

Fecha del CVA

02/07/2019

Parte A. DATOS PERSONALES

Nombre y Apellidos	Elena Vecino Cordero		
DNI	11934338Y	Edad	55
Núm. identificación del investigador	Researcher ID		
	Scopus Author ID		
	Código ORCID	0000-0002-1672-5132	

A.1. Situación profesional actual

Organismo	Universidad del País Vasco		
Dpto. / Centro	Biología Celular e Histología / Facultad de Medicina y Odontología		
Dirección	Facultad de Medicina, Departamento de Biología Celular e Histología, 48940, Leioa		
Teléfono	(+34) 680543873	Correo electrónico	elena.vecino@ehu.es
Categoría profesional	Catedrática de Universidad	Fecha inicio	2004
Espec. cód. UNESCO			
Palabras clave			

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciada en Bellas Artes	Univesidad del País Vasco	2014
PhD	Universidad de Lund (Suecia)	1996
Doctora en Biología	Universidad de Salamanca	1989
Licenciado en Biología	Universidad de Salamanca	1986

A.3. Indicadores generales de calidad de la producción científica

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

Elena Vecino (ORCID ID: 0000-0002-1672-5132) obtained her BSc and PhD in Biology from the University of Salamanca (1986 and 1989, respectively), and a second PhD in the field of vision from the University of Lund (Sweden, 1996). She has collaborated with several European and American Universities. She became a Full Professor of Cell Biology at the University of Basque Country in 2004, where she leads a multidisciplinary group in experimental Neuro-Ophtho-Biology (www.ehu.es/GOBE), and from 2012, she is a Fellow of Clare Hall, Cambridge (UK). She has published more than 120 peer reviewed papers, directed 15 PhD theses, half of whom were Ophthalmologists, and more than 20 Master's Thesis. Is referee of 10 interntional research journals and member of the editorial board of the Translational Journal (TVST). She has been Evaluator of European Grants and member of national evaluating agencies (ANEP; ANECA). She has held more than 70 national and international grants, two of them European, and she has collaborated with several pharmaceutical companies in developing/improving treatments for Glaucoma. The main interests of her research are retinal neuroprotection and the identification of biomarkers in the tear to characterize ocular pathologies. She has developed several animal models of glaucoma that are now used globally to study this pathology. She has been elected by the Univ. of Bordeaux from the Initiative of Excellence (2020) and by the Univ. of Cambridge (UK) Clare Hall College Brain Repair Centre to study the regeneration of the visual nervous system (2012). She has participated in several preclinical trials, including that to ratify the first gene therapy for Retinosis Pigmentaria (in collaboration with Dr Aguirre at U. Penn, USA), and her research has received several prizes from International organizations, including the American Glaucoma Foundation (2004), the First International Prize of ONCE Foundation (2005) and the Alcon Foundation (Prize for Excellence in Glaucoma Research, 2015). She currently holds several grants from pharmaceutical and biotech companies to identify tear biomarkers for neurological and eye diseases, that are at

present in Phase III clinical trial. In addition, Elena Vecino is Bachelor of Fine Arts (2014) with the specialization in sculpture.

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología)

