

CURRICULUM VITAE

Personal information

Name: Eva García Vázquez

Birth place:

Gender:

Professional address: Department of Functional Biology, University of Oviedo.
C/ Julián Clavería, s/n. 33006-Oviedo, Spain.

University studies and diplomas obtained

- * Degree in Biology. June 1980. Level: Honour. University of Oviedo, Spain.
- * Diploma in Statistics Applied to the Medicine and Medical Biology. June 1982. Université Pierre et Marie Curie, Paris VI (France)
- * PhD Doctorate in Biology. June 1984. Level: Cum Laude. University of Oviedo, Spain. Title of the Thesis: Selección canalizadora en *Drosophila melanogaster*. (= Stabilising selection in *Drosophila melanogaster*). Area of knowledge: Genetics. Director: Professor Julian Rubio
- * Master in Assessment of Environmental Impacts. September 1996. University of Malaga (Spain)
- * Diploma in International Cooperation. December 2001. University of Oviedo (Spain)

Prizes

- * 1981: Extraordinary Prize for Graduate Students of the University of Oviedo.
- * 1999: Award “Grande Covian”, Fundacion Principe de Asturias (Spain).
- * 2009. Prize “Severo Ochoa”. Fundacion Aula de Paz (Spain)

Professional experience

Current position

Full Professor of Genetics, University of Oviedo, Spain, since July 2007. Department of Functional Biology.

PI of the Marine Observatory of Asturias.

Visiting scientist of the University of Victoria, Canada, since September 2013.

Previous positions

Assistant Professor 1/1/1981-28/11/1987. Department of Genetics. University of Oviedo, Spain.
Associate Professor 28/11/87-10/07/06. Department of Functional Biology. University of Oviedo, Spain

Adjunct Professor of the University of Massachusetts, USA, 2005-2012. Department of Natural Resources Conservation.

List of peer-reviewed articles

223. Devloo-Delva F, Miralles L, Ardura A, Borrell YJ, Pejovic I, Tsartsianidou V, Garcia-Vazquez E. Detection and characterisation of the biopollutant *Xenostrobus securis* (Lamarck 1819) Asturian population from DNA Barcoding and eBarcoding. Marine Pollution Bulletin, [doi:10.1016/j.marpolbul.2016.03.008](https://doi.org/10.1016/j.marpolbul.2016.03.008) (2016)
222. Mohammed-Geba K, Arrutia F, Do Huu H, Borrell YJ, Galal-Khallaf A, Ardura A, Riera F, Garcia-Vazquez E. VY6, a β -lactoglobulin-derived peptide, altered metabolic lipid pathways in the zebra fish liver. Food and Function DOI: 10.1039/C6FO00003G (2016)
221. Galal-Khallaf A, Ardura A, Borrell YJ, Garcia-Vazquez E. PCR-based assessment of shellfish traceability and sustainability in international Mediterranean seafood markets. Food Chemistry 202: 302-308 (2016)
220. Muñoz-Colmenero M, Martinez JL, Roca A, Garcia-Vazquez E. Detection of different DNA animal species in commercial candy products. Journal of Food Science DOI: 10.1111/1750-3841.13225 (2016)

219. Pejovic I, Ardura A, Miralles L, Arias A, Borrell YJ, Garcia-Vazquez E. DNA barcoding for assessment of exotic molluscs associated with maritime ports in northern Iberia. *Marine Biology Research* 12: 168-176 (2016)
218. Muñoz-Colmenero M, Blanco O, Arias V, Martinez JL, Garcia-Vazquez E. DNA authentication of fish products reveals mislabeling associated to seafood processing. *Fisheries* 41(3): 130-140 (2016)
217. Galal-Khallaf A, Ardura A, Borrell YJ, Garcia-Vazquez E. Towards more sustainable surimi? PCR-cloning approach for DNA barcoding reveals the use of species of low trophic level and aquaculture in Asian surimi. *Food Control* 61: 62-69 (2016)
216. Miralles L, Lee LS, Borrell YJ, Garcia-Vazquez E. Population genetic structure of the European conger (*Conger conger*) in North East Atlantic and West Mediterranean Sea. *Fisheries Research* 174:245-249 (2016)
215. Muñoz-Colmenero M, Martinez JL, Roca A, Garcia-Vazquez E. Authentication of commercial candy ingredients employing DNA PCR-cloning methodology. *Journal of the Science of Food and Agriculture* 96(3): 859-867 (2016)
214. Galal-Khallaf A, Osman AGM, Carleos CE, Garcia-Vazquez E, Borrell YJ. A case study for assessing fish traceability in Egyptian aquafeed formulations using pyrosequencing and metabarcoding. *Fisheries Research* 174: 143-150 (2016)
213. Ardura A, Planes S, Garcia-Vazquez E. Aliens in Paradise. Boat density and exotic coastal mollusks in Moorea Island (French Polynesia). *Marine Environmental Research* 112: 56-63 (2015)
212. Zaiko A, Samulioviene A, Ardura A, Garcia-Vazquez E. Metabarcoding approach for nonindigenous species surveillance in marine coastal waters. *Marine Pollution Bulletin* 10: 53-59 (2015)
211. Ardura A, Zaiko A, Martinez JL, Samulioviene A, Semenova A, Garcia-Vazquez E. eDNA and specific primers for early detection of invasive species. A case study on the bivalve *Rangia cuneata*, currently spreading in Europe. *Marine Environmental Research* 112(Pt B): 48-55 (2015)
210. Muñoz-Colmenero M, Jeunen G-J, Borrell YJ, Martinez JL, Turrero P, Garcia-Vazquez E. Response of top shell assemblages to cyclogenesis disturbances. A case study in the Bay of Biscay. *Marine Environmental Research* 112(Pt B): 2-10 (2015)
209. Horreo JL, Abad D, Dopico E, Oberlin M, Garcia-Vazquez E. Expansion of non-native brown trout in Europe may be inadvertently driven by stocking: molecular and social survey in the north Iberian Narcea River. *International Journal of Molecular Sciences* 16: 15546-15559 (2015)
208. Zaiko A, Martinez JL, Ardura A, Clusa L, Borrell YJ, Samuiloviene A, Roca A, Garcia-Vazquez E. Detecting nuisance species using NGST: methodology shortcomings and possible application in ballast water monitoring. *Marine Environmental Research* 112(PtB): 64-72 (2015)

