

Date of the CVA

09/01/2020

Section A. PERSONAL DATA

Name and Surname	Miren Revuelta Aramberri		
DNI	44340936H	Age	32
Researcher's identification number	Researcher ID	AAH-2410-2019	
	Scopus Author ID		
	ORCID	0000-0001-8126-2050	

A.1. Current professional situation

Institution	University of the Basque Country		
Dpt. / Centre	Human physiology / Farmacy faculty, UPV/EHU		
Address	Iparraguirre 12-4A, 20600, Eibar		
Phone	(+34) 619640764	Email	miren.revuelta@ehu.eus
Professional category	University professor	Start date	2019
UNESCO spec. code	320000 - Medical Science; 580000 - Pedagogy		
Keywords			

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

Bachelor/Master/PhD	University	Year
Doctor in Biomedical Research	University of the Basque Country	2015
Master degree in Biomedical Research	University of the Basque Country	2013
Master degree in High School teaching	University of the Basque Country	2012
Bachelor in Biology	Universidad Complutense de Madrid	2011

A.3. General quality indicators of scientific production

Sum of times cited: 726 (Web of science)

Total publications: 13 (Web of science)

Publications in the 1st quartile (Q1): 8 (6 of them in the 1st decile).

H-index: 16 (Web of Science):

Section B. SUMMARY OF THE CURRICULUM

Dr. Miren Revuelta finished her PhD in October 2015, in the Department of Cell Biology and Histology in the School of Medicine and Dentistry of the University of the Basque Country, under the direction of Dr. Enrique Hilario and Dr. Agustín Martínez-Ibargüen. During her thesis, she evaluated in a perinatal rat model, the protective effect of different antioxidant therapies (docosahexanoic acid, resveratrol, melatonin and nicotin) in the brainstem after hypoxic-ischemic injury. She learned relevant techniques such as: animal surgery (the Rice-Vannucci experimental procedure), morphological, immunohistochemistry and immunofluorescence techniques in order to evaluate the brain damage by fluorescence and confocal microscopy. She also studied functional cellular studies such as, mitochondrial stage, ROS, intracellular calcium... and carried out some electrophysiological techniques, such as the auditory brainstem response (ABR) to evaluate the auditory threshold integrity.

Apart from that, during her PhD, she made a predoctoral stay in an International Research Center, in the Hospital Charité in Berlin, under the direction of Dr. Thomas Schmitz, focusing in an in vitro astrocytes hypoxia-ischemia model (OGD). Her work involved isolation, culture and maintenance of primary glia cell culture, analysis of gene expression and immunocytochemistry. From all this work she managed to publish 8 papers as a first-second author in most of them, with a relevant impact factor and to cooperate in some revision. She also wrote 3 book chapters and cooperate in other 4. Indeed, from all this work she

managed in 2018 the extraordinary award for the best thesis in the area of biomedical research of the University of the Basque Country.

As she had a background in neurodegenerative diseases, she got in touch with Dr. Ander Matheu in the Research Institute Biodonostia to start a collaboration where she started working under his direction in October 2016. Since then, she has been working in the project targeting self-renewal as therapeutic strategy in brain diseases, in particular the group is trying to determine the molecular mechanism implicated in NCS ageing. The group has related genes, such as SOX2 or SOX9 to this NSCs ageing, so they are now trying to understand the mechanism involved in this process. From this work she managed to publish 3 papers, one of them as the main author and another as a co-authorship. Indeed, there are other 2 manuscript that are under preparation.

In 2018 she managed from the Basque Government a three year postdoctoral grant to stay for 2 years in the Virchow Charité clinic in Berlin in Christoph Burher and Thomas Schmitz' lab and a third year in the Biodonostia Research Institute in Ander Matheu's lab. The results of her work qualify her for publish two revision papers as the main author and to write an experimental manuscript that is under review.

Apart from her research experience, after finishing her PhD she has been teaching in some subjects in Medicine Bachelor in the University of the Basque Country, in particular, she has given lessons in Cell Biology and Genetics subjects. Since October 2019 she is working as a University teacher in the University of the Basque Country, in the faculty of Pharmacy in the Pharmacy Bachelor and Nutrition Bachelor teaching human physiology subject.