C.1. Publicaciones

- 1 Fonollosa, Alex; et al. 2019. Effect of somatostatin on human retinal pigment epithelial cells permeability. *Experimental Eye Research*. 184, pp.15-23.
- 2 Noelia Ruzafa; et al. 2018. A proteomics approach to identify candidate proteins secreted by Müller glia that protect ganglion cells in the retina. *Proteomics*. 18-11.
- 3 Pereiro, Xandra; et al. 2018. Dexamethasone protects retinal ganglion cells but not Müller glia against hyperglycemia in vitro. *PLoS One*. 13-11.
- 4 Vecino, Elena; et al. 2018. Ocular Hypertension/Glaucoma in Minipigs: Episcleral Veins Cauterization and Microbead Occlusion Methods. *Methods in molecular biology* (Clifton, N.J.). 1695, pp.41-48. ISSN 1940-6029.
- 5 Ruzafa, Noelia; et al. 2018. The Retina of Osteopontin deficient Mice in Aging *Molecular Neurobiology*. HUMANA PRESS INC. 55-1, pp.213-221. ISSN 1559-1182.
- 6 Cabrerizo, Javier; et al. 2017. Changes in lipidomic profile of aqueous humour in Fuchs endothelial dystrophy *Acta Ophthalmologica*. WILEY. 95-7, pp.727-732. ISSN 1755-3768.
- 7 Cabrerizo, Javier; Urcola, Javier A.; Vecino, Elena. 2017. Changes in the Lipidomic Profile of Aqueous Humor in Open-Angle Glaucoma *Journal of Glaucoma*. Lippincott Williams & Wilkins. 26-4, pp.349-355. ISSN 1536-481X.
- 8 Ruzafa, Noelia; et al. 2017. Effect of hypoxia on the retina and superior colliculus of neonatal pigs *PLOS ONE*. Public Library Science. 12-4. ISSN 1932-6203.
- 9 E. Vecino; et al. 2017. Ocular Hypertension/Glaucoma in Minipig: Episcleral Vein Cauterization and Microbead Occlusion Methods. (Capítulo de Libro) *Methods in Molecular Biology*. Springer Series. ISSN 1064-3745.
- 10 Acera, A; Vecino, E. 2017. The study of the tear as example of translation: From the bench to the clinic.; El estudio de la lagrima como ejemplo de traslacionalidad: del laboratorio a la clinica. *Archivos de la Sociedad Espanola de Oftalmologia*. 92-11, pp.507-508. ISSN 1989-7286.
- 11 Sanchez, M. L.; Vecino, E.; Covenas, R. 2016. Distribution of Neurotensin and Somatostatin-28 (1-12) in the Minipig Brainstem *Anatomia, Histologia, Embryologia*. Wiley. 45-4, pp.260-276. ISSN 1439-0264.
- 12 Vecino, Elena; et al. 2016. Glia-neuron interactions in the mammalian retina *Progress in Retinal and Eye Research*. 51, pp.1-40. ISSN 1350-9462.
- 13 Heller, Janosch P.; et al. 2015. A Method for the Isolation and Culture of Adult Rat Retinal Pigment Epithelial (RPE) Cells to Study Retinal Diseases *Frontiers in Cellular Neuroscience*. Frontiers Media SA. 9. ISSN 1662-5102.
- 14 Vecino, Elena; Acera, Arantxa. 2015. Development and programmed cell death in the mammalian eye *Int. Journal. Dev. Biology*. UPV-EHU PRESS. 59-1-3, pp.63-71. ISSN 0214-6282.
- 15 Ruzafa, N; Vecino, E. 2015. Effect of Muller cells on the survival and neuritogenesis in retinal ganglion cells. *Archivos de la Sociedad Espanola de Oftalmologia*. 90-11, pp.522-6. ISSN 1989-7286.
- 16 E. Vecino; J. Kwok. 2015. Extracellular Matrix in the Nervous System: the good and the bad. (Capítulo de libro) *Extracellular Matrix*. In Tech. ISBN 978-953-51-2415-3.
- 17 Vecino, Elena; et al. 2015. Influence of Extracellular Matrix Components on the Expression of Integrins and Regeneration of Adult Retinal Ganglion Cells *PLOS ONE*. Public Library Science. 10-5. ISSN 1932-6203.
- 18 Lisardo Sanchez, Manuel; Vecino, Elena; Covenas, Rafael. 2013. Distribution of methionine-enkephalin in the minipig brainstem *Journal of Chemical Neuroanatomy*. Elsevier Science BV. 50-51, pp.1-10. ISSN 0891-0618.
- 19 Mangas, Arturo; et al. 2013. GEMSP exerts a myelin-protecting role in the rat optic nerve *Neurological Research*. Taylor & Francis LTD. 35-9, pp.903-911. ISSN 1743-1328.