207. Garcia-Vazquez E, Ardura A, Dopico E. Intercontinental cultural interchange on crop diversity. *Journal of Scientific Research and Reports* 8(3), DOI: 10.9734/JSRR/2015/19476 (2015)
206. Ardura A, Zaiko A, Martinez JL, Borrell YJ, Garcia-Vazquez E. Environmental DNA evidence of transfer of North Sea molluscs across tropical waters through ballast water. *Journal of Molluscan Studies* 81: 495-501 (2015)
205. Semeraro A, Mohammed-Geba K, Arias A, Anadon N, Garcia-Vazquez E, Borrell YJ. Genetic diversity and connectivity patterns of harvested and aquacultured molluscs in estuaries from Asturias (northern Spain). Implications for management strategies. *Aquaculture Research*, 2015, 1–14 doi:10.1111/are.12745 (2015)
204. Tesfamariam Habtemariam B, Arias A, García-Vázquez E, Borrell YJ. Impacts of supplementation aquaculture on the genetic diversity of wild *Ruditapes decussatus* from northern Spain. *Aquaculture Environment Interactions* 6: 241-254 (2015)
203. Muñoz-Colmenero M, Klett-Mingo M, Diaz E, Blanco O, Martinez JL, Garcia-Vazquez E. Evolution of hake mislabeling niches in commercial markets. *Food Control* 54: 267-274 (2015)
202. Crego-Prieto V, Ardura A, Juanes F, Roca A, Taylor JS, Garcia-Vazquez E. Aquaculture and the spread of introduced mussel genes in British Columbia. *Biological Invasions* 17(11): 2011-2026 (2015)
201. Zaiko A, Martinez JL, Schmidt-Petersen J, Ribicic D, Samuiloviene A, Garcia-Vazquez E. Metabarcoding approach for the ballast water surveillance - an advantageous solution or an awkward challenge? *Marine Pollution Bulletin* 92: 25-34 (2015)
200. Turrero P, Garcia-Vazquez E, Garcia de Leaniz C. Shrinking fish: comparisons of prehistoric and contemporary salmonids indicate decreasing size at age across millennia. *Royal Society Open Science* 1: 140026 <http://dx.doi.org/10.1098/rsos.140026> (2014). **Featured in National Geographic** <http://voices.nationalgeographic.com/2014/10/21/fish-fishermen-trout-salmon-animals-science-archaeology-stone-age/>; **in the BBC** <http://www.bbc.co.uk/news/uk-wales-south-west-wales-29847176>
199. Horreo JL, Turrero P, Perez J, Garcia-Vazquez E. Long-term species balance in sympatric populations: implications for Atlantic salmon and brown trout. *Frontiers of Biogeography*, 6(3) <http://www.escholarship.org/uc/item/3j39n46x> (2014)
198. Pardiñas AF, Martinez JL, Roca A, Garcia-Vazquez E, Lopez B. Over the sands and far away: interpreting an Iberian mitochondrial lineage with ancient Western African origin. *American Journal of Human Biology*, 26: 777-783 (2014)
197. Horreo JL, Machado-Schiaffino G, Griffiths AM, Bright D, Stevens JR, Garcia-Vazquez E. Long-term effects of stock transfers: synergistic introgression of allochthonous genomes in salmonids. *Journal of Fish Biology* 85(2), 292-306 (2014)
196. Miralles L, Juanes F, Garcia-Vazquez E. Inter-oceanic sex-biased migration in bluefish (*Pomatomus saltatrix* L.). *Transactions of the American Fisheries Society* 143, 1308-1315 (2014)
195. Galal-Khallaf A, Ardura A, Mohammed-Geba K, Borrell YJ, Garcia-Vazquez E. DNA barcoding reveals a high level of mislabeling in Egyptian fish fillets. *Food Control* 46: 441-445 (2014)
194. Miralles L, Juanes F, Pardiñas AF, Garcia-Vazquez E. Palaeoclimate shaped Bluefish (*Pomatomus saltatrix*, L.) structure in the Northern hemisphere. *Fisheries* 39(12): 578-586 (2014). **Featured in the cover page.**

