Relevant Scientific Work". The relevance of these findings has given me the national "Young Investigator Award" by Biogen Idec Foundation. I obtained an EMBO short-term stay fellowship to spend four months at Johannes Gutenberg University Mainz (Germany). In 2014, I joined Salk Institute for Biological Studies (USA) as a postdoctoral fellow in the laboratory of Juan Carlos Izpisua Belmonte. There, I specialized in stem cell biology, cell reprogramming and their role in tissue regeneration and aging, publishing five papers in top scientific journals (Ocampo et al., *Cell* 2016; Wu et al., *Cell* 2017; Kang et al., *Nature* 2016). In 2018, I moved to King's College London to join the laboratory of Benedikt Berninger, where I investigated the production of new neurons by cellular reprogramming to implement regeneration in nervous system. In 2019, I was awarded a Marie Curie Individual Fellowship to work on cell reprogramming in the brain. In 2020, I obtained a "Juan de la Cierva

Incorporación” fellowship to join the Spanish Scientific System. Soon later, I obtained **two grants from the Andalusia Regional Government** (FEDER and PAIDI programs, 220.900 euros) to join the University of **Seville** as Principal **Investigator**. Recently, I have been selected for the Healthy **Longevity Interstellar Initiative** mentoring program for early career scientists by The New York Academy of Sciences and The Japanese Agency for Medical Research and Development. This program recognised our project with the **Outstanding Presentation Award** (\$40.000).

My current line of research is about applying cell reprogramming technologies to induce regeneration in the brain by generating new neurons and reversing aging hallmarks in the central nervous system. In the 2021 call, my project was **selected to the step 2 interview stage by the ERC-Starting Grant Program**, but unfortunately was not finally funded.

I have recently signed a **collaboration contract with the American Company YouthBio Therapeutics** to carry out a project to discover new factors to fight aging symptoms and promote longevity and healthy aging. I have participated in a total of **eleven scientific articles and a book chapter**. I presented my work in numerous **national and international conferences**, by oral (6) and poster communications, such as The Cajal Christmas Meeting 2021 (Plenary Talk) and the National Meeting organized by SEBBM in 2014 (Invited Speaker). I participated as **external reviewer** for a IMIBIC conference, for an ENABLE Satellite event and for the journal “Progress in Neurobiology”, and **recently invited to join the Editorial Board of the “Cellular and Molecular Neurobiology” scientific journal**.

I have been involved in **official teaching** at King’s College London (40 hours) and University of Seville (81 hours), as part of the Undergraduate and Master Program. I directed one Master Thesis (TFM) and two Final Degree Projects (TFG). I currently co-direct a Doctoral Thesis at University of Seville awarded with a Junta de Andalucía PhD Fellowship.

Dissemination and **outreach activities** are also part of my interest. I am founder and organizer of the initiative Wow!Science at IBiS, a series of seminars and activities specially designed to motivate and encourage discussion on all aspects of science among early career researchers at University of Seville. This year I am involved in the organization of the next **FEBS-IUBMB-ENABLE Conference**, that will have placed in Seville in November 2022.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (n° x / n° y): position / total authors. If applicable, indicate the number of citations

- 1 **Scientific paper**. Veronica Sobrino; Valentina Annese; Elena Navarro-Guerrero; Aida Platero-Luengo; Ricardo Pardo. 2019. THE CAROTID BODY: A PHYSIOLOGICALLY RELEVANT GERMINAL NICHE IN THE ADULT PERIPHERAL NERVOUS SYSTEM Cellular and Molecular Life Science.
- 2 **Scientific paper**. Beyret* E; Martinez-Redondo* P; Platero-Luengo* A; Izpisua Belmonte JC. 2018. ELIXIR OF LIFE: THWARTING AGING WITH REGENERATIVE REPROGRAMMING Circulation Research. 122-1, pp.128-141. SCOPUS (6)
- 3 **Scientific paper**. Jun Wu; Aida Platero-Luengo; Masahiro Sakurai; et al; Juan Carlos Izpisua Belmonte. 2017. INTERSPECIES CHIMERISM WITH MAMMALIAN PLURIPOTENT STEM CELLS Cell. 168-3, pp.473-486. SCOPUS (253)
- 4 **Scientific paper**. Ocampo A; Reddy P; Martinez-Redondo P; et al; Izpisua Belmonte JC. 2016. IN VIVO AMELIORATION OF AGE-ASSOCIATED HALLMARKS BY PARTIAL REPROGRAMMING Cell. 167-7, pp.1719-1733. SCOPUS (276)
- 5 **Scientific paper**. Navarro-Guerrero*; Platero-Luengo A*; Linares-Clemente P; Cases I; López-Barneo J; Pardo R. 2016. GENE EXPRESSION PROFILING SUPPORTS THE NEURAL CREST ORIGIN OF ADULT RODENT CAROTID BODY STEM CELLS AND IDENTIFIES CD10 AS A MARKER FOR MESECTODERM-COMMITTED PROGENITORS. Stem Cells. 34-6, pp.1637-1650. ISSN 1066-5099. SCOPUS (14)

