

Curriculum Vitae

Fernando Rodriguez, Ph.D.

Postdoctoral Researcher
Josephine Bay Paul Center for Comparative Molecular Biology and Evolution
Marine Biological Laboratory
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Education and Postdoctoral Training

2010 -	Postdoctoral position Projects: -Mobile genetic elements in sexual and ancient asexual taxa -Reverse transcriptase-related genes and their biological significance -Horizontal gene transfer as a source of evolutionary innovation in metazoans Advisor: Irina Arkhipova	Marine Biological Laboratory
2004 - 2009	PhD, Biology, Molecular Biology and Biochemistry Program Project: Phylogeography and evolutionary history in genus <i>Rupicapra</i> based on mitochondrial DNA Advisor: Ana Dominguez Sanjurjo and Trinidad Perez Mendez	Universidad de Oviedo (Spain)
1998-2002	BS, Biology	Universidad de Oviedo (Spain)

Professional Positions

2010 -	Postdoctoral position	Josephine Bay Paul Center, MBL
2004 - 2009	Research assistant	Universidad de Oviedo (Spain)

Teaching

2008	Lecturer (invited speaker) in MSc Courses, Universidad de Oviedo
2005	Summer Course "Conservation and genetic characterization of plant resources", Universidad de Oviedo
2010 - 2012	Graduate student supervision. Anupriya Dutta, Brown University.
2013	Undergraduate student supervision. Daniel DiCorpo, Brown University.
2014	Undergraduate student supervision. Aubrey W. Kenefick, Williams College.

Training Record

2010 -	Postdoctoral research position	Marine Biological Laboratory
	Projects:	
	-Mobile genetic elements in sexual and ancient asexual taxa	
	-Reverse transcriptase-related genes and their biological significance	
	-Horizontal gene transfer as a source of evolutionary innovation in metazoans	
2004 - 2009	Graduate Research Assistant	Universidad de Oviedo
	Project: Ternera Asturiana Beef Traceability based on DNA fingerprinting	(Spain)
2004 - 2009	PhD fellow	Universidad de Oviedo
	Project: Phylogeography and evolutionary history in genus <i>Rupicapra</i> based on mitochondrial DNA	(Spain)
2002-2004	Msc in Biology	Universidad de Oviedo
	Project: Evolution of mitochondrial cytochrome b gene and its corresponding nuclear pseudogene in the chamois (<i>Rupicapra</i> spp.).	(Spain)

Workshops attended

2013 - 2013 GMOD Summer School. NESCent. Durham, NC, USA.

2013 - Statistical Analysis and Graphics with R. MBL. Woods Hole, MA, USA.

2011 - CCV Bioinformatics Workshop. Brown University, RI, USA.

2011 - Genome Assembly Special Forces Workshop. Brown University, RI, USA.

2010 - Next-Generation Sequencing Data Analysis. Brown University, RI, USA.

2010 - Programmatic Access to Biological Databases (Perl). EMBL-EBI. Hinxton, UK.

Publications

Original Research in Peer-Reviewed Journals

Rodríguez F, Arkhipova I. (2014). Multitasking of piRNA silencing machinery; targeting transposon elements and foreign genes in *Adineta vaga* genome. In preparation.

Arkhipova IR, Yushenova IA, **Rodríguez F**. (2014). Athena retroelements in the bdelloid rotifer *Adineta vaga* (TBA). In preparation.

Arkhipova IR, Yushenova IA, **Rodríguez F**. (2013). Endonuclease-containing Penelope retrotransposons in the bdelloid rotifer *Adineta vaga* exhibit unusual structural features and play a role in expansion of host gene families. *Mobile DNA*. 4:19.

Flot JF, Hespeels B, Li X, Noel B, Arkhipova I, Danchin EG, Hejnol A, Henrissat B, Koszul R, Aury JM, Barbe V, Barthélémy RM, Bast J, Bazykin GA, Chabrol O, Couloux A, Da Rocha M, Da Silva C, Gladyshev E, Gouret P, Hallatschek O, Hecox-Lea B, Labadie K, Lejeune B, Piskurek O, Poulain J, **Rodríguez F**, Ryan JF, Vakhrusheva OA, Wajnberg E, Wirth B, Yushenova I, Kellis M, Kondrashov AS, Mark Welch DB, Pontarotti P, Weissenbach J, Wincker P, Jaillon O, Van Doninck K. (2013). Genomic evidence for ameiotic evolution in the bdelloid rotifer *Adineta vaga*. *Nature*. 500:453-457.

Arkhipova IR, **Rodríguez F**. (2013). Genetic and epigenetic changes involving (retro)transposons in animal hybrids and polyploids. *Cytogenet Genome Res*. 140: 295-311.

Rodríguez F, Pérez T, Hammer S, Albornoz J, Domínguez A. (2010). Integrating phylogeographic patterns of microsatellite and mtDNA divergence to infer the evolutionary history of chamois (genus *Rupicapra*). *BMC Evolutionary Biology*. 10:222.

Rodríguez F, Hammer S, Pérez T, Suchentrunk F, Lorenzini R, Michallet J, Martinkova N, Albornoz J, Domínguez A. (2009). Cytochrome b phylogeography of chamois (*Rupicapra* spp.). Population contractions, expansions and hybridizations governed the diversification of the genus. *Journal of heredity*. 100: 47-55.

Rodríguez F, Albornoz J, Domínguez A. (2007). Cytochrome b pseudogene originated from a highly divergent mitochondrial lineage in genus *Rupicapra*. *Journal of Heredity*. 98: 243-249.