193. Turrero P, Muñoz-Colmenero AM, Prado A, Garcia-Vazquez E. Long-term impacts of human harvesting on shellfish: North Iberian top shells and limpets from the Upper Palaeolithic to the present. *Journal of Marine Systems* 139: 51-57 (2014)
192. Miralles L, Machado-Schiaffino G, Garcia-Vazquez E. Genetic markers reveal a gradient of hybridization between cape hakes (*Merluccius capensis* and *Merluccius paradoxus*) in their sympatric geographic distribution. *Journal of Sea Research* 86: 69-75 (2014)
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189. Marquez I, Garcia-Vazquez E, Borrell Y. Possible effects of vaccination and environmental changes on the presence of disease in northern Spanish fish farms. *Aquaculture* 431: 118-123 (2014).
188. Palomar G, Pola M, Garcia-Vazquez E. First molecular phylogeny of the subfamily Polycerinae (Mollusca, Nudibranchia, Polyceridae). *Helgoland Marine Research* 68: 143-153 (2014)
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186. Dopico E, Linde AR, Garcia-Vazquez E. Learning gains in lab practices: teach science doing science. *Journal of Biological Education*, 48(1): 46-52 (2014)
185. Miralles L, Moran P, Dopico E, Garcia-Vazquez E. *DNA Re-EvolutionN*: A Game for Learning Molecular Genetics and Evolution. *Biochemistry and Molecular Biology Education*, 41(6):396-401 (2013)
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183. Ardura A, Gomes V, Linde AR, Moreira JC, Horreo JL, Garcia-Vazquez E. The Meeting of Waters, a possible shelter of evolutionary significant units for Amazonian fish. *Conservation Genetics*, 14(6): 1185-1192 (2013)
182. Miralles L, Lens S, Rodríguez-Folgar A, Carrillo M, Martín V, Mikkelsen B, Garcia-Vazquez E. Interspecific Introgression in Cetaceans: DNA Markers Reveal Post-F1 Status of a Pilot Whale. *PLoS ONE* 8(8): e69511. doi:10.1371/journal.pone.0069511 (2013)
181. Ardura A, Linde AR, Garcia-Vazquez E. Genetic detection of *Pseudomonas* in commercial Amazonian fish. *International Journal of Environmental Research and Public Health* 10: 3954-3966 (2013)
180. Turrero P, Dominguez-Cuesta MJ, Jimenez-Sanchez M, Garcia-Vazquez E. The spatial distribution of Palaeolithic human settlements and its influence on palaeoecological studies: a case from Northern Iberia. *Journal of Archaeological Science* 40: 4127-4138 (2013)
179. Ardura A, Planes S, Garcia-Vazquez E. Applications of DNA Barcoding to fish landings: land authentication and diversity assessments. *Zookeys* 365: 49-65 (2013)
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177. Finnegan AK, AM Griffiths AM, RA King RA, Machado-Schiaffino G, Porcher J-P, Garcia-Vazquez E, Bright D, Stevens JR. Use of multiple markers demonstrates a cryptic western refugium and postglacial colonisation routes of Atlantic salmon (*Salmo salar* L.) in northwest Europe. *Heredity* 111(1): 34-43 (2013)
176. Horreo JL, Ardura A, Pola IG, Martinez JL, Garcia-Vazquez E. Universal primers for species authentication of animal foodstuff in a single PCR reaction. *Journal of the Science of Food and Agriculture*, 93: 354-361 (2013)
175. Pardiñas AF, Roca A, García-Vazquez E, López B. Assessing the Genetic Influence of Ancient Sociopolitical Structure: Micro-differentiation Patterns in the Population of Asturias

- (Northern Spain). PLoS ONE 7(11): e50206. doi:10.1371/journal.pone.0050206 (2012)
174. Crego-Prieto V, Martinez JL, Campo D, Perez J, Garcia-Vazquez E, Roca A. Inaccurate labelling detected at landings and markets. The case of European megrims. Fisheries Research 129– 130: 106– 109 (2012)
173. Lopez B, Pardiñas AF, Garcia-Vazquez E, Dopico E. Socio-cultural factors in dental diseases in the Medieval and early Modern Age of northern Spain. HOMO - Journal of Comparative Human Biology 63, 21– 42 (2012)
172. Muñoz-Colmenero AM, Turrero P, Horreo JL, Garcia-Vazquez E. Evolution of limpet assemblages driven by environmental changes and harvesting in North Iberia. Marine Ecology Progress Series 466: 121-131 (2012)
171. Horreo J. L., de la Hoz J., Pola I. G., Machado-Schiaffino G., Garcia-Vazquez E. Ecological and economic costs of supportive breeding: Atlantic salmon as a case study. Aquaculture 356-357: 1-6 (2012)
170. Pardiñas AF, Roca A, Garcia-Vazquez E, Lopez B. Mitochondrial diversity patterns and the Magdalenian resettlement of Europe: new insights from the edge of the Franco-Cantabrian refuge. Journal of Human Genetics, 57(11):717-726 (2012)
169. Turrero P, Horreo JL, Garcia-Vazquez E. Same old *Salmo*? Changes in life history and demographic trends of North Iberian salmonids since the Upper Palaeolithic as revealed by archaeological remains and BEAST analyses. Molecular Ecology, 21(10): 2318-2329 (2012)
168. Crego-Prieto V, Martinez JL, Roca A, Garcia-Vazquez E. Interspecific hybridization increased in congeneric flatfishes after the *Prestige* oil spill. PLoS ONE 7(4): e34485 doi:10.1371/journal.pone.0034485 (2012)
167. Campo D, Garcia-Vazquez E. Evolution in the block: common elements of 5S rDNA organization and evolutionary patterns in distant fish genera. Genome 55(1): 33-44 (2012)
166. Ardura A, Horreo JL, Hernandez E, Jardon A, Pola IG, Martinez JL, Garcia-Vazquez E. Forensic DNA analysis reveals use of high trophic level marine fish in commercial aquaculture fish meals. Fisheries Research 115-116: 115-120 (2012)
165. Huelga-Suarez G, Moldovan M, Garcia-Valiente A, Garcia-Vazquez E, Garcia Alonso JI. Individual-Specific Transgenerational Marking of Fish Populations Based on a Barium Dual-Isotope Procedure. Analytical Chemistry 84 (1): 127–133 (2012)
164. Turrero P, Muñoz-Colmenero AM, Pola IG, Arbizu M, Garcia-Vazquez E. Morphological, demographic and genetic traces of Upper Palaeolithic human impact on limpet assemblages in North Iberia. Journal of Quaternary Science 27(3): 244–253 (2012)
163. Garcia-Gonzalez C, Campo D, Pola IG, Garcia-Vazquez E. Rural road networks as barriers to gene flow for amphibians: species-dependent mitigation by traffic calming. Landscape and Urban Planning 104: 171-180 (2012)
162. Garcia-Vazquez E, Machado-Schiaffino G, Campo D, Juanes F. Species misidentification in mixed hake fisheries may lead to overexploitation and population bottlenecks. Fisheries Research 114: 52-55 (2012)
161. Juanes F, Gephard S, de la Hoz J, Moran P, Dopico E, Horreo JL, Garcia-Vazquez E. Restoration of native Atlantic salmon runs in northern Spain: do costs outweigh benefits? Knowledge and Management of Aquatic Ecosystems 402, 22 DOI: 10.1051/kmae/2011078 (2012)
160. Horreo JL, de la Hoz J, Machado-Schiaffino G, Pola IG, Garcia-Vazquez E. Restoration and enhancement of Atlantic salmon populations: what we have learned from North Iberian rivers. Knowledge and Management of Aquatic Ecosystems 402, 23 DOI: 10.1051/kmae/2011079 (2011)
159. Garcia-Gonzalez C, Garcia-Vazquez E. Reasonable economic costs of Amphibian conservation in urban environments. A case study in North Spain. Human Ecology 39: 807-812 (2011)
158. Griffiths AM, Ellis JS, Clifton-Dey D, Machado-Schiaffino G, Bright D, Garcia-Vazquez E, Stevens JR. Restoration versus recolonisation: the origin of Atlantic salmon (*Salmo salar* L.) currently in the River Thames. Biological Conservation 144: 2733-2738 (2011)
157. Ardura A, Jardon A, Hernandez E, Martinez JL, Garcia-Vazquez E. DNA analysis reveals potential risks for fish species conservation derived from mislabeling of dietetic complements.