- 6 **Scientific paper.** Platero-Luengo A; González-Granero S; Durán R; Díaz-Castro B; Piruat JI; García-Verdugo JM; Pardal R; López-Barneo J. 2014. AN O₂-SENSITIVE GLOMUS CELL-STEM CELL SYNAPSE INDUCES CAROTID BODY GROWTH IN CHRONIC HYPOXIA *Cell*. 156-1-2, pp.291-303. ISSN 0092-8674. SCOPUS (69)
- 7 **Scientific paper.** Veronica Sobrino; Aida Platero Luengo; Valentina Annese; Elena Navarro Guerrero; Patricia Gonzalez Rodriguez; Jose Lopez Barneo; Ricardo Pardal Redondo. 2020. Neurotransmitter modulation of carotid body germinal niche *International Journal of Molecular Science*.
- 8 **Scientific paper.** Kang E; Wu J; Gutierrez NM1; et al; Mitalipov S. 2016. MITOCHONDRIAL REPLACEMENT IN HUMAN OOCYTES CARRYING PATHOGENIC MITOCHONDRIAL DNA MUTATIONS *Nature*. 540-7632, pp.270-275. SCOPUS (145)
- 9 **Scientific paper.** Wu J; Platero Luengo A; Gil MA; et al; Izpisua Belmonte JC. 2016. GENERATION OF HUMAN ORGANS IN PIGS VIA INTERSPECIES BLASTOCYST COMPLEMENTATION *Reproduction in domestic animals*. 0, pp.18-24. ISSN 0936-6768.
- 10 **Scientific paper.** López-Barneo J; Macías D; Platero-Luengo A; Ortega-Sáenz P; Pardal R. 2016. CAROTID BODY OXYGEN SENSING AND ADAPTATION TO HYPOXIA *European Journal of Physiology*. 468-1, pp.59-70. ISSN 0031-6768. SCOPUS (19)
- 11 **Scientific paper.** Pardal R; Ortega-Sáenz P; Durán R; Platero-Luengo A; López-Barneo J. 2010. THE CAROTID BODY, A NEUROGENIC NICHE IN THE ADULT PERIPHERAL NERVOUS SYSTEM. *Arch Ital Biol*. 148, pp.95-105. ISSN 0003-9829.
- 12 **Book chapter.** Pardal R; Platero-Luengo A. 2011. A PATHOPHYSIOLOGICAL VIEW OF THE NEURAL STEM CELL NICHE *Stem Cell, Regenerative Medicine and Cancer*. Nova Science Publishers. pp.141-156.

C.2. Conferences and meetings

- 1 Aida Platero Luengo. Exploring the possibilities of cell reprogramming technology to promote brain health. Cajal Christmas Meeting. Instituto Cajal. 2021. Spain. Participatory - Plenary session.
- 2 Aida Platero Luengo; Benedikt Berninger. In vivo partial reprogramming of parenchymal glia into neural stem cells. XIV European Meeting on Glial Cells in Health and Disease. Network Glia. 2019. Portugal. 'Participatory - poster.
- 3 Aida Platero Luengo; Benedikt Berninger. N VIVO PARTIAL REPROGRAMMING OF PARENCHYMAL GLIA INTO NEURAL PROGENITOR CELLS IN THE MOUSE BRAIN. ISSCR Annual Meeting 2019. International Society for Stem Cell Research. 2019. United States of America. 'Participatory - poster.
- 4 Aida Platero Luengo; Benedikt Berninger. In vivo partial reprogramming of parenchymal glia into neural stem cells. *Molecular neuroscience: From genes to circuits in health and disease*. EMBO. 2019. India. 'Participatory - poster.
- 5 Aida Platero Luengo; Benedikt Berninger. "IN VIVO PARTIAL REPROGRAMMING OF PARENCHYMAL GLIA INTO NEURAL STEM CELLS". 5th Biennial Meeting of the Rhine-Main Neuroscience Network (rmn²). Rhine-Main Neuroscience Network. 2018. Germany. 'Participatory - poster.
- 6 Aida Platero Luengo. "ACTIVACIÓN POR HIPOXIA DEL NICHU NEUROGÉNICO DEL CUERPO CAROTÍDEO". XXXVII Spanish Society of Biochemistry and Molecular Biology Conference. Spanish Society of Biochemistry and Molecular Biology Conference. 2014. Spain. Participatory - invited/keynote talk.
- 7 Aida Platero Luengo; Rocío Duran; José López Barneo; Ricardo Pardal Redondo. "AN O₂-SENSITIVE GLOMUS CELL-STEM CELL SYNAPSE INDUCES CAROTID BODY GROWTH IN CHRONIC HYPOXIA". *The Stem Cell Niche*. Copenhagen Bioscience Conferences. 2014. Denmark. Participatory - oral communication.
- 8 Aida Platero Luengo; Rocío Duran; José López Barneo; Ricardo Pardal Redondo. "ENDOTHELIN-1 CONSTITUTES A NICHE FACTOR THAT REGULATES ADULT CAROTID BODY STEM CELL ACTIVITY". 22nd International Union of Biochemistry and Molecular Biology (IUBMB) and the 37th Federation of European Biochemical Societies (FEBS) Congress and Young Scientist Program (YSP). IUBMB & FEBS. 2012. Spain. Participatory - oral communication.