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

- 1 **Scientific paper.** Miren Revuelta; et al. (10/1). 2019. NEURONAL P38 MEDIATES AGE-ASSOCIATED COGNITIVE DECLINE AND NEURAL STEM CELL EXHAUSTION IN THE HIPPOCAMPUS Ageing cell. ELSEVIER (D1). ISSN 1474-9718.
- 2 **Scientific paper.** O.Arteaga; et al. (6/2). 2016. Docosahexaenoic acid ameliorates long-term cognitive impairments by reducing damage cellular caused by neonatal hypoxia-ischemia in rats molecular neurobiology. springer (D1). Epub ahead of print, pp.1-19. ISSN 0893-7648.
- 3 **Scientific paper.** M.Revuelta; et al. (6/1). 2016. Antioxidant treatments recover the alteration of auditory evoked potentials and reduce morphological damage in the inferior colliculus after perinatal asphyxia in rat.Brain pathology. elsevier (D1). 26-2, pp.186-198. ISSN 1750-3639.
- 4 **Scientific paper.** M.Revuelta; et al. (5/1). 2016. Characterization of gene expression in the rat brainstem after neonatal hypoxic-ischemic injury and antioxidant treatment.Molecular Neurobiology. springer (D1). ISSN 0893-7648.
- 5 **Scientific paper.** O.Arteaga; et al. (6/2). 2015. Pretreatment with resveratrol prevents neuronal injury and cognitive deficits induced by perinatal hypoxia-ischemia in rats.Plos One. Public Library of Science (PLoS) (Q1). ISSN 1932-6203.
- 6 **Scientific paper.** Estefanía Carrasco; et al. (11/4). 2018. SOX2 expression diminishes with ageing in several tissues in mice and humans.Mechanisms of Ageing and Development. elsevier (Q2). ISSN 0047-6374.
- 7 **Scientific paper.** Miren Revuelta; Antonia Alvarez; Enrique Hilario. 2018. Entzefalopatía hipoxiko-iskemikoaren eragina arratoien entzunbidean EKAIA. EKAIA. 34, pp.149-156.
- 8 **Scientific paper.** F.J.Alvarez; et al. (9/2). 2015. Effect of Neonatal Asphyxia on the Impairment of the Auditory Pathway by Recording Auditory Brainstem Responses in Newborn Piglets: A New Experimentation Model to Study the Perinatal Hypoxic-Ischemic Damage on the Auditory System.Plos One. Public Library of Science (PLoS) (Q1). ISSN 1932-6203.
- 9 **Book chapter.** L.Urigüen; et al. 2015. Long-term memory impairments in neonatal rat brain after hypoxic-ischemic injury.SEHIT. SEHIT.