- International Journal of Food, Agriculture & Environment 9(3&4): 53-56 (2011)
156. Horreo JL, Martinez JL, Ayllon F, Pola IG, Monteoliva JA, Héland M, Garcia-Vazquez E. Impact of habitat fragmentation on the genetics of populations in dendritic landscapes. *Freshwater Biology* 56: 2567-2579 (2011)
155. Machado-Schiaffino G, Garcia-Vazquez E. Population structure of long tailed hake *Macruronus magellanicus* in the Pacific and Atlantic oceans: implications for fisheries management. *Fisheries Research* 111: 164-169 (2011)
154. Ardura A, Planes S, Garcia-Vazquez E. Beyond biodiversity: Fish metagenomes. *PloS One*, 6(8):e22592 (2011)
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151. Alvarez D, Garcia-Vazquez E. Maintenance of asymmetric hybridization between Atlantic salmon (*Salmo salar*) and brown trout (*Salmo trutta*) via postzygotic barriers and paternal effects. *Canadian Journal of Fisheries and Aquatic Sciences* 68: 593-602 (2011)
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149. Ellis JS, Gilbey J, Armstrong A, Balstad T, Cauwelier E, Cherbonnel C, Consuegra S, Coughlan J, Cross TF, Crozier W, Dillane E, Ensing D, García de Leániz C, Garcia-Vazquez E, Griffiths AM, Hindar K, Hjorleifsdottir S, Knox D, Machado-Schiaffino G, McGinnity P, Meldrup D, Nielsen EE, Olafsson K, Primmer CR, Prodohl P, Stradmeyer L, Vähä JP, Verspoor E, Wennevik V, Stevens JR. Microsatellite standardization and evaluation of genotyping error in a large multi-partner research programme for conservation of Atlantic salmon (*Salmo salar* L.). *Genetica* 139: 353-367 (2011)
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147. Garcia-Vazquez E, Perez J, Martinez JL, Pardiñas A, Lopez B, Karaïskou N, Casa MF, Machado-Schiaffino G, Triantafyllidis A. High levels of mislabelling in Spanish and Greek markets suggest the fraudulent introduction of African hake species. *Journal of Agricultural and Food Chemistry* 59(2), 475-480 (2011)
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142. Lopez B, Garcia-Vazquez E, Dopico E. Dental Indicators Suggest Health Improvement Associated with Increased Food Diversity in Modern Age Spain. *Human Ecology* 39(4): 527-534 (2011)
141. Dopico E, Garcia-Vazquez E. Leaving the classroom. A didactic framework for education in environmental sciences. *Cultural Studies of Science Education*, 6: 311-326 (2011)
140. Pardiñas AF, Roca A, Dopico E, Garcia-Vazquez E, Lopez B. Introducing human population biology through an easy laboratory exercise on mitochondrial DNA. *Biochemistry and Molecular Biology Education*, 38(2): 110-115 (2010)
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- Hauschild J, Hervet C, Hjörleifsdóttir S, Hreggvidsson G, Kappel K, Landi M, Magoulas A, Marteinson V, Nölte M, Planes S, Tinti F, Turan C, Venugopal MN, Weber H, Blohm D. Identifying fishes through DNA barcodes and microarrays. *PLoS One* 5(9): e12620 (2010)
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135. Campo D, Garcia-Vazquez E. Evolutionary history of the four-spotted megrim (*Lepidorhombus boscai*) and speciation time within the genus based on mitochondrial genes analysis. *Journal of Sea Research* 64: 360-368 (2010)
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Patents