- 9 Aida Platero Luengo; Rocío Duran; José López Barneo; Ricardo Pardal Redondo. "ENDOTHELIN-1 CONSTITUTES A NICHE FACTOR THAT REGULATES ADULT CAROTID BODY STEM CELL ACTIVITY". 8th FENS Forum of Neuroscience. Federation of European Neuroscience Societies. 2012. Spain. 'Participatory - poster.
- 10 Aida Platero Luengo; Rocío Duran; José López Barneo; Ricardo Pardal Redondo. 'VASCULAR NICHE FACTORS REGULATE RODENT ADULT CAROTID BODY STEM CELL ACTIVITY". ISSCR 9th Annual Meeting. International Society for Stem Cell Research. 2011. Canada. 'Participatory - poster.
- 11 Aida Platero Luengo; Rocío Duran; José López Barneo; Ricardo Pardal Redondo. 'NICHE CELLS REGULATE THE BIOLOGY OF ADULT CAROTID BODY STEM CELLS". Workshop: Cell replacement for regeneration in the nervous system: lessons from adult neurogenesis. Universidad Internacional de Andalucía. 2010. Spain. Participatory - oral communication.
- 12 Aida Platero Luengo; Rocío Duran; José López Barneo; Ricardo Pardal Redondo. 'UNDERSTANDING THE ADULT CAROTID BODY STEM CELL NICHE". TIPO DE PARTICIPACIÓN. Workshop: Developmental origins of Neurological Disorders: from Neurogenesis to Circuit Formation. Universidad Internacional de Andalucía. 2009. Spain. 'Participatory - poster.
- 13 Aida Platero Luengo; Rocío Duran; José López Barneo; Ricardo Pardal Redondo. 'UNDERSTANDING THE ADULT CAROTID BODY STEM CELL NICHE". 2nd International PhD student meeting on ENInet. ENInet. 2009. Greece. Participatory - oral communication.

C.3. Research projects and contracts

- 1 **Project.** PY18-1088, Ingeniería de la neurogenesis aplicada a la regeneracion del tejido cerebral. CONSEJERÍA DE ECONOMÍA, CONOCIMIENTO, EMPRESAS Y UNIVERSIDAD. Aida Platero Luengo. (Universidad de Sevilla). 16/12/2020-16/12/2023. 190.900 €. Principal investigator.
- 2 **Project.** US-1262881, Ingeniería de la neurogénesis y regeneración cerebral: desarrollo de una tecnología basada en la reprogramación celular para activar la formación de nuevas neuronas en el cerebro adulto. CONSEJERÍA DE ECONOMÍA, CONOCIMIENTO, EMPRESAS Y UNIVERSIDAD. Aida Platero Luengo. (Universidad de Sevilla). 01/09/2020-31/08/2023. 30.000 €. Principal investigator.
- 3 **Project.** 206410/Z/17/Z, Lineage reprogramming of glia into subtype-specific cortical neurons. Wellcome Trust. Benedikt Berninger. (King's College London). 01/03/2018-30/04/2023. 2.843.025,21 €. Team member.
- 4 **Project.** Harnessing partial reprogramming to "rejuvenate" aging brains. Japan Agency for Medical Research and Development- The New York Academy of Science. Aida Platero Luengo. (Universidad de Sevilla). 06/11/2020-28/02/2022. 35.324 €. Principal investigator.
- 5 **Project.** Physiopy of the Adult Carotid Body Stem Cell Niche. European Research Council. (Instituto de Biomedicina de Sevilla). 01/11/2010-31/10/2015. 1.476.000 €. Team member.
- 6 **Project.** P08-CTS-4121, Cell therapy in Parkinson's disease. Consejería de Innovación, C^a y Empresa Junta Andalucía. JUAN JOSE TOLEDO ARAL. (Biomedical Research Laboratory). 13/01/2009-31/03/2014. 288.320 €. Team member.
- 7 **Project.** Oxygen Sensitivity and Neurodegeneration. Marcelino Botín Foundation. Jose López Barneo. (Instituto de Biomedicina de Sevilla). 20/07/2013-19/09/2013. 625.000 €. Team member.
- 8 **Project.** SAF2009-11440, Regulation of the physiology of the carotid body adult stem cells. Ministerio de C^a e Innovación- FEDER. Ricardo Pardal Redondo. (Institute of Biomedical Research of Seville (IBIS)). 01/01/2010-31/12/2012. 135.000 €. Team member.
- 9 **Project.** PI-0290/2008, In vitro generation of glomus cells from stem cells for cell therapy against Parkinson's disease. Consejería de Salud. Junta de Andalucía. 1. (Institute of Biomedical Research of Seville (IBIS)). 01/01/2009-31/10/2011. 84.400 €. Team member.
- 10 **Contract.** High-throughput screening for novel rejuvenation factors YouthBio Therapeutics Inc.. Aida Platero Luengo. (University of Seville). 01/01/2022-01/01/2023. 87.000 €.