- 10 Book chapter.** M.Revuelta; et al. 2015. Short review of inner hair cell regeneration Congreso de la Sociedad Española de Histología e Ingeniería Tisular - VI International Congress of Histology and Tissue Engineering. SEHIT.
- 11 Book chapter.** O.Arteaga; et al. 2015. Antioxidatzailiek hipoxia-iskemiak eragindako burmuin-kaltea murrizten dute, epe luzeko ikasketa eta memoria hobetuz. Ikergazte 2015, the First Conference For Basque Researchers. Udako Euskal Unibertsitatea. UEU.
- 12 Book chapter.** M.Revuelta; et al. 2015. Hipoxia-iskemiaren kalteak arratoien entzumen sisteman eta behe kolikuluko neuronetan eta antioxidatzailen eragin onuragarriak. Ikergazte 2015, the First Conference For Basque Researchers. Udako Euskal Unibertsitatea. UEU. ISBN: 978-84-8438-54.
- 13 Book chapter.** M.Revuelta; et al. 2014. Correlation between auditory threshold and the auditory brainstem response (ABR) in rats. A possibility for the experimental study of the auditory impairments. Microscopy: advances in scientific research and education. Formatex.
- 14 Book chapter.** O.Arteaga; et al. 2014. Neuroprotective effect of antioxidants in neonatal rat brain after hypoxia-ischemia. Microscopy: advances in scientific research and education. Formatex Research Center.
- 15 Book chapter.** M.L.Cañavate; et al. 2014. Regulation of central nervous system through cytokines immune system signals. Microscopy: advances in scientific research and education. formatex.
- 16 Review.** M.Revuelta; A.Matheu. 2017. Autophagy in stem cell aging Aging Cell. Wiley (D1). ISSN 1474-9726.
- 17 Review.** M.Revuelta; et al. (6/1). 2017. Recent advances in cochlear hair cell regeneration —A promising opportunity for the treatment of age-related hearing loss Ageing Research Reviews. Elsevier (D1). 37, pp.149-155. ISSN 1568-1637.
- 18 Review.** Miren Revuelta; et al. 2020. Glial factors regulating white matter development and pathologies of the cerebellum Neurochemical research reviews. (Q3). ISSN 0364-3190.
- 19 Review.** Miren Revuelta; et al. (6/1). 2019. ISCHEMIC STROKE IN NEONATAL AND ADULT ASTROCYTES Mechanisms of Ageing and Development. (Q2). ISSN 0047-6374.
- 20 Review.** O.Arteaga; et al. (6/3). 2017. Role of antioxidants in the neonatal hypoxic-ischemic brain injury. New therapeutic approaches. Bioactives and Nutraceuticals. International Journal of Molecular Science (Q2). Accepted. ISSN 1422-0067.

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

- 1** Abordaje de la fragilidad en atención primaria: evaluación de la efectividad de una intervención multifactorial mediante un ensayo clínico aleatorizado. Subproyecto 1 Itziar Vergara. (Instituto Carlos III). 01/01/2019-31/12/2021. 45.000 €.
- 2** Ayudas nuevas programa postdoctoral investigador doctor Miren Revuelta Aramberri. (Gobierno Vasco departamento de educación, política lingüística y cultura). 28/01/2018-28/01/2021. 113.504 €.
- 3** Helicobacter pylori: Vigilancia de resistencia antibiótica, epidemiología de portación de factores de virulencia e identificación por MALDI-TOF MS Milagrosa Montes ROS. (INSTITUTO CARLOS III). 01/01/2018-31/01/2020. 93,17 €.
- 4** Plasticidad celular como diana terapéutica en cancer Estefania Carrasco. (Diputación Foral de Gipuzkoa). 12/04/2018-30/09/2019. 86.850 €.
- 5** Bionanomateriales para aplicaciones biomédicas en diagnóstico y terapia Charles Lawrie. (Departamento de desarrollo económico e infraestructura). 01/03/2017-31/03/2019. 70.951 €.
- 6** La auto-renovación como diana terapéutica en patologías cerebrales. Ander Matheu. (Diputación Foral de Gipuzkoa). 01/06/2016-30/09/2017. 72.002 €.
- 7** Nuevas estrategias para el desarrollo de instrumentos y productos dirigidos a la identificación y la valoración del síndrome de la fragilidad-Frailtek II. Tecnia. Ander Matheu. (Departamento de industria del Gobierno Vasco, programa ELKARTEK). 01/03/2016-31/03/2017. 603.081 €.
- 8** Cerebral Injury during Perinatal asphyxia Basque Government. Enrique Hilario Rodriguez. (Universidad del País Vasco). 01/01/2013-31/12/2015. 103.000 €.
- 9** Cerebral Injury during Perinatal asphyxia Enrique Hilario. (Gobierno Vasco, industria). 01/01/2013-31/12/2015. 106.000 €.

10 Auditory impairment after a perinatal Hypoxic-ischemic injury Miren Revuelta. (Fundación Gangoiti Barreda). 01/01/2013-31/12/2014. 20.000 €.

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

- 1** leodardo grant for a trainee in a foreign Company 07/01/2015-07/05/2015. 2.250 €.
- 2** Auditory impairment after a perinatal Hypoxic-ischemic injury FUNDACIÓN GANGOITI BARREDA. Enrique Hilario Rodriguez. 01/01/2013-P2Y. 20.000 €.

C.4. Patents