- 20 Pinar-Sueiro, Sergio; et al. 2013. Neuroprotective effects of topical CB1 agonist WIN 55212-2 on retinal ganglion cells after acute rise in intraocular pressure induced ischemia in rat. *Experimental Eye Research*. Academic press ltd elsevier science ltd. 110, pp.55-58. ISSN 1096-0007.
- 21 Veiga-Crespo, Patricia; et al. 2013. Phenotypic map of porcine retinal ganglion cells. *Molecular Vision*. 19, pp.904-916. ISSN 1090-0535.
- 22 Acera, Arantxa; Vecino, Elena; Duran, Juan A. 2013. Tear MMP-9 Levels as a Marker of Ocular Surface Inflammation in Conjunctivochalasis. *Investigative Ophthalmology and Visual Science*. Assoc Research Vision Ophthalmology INC. 54-13, pp.8285-8291. ISSN 0146-0404.
- 23 Rodriguez-Agirretxe, Ignacio; et al. 2013. The PLGA Implant as an Antimitotic Delivery System After Experimental Trabeculectomy. *Investigative Ophthalmology and Visual Science*. Assoc Research Vision Ophthalmology INC. 54-8, pp.5227-5235. ISSN 0146-0404.
- 24 S. Pinar-Sueiro; et al. 2012. Effect of synthetic cannabinoid CB1 agonist (WIN 55212-2) and antagonist (AM 251) on intraocular pressure in rats. (Capítulo de libro) *Glaucoma: Etiology, Pathogenesis and Treatments*. Nova Science Publishers NY, Inc.. pp.147-156. ISBN 978-1-61470-975-6.
- 25 Galdos, Marta; et al. 2012. Morphology of retinal vessels in the optic disk in a Gottingen minipig experimental glaucoma model. *Veterinary Ophthalmology*. Wiley-Blackwell. 15, pp.36-46. ISSN 1463-5216.
- 26 Acera, A; Vecino, E. 2012. [The tear biomarkers, as source of information for the ocular surface. the tears as mirror of the eye?]; Biomarcadores de la lagrima como fuente de informacion de la superficie ocular. Las lagrimas como espejo del ojo? *Archivos de la Sociedad Espanola de Oftalmologia*. 87-6, pp.171-2. ISSN 1989-7286.
- 27 S.C. Sharma; J. Li; E. Vecino. 2011. Adaptive changes in the retina and central visual areas in glaucoma. (Capítulo de libro) *Glaucoma - Basic and clinical concepts*. In Tech. ISBN 978-953-307-591-4.
- 28 Acera, Arantxa; et al. 2011. Changes in Tear Protein Profile in Patients With Conjunctivochalasis. *Cornea*. Lippincott Williams & Wilkins. 30-1, pp.42-49. ISSN 0277-3740.
- 29 Acera, A.; et al. 2011. Changes in tear protein profile in keratoconus disease. *EYE*. Nature Publishing Group. 25-9, pp.1225-1233. ISSN 0950-222X.
- 30 Del Rio, Patricia; et al. 2011. GDNF-Induced Osteopontin from Muller Glial Cells Promotes Photoreceptor Survival in the Pde6b(rd1) Mouse Model of Retinal Degeneration. *GLIA*. Wiley-Blackwell. 59-5, pp.821-832. ISSN 0894-1491.
- 31 E. Vecino; S.C. Sharma. 2011. Glaucoma animal models. (Capítulo de libro) *Glaucoma - Basic and clinical concepts*. In Tech. pp.319-334. ISBN 978-953-307-591-4.
- 32 Pinar-Sueiro, Sergio; et al. 2011. Prevention of retinal ganglion cell swelling by systemic brimonidine in a rat experimental glaucoma model. *Clinical and Experimental Ophthalmology*. Wiley-Blackwell. 39-8, pp.799-807. ISSN 1442-6404.
- 33 David Rodriguez, F.; Vecino, Elena. 2011. Stem Cell Plasticity, Neuroprotection and Regeneration in Human Eye Diseases. *Current Stem Cell Research and Therapy*. 6-1, pp.73-81. ISSN 1574-888X.
- 34 Hernandez, Maria; et al. 2010. Altered Expression of Retinal Molecular Markers in the Canine RPE65 Model of Leber Congenital Amaurosis. *Investi. Ophthal. Vis. Sci.* Assoc Research Vision Ophthalmology INC. 51-12, pp.6793-6802. ISSN 0146-0404.
- 35 Pinar-Sueiro, Sergio; et al. 2010. Optic neuropathy in methylmalonic acidemia: the role of neuroprotection. *J. Inherited Metab. Disease*. Springer. 33, pp.S199-S203. ISSN 1573-2665.
- 36 Vecino, Elena; et al. 2010. Rat retinal ganglion cells co-express brain derived neurotrophic factor (BDNF) and its receptor TrkB (vol 42, pg 151, 2002). *Vision Research*. 50-9, pp.926-926. ISSN 0042-6989.
- 37 Rivas, Miren Agurtzane; Vecino, Elena. 2009. Animal models and different therapies for treatment of retinitis pigmentosa. *Histology and Histopathology*. 24-10, pp.1295-1322. ISSN 0213-3911.