Inventors: Eva García Vázquez, José Luis Hórreo Escandón, José Luis Martínez Fernández
 Title: Universal primers for species identification, and their uses. Number of patent: ES2388821 B2. Date: 11-February-2013
http://www.oepm.es/pdf/ES/0000/000/02/38/88/ES-2388821_B2.pdf

Direction and Formation of Researchers

Direction of Research

Current research group: Marine Natural Resources of the Anthropocene (Departments of Functional Biology, Palaeontology and Biology of Organisms and Systems, Universidad de Oviedo, Spain)

Position: Head of the Group

Members:

- Dr. Agustin Roca, Associate Professor
- Dr. Miguel Arbizu, Associate Professor
- Dr. Belen Lopez, Associate Professor
- Dr. Yaisel Borrell, Assistant Professor
- Dr. America G. Valiente, Postdoctoral Researcher
- Dr. Pablo Turrero, Postdoctoral Researcher
- Dr. Laura Miralles, Postdoctoral Researcher
- Dr. Hoang Do Huu, Postdoctoral Researcher
- Ms. A. Marta Muñoz Colmenero, PhD Student
- Mrs. Asmaa Ghalal-Khallaf, PhD Student
- Ms. Laura Clusa Cuesta, PhD Student

Former Postdoctoral Researchers

- Delphine Danancher, France
- David Alvarez, Spain
- Khaled Mohammed-Gheba, Egypt

Direction of Doctoral Theses (PhD)

- 1: Paloma Moran. 1993. Doctor in Biology. Awarded with the Extraordinary Prize of Doctorate
- 2: Alberto M. Pendas. 1993. Doctor in Biology. Awarded with the Extraordinary Prize of Doctorate
- 3: Carmen Piñeiro. 1996. Doctor in Medicine. Grade: Cum Laude.
- 4: Juliana Pérez. 1999. Doctor in Biology. Awarded with the Extraordinary Prize of Doctorate
- 5: Jose Luis Martínez. 2000. Doctor in Biology. Awarded with the Extraordinary Prize of Doctorate
- 6: Fernando Ayllon. 2005. Doctor in Biology. Awarded with the Extraordinary Prize of Doctorate
- 7: Ana Garcia Fernandez de Castillo. 2008. Doctor in Biology. Grade: Cum Laude
- 8: America Garcia Valiente. 2008. Doctor in Biology. Awarded with the Extraordinary Prize of Doctorate.
- 9: Daniel Campo Falgueras. 2009. Doctor in Biology. Grade: Cum Laude.
- 10: Gonzalo Machado Schiaffino. 2009. Doctor in Biology. Grade: Cum Laude. Awarded with the Extraordinary Prize of Doctorate

- 11: Jose L. Horreo Escandon. 2011. Doctor in Biology. Grade: Cum Laude. Awarded with the Extraordinary Prize of Doctorate
- 12: Alba Ardura Gutierrez. 2011. Doctor in Chemistry. Grade: Cum Laude
- 13: Claudia García González. 2012. Doctor in Biology. Grade: Cum Laude
- 14: Victor Crego Prieto. 2013. Doctor in Biology. Grade: Cum Laude
- 15: Antonio Fernandez Pardiñas. 2014. Doctor in Biology. Grade: Cum Laude
- 16: Laura Miralles López. 2014. Doctor in Biology. Grade: Cum Laude
- 17: Claudia Lopez Vizcon. 2015. Doctor in Chemistry. Grade: Cum Laude

Direction of Research Projects

E. U. funded Research projects:

- * Direction of the Spanish Research team (UNIOVI) in the Project AMBER, Reference 689682-2, H2020 EU Program. Adaptive Management of Barriers in European Rivers. 2016-2019.
- * Direction of the Spanish Research & Academic team (UNIOVI) in the Marie Curie ITN AQUAINVAD-ED. Contract 642197, H2020 EU Program. Aquatic invaders: early detection, control and management. 2015-2019.
- * Direction of the Spanish Research team (UNIOVI) in the Project SALSEA-Merge. Contract 212529, 7th Framework Program call FP7-ENV-01. Advancing understanding of Atlantic Salmon at Sea: Merging Genetics and Ecology to Resolve Stock-specific Migration and Distribution patterns. 2008-2012.
- * Direction of the Spanish Research team (UNIOVI) in the European INTERREG IIIB Project ASAP. Atlantic Salmon Arc Project. 2004-2007
- * Associated Member of the European Network of Excellence in Marine Biodiversity MarBEF (6th Framework Program). 2005-2007
- * Associated Member of The European Network of Excellence in Marine Genomics (6th Framework Program). 2006-2007
- * Work package Leader in the Coordination Action GENIMPACT, number 022802 (6th Framework Program). Evaluation of genetic impact of aquaculture activities on native populations – A European network. 2005-2008
- * Direction of the Spanish Research team (UOVE) in the European STREP Project FISH & CHIPS, number 505491 (6th Framework Program). Towards DNA chip technology as a standard analytical tool for the identification of marine organisms in biodiversity and ecosystem science. 2004-2006
- * Coordinator of the EU RTD Project MARINEGGS (QLK5-CT1999-01157) (5th Framework Program). Genetic identification of fish eggs by species-specific DNA markers for use in stock biomass assessments and detection of commercial fraud. 2000-2004
- * Direction of the Spanish Research team (UOVE) in the European RTD Project AIR 3033 0719 (4th Framework Program). An assessment of the genetic consequences of the deliberate or inadvertent introduction of non-native Atlantic salmon into natural populations. Direction of the Spanish Research team. 1993-1996
- * Direction of the Spanish Research team (UOVE) in the European RTD Project FAR MA2 480 (3rd Framework Program). Development of molecular markers for the study of genetic interactions between wild and reared (native or exotic) Atlantic salmon. Direction of the Spanish Research team. 1991-1993

Coordination of other international projects

- * NATO ENVIR.LG 974614. Consequences of armament wastes for indicator fish species. 1999-2001
- * NATO CNS 975480. Computer Network for Romanian Institutes. 2000-2001
- * Fulbright Commission Program 2000, Project 20044. Genetic diversity in southern populations of Atlantic salmon: restoring populations. 2000-2002.
- * AECI D/9475/07. Genetic diversity and conservation of fishing resources in the Amazonia. 2008-2010.