Reviews, Articles, Books, Book Chapters

Ana Domínguez Sanjurjo, **Fernando Rodríguez Vázquez**, Jesús Albornoz Pons, Trinidad Pérez Méndez. Book Chapter: El rebeco cantábrico, filogeografía e historia evolutiva. In: El Rebeco Cantábrico (*Rupicapra pyrenaica parva*), "Conservación y gestión de sus poblaciones". Edited by Pérez-Barbería, F.J. & Palacios, B. Colección Naturaleza y Parques Nacionales. Serie Técnica. 2009.

Rodríguez F, Hammer S, Pérez T, Suchentrunk F, Lorenzini R, Michallet J, Martinkova N, Albornoz J, Domínguez A. (2008). Cytochrome b phylogeography of chamois (*Rupicapra* spp.): Population contractions, expansions and hybridizations characterize the diversification of the genus. 82nd Annual Meeting of the German Society of Mammalogy. Vienna, 14-18 September 2008. *Mammalian Biology*. 73 [Suppl. 1]: 16.

Domínguez, A. and **Rodríguez, F**. (2004). Beef traceability based on DNA fingerprinting. *Feedinfo News Service*.

Meetings and Conferences Presentations (summary)

TITLE: Evolución del gen citocromo b y su correspondiente pseudogen nuclear en el rebeco (*Rupicapra* spp.).

AUTHORS: **Rodríguez F**, Albornoz J, Domínguez A.

XXXV Congreso de la Sociedad Española de genética, Almería, Spain, 2005.

TITLE: Mitochondrial Phylogeography of chamois (*Rupicapra* spp.) based on cytb.

AUTHORS: **Rodríguez F**, Hammer S Pérez T, Suchentrunk F, Lorenzini R, Michallet J, Albornoz J, Domínguez A.

XI Congress European Society for Evolutionary Biology, Uppsala, Sweden, 2007

TITLE: Filogeografía mitocondrial del rebeco (*Rupicapra* spp.) basada en el citocromo b.

AUTHORS: **Rodríguez F**, Hammer S, Pérez T, Suchentrunk F, Lorenzini R, Michallet J, Albornoz J, Domínguez A.

XXXVI Congreso de la Sociedad Española de genética, León, Spain, 2007.

TITLE: Cytochrome b Phylogeography of Chamois (*Rupicapra* spp.): Population Contractions, Expansions and Hybridizations characterize the Diversification of the Genus.

AUTHORS: **Rodríguez F**, Hammer S, Pérez T, Suchentrunk F, Lorenzini R, Michallet J, Albornoz J, Domínguez A.

82nd Annual meeting of the German Society of Mammalogy, Vienna, Austria, 2008.

TITLE: Filogeografía y diversificación del género *Rupicapra*.

AUTHORS: **Rodríguez F**, Hammer S, Pérez T, Suchentrunk F, Lorenzini R, Michallet J, Martinkova N, Albornoz J, Domínguez A.

XVII Seminario de Genética de Poblaciones y Evolución, Ribadesella, Spain, 2008.

TITLE: Diversification of the chamois (genus *Rupicapra*). Discordance between microsatellite and mt-DNA phylogenies.

AUTHORS: **Rodríguez F**, Pérez T, Hammer S, Albornoz J, Domínguez A.

XII Congress European Society for Evolutionary Biology, Turin, Italy, 2009

TITLE: Microsatellite and mt-DNA phylogenies of the chamois (genus *Rupicapra*) and taxonomic implications.

AUTHORS: **Rodríguez F**, Pérez T, Hammer S, Albornoz J, Domínguez A.

V World Conference on Mountain Ungulates, Granada, Spain, 2009.

TITLE: Initial characterization of PIWI-interacting RNAs in *Adineta vaga*.

AUTHORS: **Rodríguez F**, Arkhipova I.

North East Mobile Genetic Element Meeting, Woods Hole, MA, USA, 2011.

TITLE: An increase in relative abundance of pi-like RNAs in response to ionizing radiation in the bdelloid rotifer *Adineta vaga*.

AUTHORS: **Rodríguez F**, Arkhipova I.

Genomic Impact of Eukaryotic Transposable Elements, Asilomar, CA, USA, 2012.

TITLE: Use of phylogenetic approaches to study horizontal gene transfer and evolutionary history of gene families.

AUTHORS: Gladyshev EA, **Rodríguez F**, Yushenova IA, Arkhipova IR.

3rd Moscow International Conference Molecular Phylogenetics, Moscow, Russia, 2012.

TITLE: Loss of let-7 and miR-100 and possible compensation through editing of miR-125.

AUTHORS: Dutta A, **Rodríguez F**, Sperling EA, Peterson KJ, Mark Welch DB.

The Biology of Post-Transcriptional Gene Regulation, Gordon Research Conference, Newport, RI, USA, 2012.

TITLE: piRNA-mediated silencing in the bdelloid rotifer *Adineta vaga* targets transposons as well as genes of foreign origin.

AUTHORS: **Rodriguez F**, Arkhipova I.

Regional Meeting on Mobile Genetic Elements, CSHL, Cold Spring Harbor, NY, USA, 2013.

TITLE: Diversified coding potential of retroelements from bdelloid rotifers reveals multiple links to the viral world.

AUTHORS: Arkhipova IR, Yushenova IA, **Rodriguez F**.

Abstracts, Keystone Symposium "Mobile Genetic Elements and Genome Evolution", Santa Fe, NM, USA, 2014.

TITLE: Phylogenetic relationships in diverse superfamilies of eukaryotic transposable elements.

AUTHORS: Arkhipova IR, Yushenova IA, **Rodriguez F**.

Contributions to the 4th Moscow International Conference "Molecular Phylogenetics" (MolPhy-4).
Moscow, Russia, 2014.