- 38 Hernandez, Maria; et al. 2009. Immunohistochemical changes in rat retinas at various time periods of elevated intraocular pressure *Molecular Vision*. 15-283-88, pp.2696-2709. ISSN 1090-0535.
- 39 Acera, Arantxa; et al. 2008. Inflammatory markers in the tears of patients with ocular surface disease *Ophthalmic Research*. KARGER. 40-6, pp.315-321. ISSN 0030-3747.
- 40 E. Vecino. 2008. Neurotrophins: Responsible for survival and death. (Capítulo de libro) *The Brain Molecules*. Research Signpost, Kerala, INDIA. pp.181-193. ISBN 978-81-7895-335-9.
- 41 Hernandez, Maria; Urcola, J. Haritz; Vecino, Elena. 2008. Retinal ganglion cell neuroprotection in a rat model of glaucoma following brimonidine, latanoprost or combined treatments *Experimental Eye Research*. Academic press Ltd elsevier science Ltd. 86-5, pp.798-806. ISSN 0014-4835.
- 42 Urcola, J. Haritz; Hernandez, Maria; Vecino, Elena. 2006. Three experimental glaucoma models in rats: Comparison of the effects of intraocular pressure elevation on retinal ganglion cell size and death *Experimental Eye Research*. Academic press Ltd Elsevier Science Ltd. 83-2, pp.429-437. ISSN 0014-4835.
- 43 Ruiz-Ederra, J; et al. 2005. The pig eye as a novel model of glaucoma *Experimental Eye Research*. Academic press Ltd elsevier science Ltd. 81-5, pp.561-569. ISSN 0014-4835.
- 44 Bonnet, D; et al. 2004. Brain-derived neurotrophic factor signalling in adult pig retinal ganglion cell neurite regeneration in vitro *Brain Research*. Elsevier Science BV. 1007-1-2, pp.142-151. ISSN 0006-8993.
- 45 Vecino, E; Hernandez, M; Garcia, M. 2004. Cell death in the developing vertebrate retina *International Journal of Developmental Biology*. 48-8-9, pp.965-974. ISSN 0214-6282.
- 46 Garcia, M; Vecino, E. 2003. Role of Muller glia in neuroprotection and regeneration in the retina *Histol and Histopathol*. 18-4, pp.1205-1218. ISSN 0213-3911.
- 47 Garcia, M; et al. 2002. Effects of Muller glia on cell survival and neuritogenesis in adult porcine retina in vitro *Invest. Ophthal. Vis. Sci.Assoc Research Vision Ophthalmology INC*. 43-12, pp.3735-3743. ISSN 0146-0404.

C.2. Proyectos

- 1 AMINOGE (ELKARTEK). 01/07/2019-31/12/2020. 160.000 €.
- 2 Análisis lipídico de la retina in vivo e in vitro (Lipid analysis of the retina in vivo and in vitro) Elena Vecino. (Gobierno Vasco, acciones Universidad-Empresa (PUE_2018_1_0004)). 2018-2020. 31.789 €.
- 3 Investigación en neuroprotección de la retina y biomarcadores moleculares en patologías de la superficie ocular (Research in neuroprotection of the retina and molecular biomarkers in pathologies of the ocular surface) Elena Vecino. (Ayudas a la Investigación: Mod. II Grupos). 2018-2019. 3.600 €.
- 4 Apoyo a Grupos Consolidados. (Support to Consolidated Groups. Special actions) Elena Vecino. (Universidad del País Vasco. Ayudas extraordinarias a grupos de investigación en la UPV/EHU(GIU17/73)). 2017-2018. 16.000 €.
- 5 Desarrollo de tratamientos personalizados para el glaucoma. Énfasis en poblaciones infantiles y de edad avanzada. GLAUKUS (Development of personalized treatments for glaucoma. Emphasis on children and elderly populations. GLAUKUS) Elena Vecino. (RETOS- MINECO Fondos FEDER (RTC-2016-4823-1)). 2016-2018. 182.000 €.

C.3. Contratos

C.4. Patentes

- 1 Elena Vecino. P16051ES00. Método para extraer lípidos de lágrima España. 24/10/2018. Universidad del País Vasco.
- 2 Elena Vecino. 9602680. Modelo de Utilidad Cámara de Humedad España. 16/10/1997. Universidad del País Vasco.