International bilateral projects

- * Spain-France HF-55B. Contribution of juvenile precocious males to Atlantic salmon-brown trout hybridisation. 1993
- * Spain-France HF-232B. Atlantic salmon precocious males contribute to interspecific hybridisation. 1994
- * Spain-Germany. HA1996-0094. Metallothionein as heavy metal pollution bioindicator in fluvial ecosystems. 1997
- * Spain-Portugal. HP1997-0010. Ancestral populations of brown trout in European Atlantic drainage: effect of latitude on their genetic pattern. 1998
- * Spain-France. HF1997-0215. Assessment of reproductive strategies and male success in salmonids by means of paternity analysis. 1998-1999
- * Spain-Brazil. AECI A/6081/06. Application of molecular markers to the knowledge of fish species of commercial interest in the Amazonia. 2006-2007

National Research Projects (Spain)

- * DGICYT CE92-0001. Development of molecular markers in Atlantic salmon. 1992-1994.
- * DGICYT PB91-0673. Contribution of precocious males to wild Atlantic salmon populations by means of SLPs. 1992-1995
- * DGICYT UE94-0020. Consequences of introduction of foreign Atlantic salmon stocks into wild populations. 1994-1997
- * DGICYT PB94-1327. Elaboration of physical genetic maps in salmonids and integration with the genetic map employing gene families and microsatellite loci. 1995-1998
- * FICYT 1995. Effects of pollution in fish populations of the Asturian region: quantification of heavy metals and development of bioindicators. 1995-1998
- * INIA AE98-043. Elaboration of a European network for assessment of genetic resources in Atlantic salmon. 1998-1999
- * FICYT PP-AMB98-01. Assessment of genotoxic risks in freshwater species by micronucleus tests. 1998-1999.
- * DGICYT PB98-1570. Historic variation of genetic and demographic diversity of Cantabric Atlantic salmon populations. 1999-2002
- * INIA CAL00-050-C4. Transference and formation of personal in molecular technology for warranting tracing of frozen, salt-preserved and smoked fish products. 2000-2003
- * FICYT PC-REC01-08. Development of genetic markers for the study of population genetic structure of European hake and megrims. 2002-2003
- * REN2003-00303. Causes and effects of the hybridisation salmon-trout in natural populations subjected to fisheries. 2003-2006
- * CGL2006-05845. Identification of conservation units for Amphibian species on mountain landscapes: model systems in the Cantabric Chain. 2007-2010
- * FICYT IB09-0023. Development of a universal species-specific marker for fish. 2009-2010
- * CGL2009-08279. Interspecific barriers in marine fish. The genera *Merluccius* and *Pomatomus*, with the genus *Salmo* as a reference. 2009-2012
- * SV-PA13-ECOEMP-41. Anthropogenic impacts on intertidal mollusks: ecological and genomic evaluation. 2013
- * FECYT FCT-13-6105. The Cantabric Sea, a sea for all: species present and expected. 2014.
- * CGL2013-42415-R. Multidisciplinary tools for alert and control of marine bioinvasions: environmental DNA, ICT and Citizen Science. 2014-2016.
- * GRUPIN14-093. Marine natural resources in the Anthropocene. 2015-2017.

Contracts with Private Companies

- * Dupont S. A. Development of bioindicators for pollution monitoring in freshwater ecosystems. 1995-1998
- * MAPFRE-Insurance Co. Development of experimental protocols for detection of cytogenetic abnormalities employing micronucleus tests. 1998-1999
- * ECOHYDROS S. L. Populations studies in Salmonids. Research Contract CN-07-115. 2007-2009
- * Fishermen Association “Fuentes del Narcea”. Population studies in Salmonids. Research

Contract CN-08-025. 2008-2010

- * Center for Public Integrity (Washington, USA). Genetic identification of commercial hake samples. Research Contract FUE-EM-185-11. 2011

- * NAFC Marine Centre (Scotland). Genetic analyses of megrim samples. Research Contract FUE-EM-215-12. 2012

- * Fundacion MAPFRE Co. Traces of allergenic species in commercial candies. Research Contract SA/12/AYU/154. 2013-2014.

- * Fish farm “Truchas del Alba”. DNA analysis of fishmeal. Contract CN-13-023. 2013-2014.

- * Company CAPSA. Development and clinic evaluation of a dairy drink with bioactive ingredients against the metabolic syndrome, diabetes and obesity. Contract FUE-EM-330-13. 2014-2015.

- * Company ASINCAR. Identification of hake species. Contract FUE-EM-007-15. 2015.

- * Consortium of Protected Denomination of Origin of Asturian cider. Biological activity and nutritional properties of apples and cider. Contract FUE-EM-287-14. 2014-2015.

Contracts with Public Administrations

- * Consejería de Medio Ambiente (Environmental Protection Directorate-Regional Government of Asturias, Spain). Genetic and demographic analysis of Atlantic salmon and brown trout stocks in Asturias, Spain. 1993-2000

- * Consejería de Agricultura y Pesca (Agriculture and Fisheries Directorate- Regional Government of Asturias, Spain). Effects of pollution in Asturian freshwater ecosystems. 1995-1996

- * Consejería de Agricultura y Pesca (Agriculture and Fisheries Directorate- Regional Government of Asturias, Spain). Spatial-temporal distribution of Atlantic salmon in Asturian rivers. 1997-1998

- * Consejería de Medio Ambiente y Recursos Naturales (Environment and Natural Resources Protection Agency- Regional Government of Asturias, Spain). Population genetic studies of sedentary and migratory brown trout. 2001.

- * Consejería de Medio Ambiente y Recursos Naturales (Environment and Natural Resources Protection Agency- Regional Government of Asturias, Spain). Genetic and demographic studies of Atlantic salmon populations from Asturias, Spain. 2001-2003.

- * Dirección General de Pesca (General Directorate of Fisheries-Spain). Genetic evaluation of hake and megrim stocks in Spanish waters. 2002-2005

- * Consejería de Medio Ambiente y Recursos Naturales (Environment and Natural Resources Protection Agency- Regional Government of Asturias, Spain). Genetic studies of Atlantic salmon and brown trout populations from Asturias, Spain. 2004-2005.

- * Xunta de Galicia (Regional Government of Galicia, Spain). Contract SV-05-XUNTA-1. Evaluation of population genetic variation in European barnacle *Pollicipes pollicipes*. 2005-2006.

- * Consejería de Medio Ambiente y Recursos Naturales (Environment and Natural Resources Agency- Regional Government of Asturias, Spain). Genetic studies of Atlantic salmon populations from Asturias, Spain. 2006-2010

- * Court of First Instance Nº 1 of Grado (Asturias, Spain). Genetic assignment of the first salmon catch to its origin river. Contract FUE-EM-172-11. 2011.

- * Consejería de Medio Ambiente y Recursos Naturales (Environment and Natural Resources Agency- Regional Government of Asturias, Spain). Determining the marine route of Asturian Atlantic salmon. Contract CN-14-076. 2014.

- * Port of Aviles (Asturias). Control of the invasive species *Xenostrobus securis*. Contract FUE-EM-261-15. 2015-2016.

Research Contracts with Foreign Institutions

- * INRA (France). Contract CN-01-091-B1. Study of impact of natural or anthropic fragmentation of ecosystems on genetic diversity of brown trout from the River Nive. 2001-2002.

- * University of Massachusetts-Department of Natural Resources Conservation. Genetic analysis

of wild cyclid fishes employing microsatellites as genetic markers. 2001.

* Institute of Polar Studies (IPEV, France). Project SALMOPOP. 2000-2003

* Institute of Polar Studies (IPEV, France). Project SALMEVOL. 2009-2012

* University of Klaipeda (Lithuania). DNA analysis of Atlantic salmon. Contract FUE-EM-376-13. 2013.

Research in other institutions (> one month):

1989: Marine Laboratory (Aberdeen, Scotland). Host: Eric Verspoor.

1992: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

1993: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

1995: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

1996: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

1997: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

1998: Department of Forestry and Wildlife Management, University of Massachusetts (Amherst, MA, USA). Host: Francis Juanes.

1999: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

1999: Universidad de S. Juan Bosco and Centro Nacional Patagónico, Patagonia (Argentina). Host: Luis O. Bala.

2000: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

2001: Department of Natural Resources Conservation, University of Massachusetts (Amherst, MA, USA). Host: Francis Juanes.

2002-2003: IFRTF, Kerguelen Islands (Subantarctic Ocean, France). Program SALMOPOP of Antarctic Territories Research. French Research Project. Responsible: Rene Guyomard.

2003: INRA Hydrobiology Research Center (St Pée sur Nivelle, France). Host: Edward Beall.

2004: Department of Genetics, University of Georgia (USA). Host: John C. Avise.

2004: Department of Natural Resources Conservation, University of Massachusetts (USA). Host: Francis Juanes.

2007: Fundação Oswaldo Cruz, Rio de Janeiro and Manaus (Brazil). Host: Josino Costa Moreira.

2008: Department of Natural Resources Conservation, University of Massachusetts (USA). Host: Francis Juanes.

2008: Fundação Oswaldo Cruz, Rio de Janeiro (Brazil). Host: Josino Costa Moreira.

2009: Fundação Oswaldo Cruz, Manaus (Brazil). Host: Josino Costa Moreira.

2010: Centro de Derechos Humanos Fray Bartolomé de las Casas, S. Cristóbal de las Casas, Chiapas (Mexico).

2011: CRILOBE, Moorea Island (French Polynesia). Host: Serge Planes.

2013: University of Victoria (Canada). Visiting scientist. Host: Francis Juanes.

2015: Cawthron Institute (New Zealand). Visiting scientist. Host: Susie Woods.

Academic responsibilities

* Member of the Research Committee, Department of Functional Biology, University of Oviedo. 1995-present

* Member of the Committee for Quality Evaluation, Faculty of Biology, University of Oviedo. 2003-present

* Member of the Directive Board of the Faculty of Biology, University of Oviedo. 2004-2006

* Coordinator of the European Erasmus Program in Biology for the University of Oviedo. 2004-2011

* Coordinator of Graduate Projects in Biology, University of Oviedo. 2004-Present

* Vice-director of the European Master in Marine Biodiversity and Conservation (Erasmus Mundus Program), University of Oviedo. 2008-present

Teaching experience

International Teaching Projects:

Coordinator in Oviedo University of the International Master in Marine Biodiversity & Conservation. 2014-present.

Coordinator of the European Erasmus Intensive Programme 2011-1-ES1-ERA10-0024 “River restoration in the Atlantic Arc”. 2011-2014.

Member of the Direction Board of the Erasmus Mundus Master in Marine Biodiversity & Conservation. 2008-present.

Post-Graduate Projects:

Coordinator of the Master in Marine Conservation. UOVE. 2015-present.

Member of the Direction Board of the Master in Food Biotechnology. UOVE. 2011-present.

Member of the Coordination Committee of the Doctorate Program in Chemistry Engineering and Food Biotechnology. UOVE. 2014-present.

Courses programmed and taught:

Undergraduate level:

1981-1989: Medical Biology. UOVE

1981-1989: Genetics. UOVE

1988: Genetic Improvement. UOVE

1989-1993: General Genetics. UOVE

1989-1993: Cytogenetics. UOVE

1993-1998: Human Genetics. UOVE

1993-1998: Basis of Genetic Analysis. UOVE

1996-1998: Molecular Evolution. UOVE

1998-2003: Population Genetics and Evolution. UOVE

2000-2006: Basis of Cytogenetics. UOVE

2003-2011: Molecular Genetics. UOVE

2003: Introduction of Population Genetics. Université de Pau et Pays d’Aquitaine, France

2004-present: Projects in Biology. UOVE

2006: Molecular Markers. University of Thessaloniki, Greece

2011-present: Conservation & Genetic Improvement. UOVE

Post-graduate level:

1993-2000: Chromosome Polymorphisms, Bases and Applications. UOVE

1993-2000: Gene Mapping. UOVE

2000-2008: Molecular Evolution. UOVE

2000- 2008: Application of Genetic Markers to Natural Resources Management. UOVE

2000-2008: Pollution Bioindicators in Natural Ecosystems. UOVE

2004: Genetics and Conservation of Natural Resources. University of Massachusetts, USA

2007-present: Control and Improvement of Primary Production. Master in Food Biotechnology. University of Oviedo, Spain.

2007-present: Biogeography and Evolution of Aquatic Organisms. Erasmus Mundus Master in Marine Biodiversity and Conservation

2007-present: Molecular Techniques and their Applications. Erasmus Mundus Master in Marine Biodiversity and Conservation

2007-present: Genetic Biodiversity. Erasmus Mundus Master in Marine Biodiversity and Conservation

2009-present: Aquaculture. Erasmus Mundus Master in Marine Biodiversity and Conservation

2013-present: Biological Invasions. International Master in Marine Biodiversity and Conservation. University of Klaipeda (Lithuania) in 2013; UOVE.

UOVE: University of Oviedo

Experience in International Cooperation

* 1999. La Habana (Cuba). Teaching the Doctorate Course “Application of genetic markers for natural resources conservation”. Funded by the Service of International Cooperation (University of Oviedo). September 2000.

* 2000-2001. Patagonia (Argentina). National University of S. Juan Bosco. Development of the

Research Project “Micronucleus tests in mussels for detection of pollution in coastal ecosystems”. Funded by the Service of International Cooperation (University of Oviedo).

- * 2001-2002. Host and Supervisor of South American Graduate students at the University of Oviedo. Spanish Agency for International Cooperation (AECI), Program of Cooperation with Latin America.

- * 2004. Host and Supervisor of South American Post-Graduate students at the University of Oviedo. Spanish Agency for International Cooperation (AECI).

- * 2002-present. Responsible of the Bilateral Agreement between the University of Oviedo and the University of Mar del Plata (Argentina). Interchange of students and research on environmental bioindicators.

- * 2007-present. Responsible of the Bilateral Agreement between the University of Oviedo and the Fundação Oswaldo Cruz (Brazil). Development of projects on sustainable management of fisheries resources in Brasil.

- * 2010. Awarded with a mobility Grant for cooperation in Chiapas (Mexico). International observer of human rights and researcher on sustainable management of natural resources. One month of field work in a Mayan community.

Expert for research evaluation

- * President of the National Committee of Evaluation of Research Activity (Spain). Field: Molecular and Cell Biology. 2010.

- * Member of the National Committee of Evaluation of Research Activity (Spain). Field: Molecular and Cell Biology. 2007-2009

- * Evaluator of Researchers, Research Units and Research Projects for the following institutions: National Science Foundation (USA)

- National Research Agency ANR (France)

- Agency for Evaluation of Research and Quality ANEP/ANECA (Spain)

- CSIC (Spain)

- Austrian Science Foundation (Austria)

- INRA (France)

- City University of New York CUNY (USA)

- National Agency for Scientific and Technological Promotion ANPCT (Argentina)

Evaluation of Marie Curie Postdoctoral Grants (European Commission). Contract in 2001.

Evaluation of EU COST projects. 2015.

Science outreach

- * Seminar “Living Science”, University of Oviedo

- (<http://www.otri.uniovi.es/culturacientifica/cienciaviva>). 2002-present.

- * Director of the workshop “Evolution” within the Aula of Scientific Thinking of the Vice-Rectorate of University Extension (Oviedo). 2013-present.

- * Annual plan of science communication and outreach of the University of Oviedo. Grant MINECO-FCT-14-8145. 2014-2015.

- * Director of the Evolution Club. 2014-present.

Other merits

- * Member of the Regional Council of Freshwater Fisheries (Asturias, Spain), designated by the Asturian President as Expert in Fish Biology representative of the University of Oviedo. 1989-present.

- * Member of the Editorial Board of *Frontiers in Genetics*

- * Referee for more than 50 SCI Journals