

# Patricia CASTILLO-BRICENO, PhD

My research interest goes through animal to environmental health assessment in aquatic systems, using quantitative methods. I integrate molecular to ecosystem approaches using *in silico*, *in vitro* and *in vivo* tests on Climate Change, One-Health and Food Sovereignty contexts. Also, I enjoy working on science communication, transference of knowledge and arts-science-community interactions.

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## Professional IDs

ORCID: <http://orcid.org/0000-0001-9122-6002>  
ResearcherID (ISI): G-7754-2015 <http://www.researcherid.com/rid/G-7754-2015>  
Scopus ID: 23972607500 ; H-Index = 6  
Google Scholar ID: <https://scholar.google.com.ec/citations?user=VN5SwaEAAAAJ>

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## Basic information

**Nationality:** Ecuadorian  
**Birth place and date:** Quito, Ecuador; June 11th, 1979  
**Passport:** 1711797470  
**e-mails:** [pat.castillo.briceno@gmail.com](mailto:pat.castillo.briceno@gmail.com) ; [pcasbri@um.es](mailto:pcasbri@um.es)

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## Languages

**Spanish** (native speaker)  
**English** (advanced)  
**French** (intermediate)  
**Portuguese** (basic)

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## Academic Degrees

Sep 2010 **Doctorate – PhD European Mention (10/10 *Cum Laude*)**. Subject: “Implication of extracellular matrix related molecules in the immune response and spermatogenesis in the teleost fish gilthead seabream”. Official program on Integration and modulation of signalling in Biomedicine. University of Murcia. Spain.

Mar 2016 **Master in Sciences in Marine Aquaculture**. Study of case: “The extracellular matrix in immunity and its potential for improving the production in fish aquaculture”. Polytechnic Superior School of Littoral (ESPOL), Ecuador.

Sep 2007 **Master in Technology and Research in Experimental Biomedical Sciences (9.67/10)**. Thesis: “Collagen and related molecules like activators of phagocytic cells in fish and mammals”. Postgraduate Official Program in Integration and modulation of signalling in Biomedicine. U. of Murcia. Spain.

Feb 2003 **Marine Biologist (9.66/10)**. Thesis: “Study of water status on artesian fishery areas in Chone river estuary, Manabí, Ecuador based on microbiological indicators, since April to August 2002”. Catholic University of Ecuador – PUCE. Coastal Resources Program. Ecuador.

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## Research & Management Experience

Nov 2016 - currently **Research Professor of Physiology**. Faculty of Marine Sciences. ULEAM University - Universidad Laica Eloy Alfaro de Manabi. Ecuador.

Mar 2014 - currently. **Co-Director**. Equatorial Biome & Ocean Acidification – EBIOAC Group. Ecuador. Subject: Impact of Ocean Acidification on ecosystems health and implications for food sovereignty.

Feb-Jun 2017 **Director (E)**. Central Research Department. ULEAM University. Ecuador.

Mar – Oct 2016 **Research Associate Professor**. Faculty of Marine Sciences. ULEAM University. Ecuador.

Jul - Dic 2014. **Director & Co-Organizer**. Conferences ‘The art of Science – The science of Art’. FIMCBOR-ESPOL & Prometeo Project – SENESCYT w/ UPEC, CIESPAL, FLOK Society. Quito, Tulcán and Guayaquil. Ecuador.

Feb 2014 – Feb 2015 **Visitor Researcher**. Prometeo Project. National Secretary of Higher Education, Science, Technology and Innovation – SENESCYT / Escuela Superior Politécnica del Litoral – ESPOL. Ecuador.

Jan 2012 – Nov 2013 **Researcher / Postdoctoral researcher**. Institute of Developmental Biology of Marseille – IBDM, CNRS / University Aix-Marseille. France. (Subject: The role of sex steroids in mucociliary epithelia)

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Nov 2010 - Dic 2011 **Postdoctoral Fellow**. IBDM, CNRS / Aix-Marseille University. France. (Subject: Role of microRNAs and effect of sex steroids in ciliogenesis)

Oct 2006 - Sep 2010 **Doctoral Researcher**. Department of Cell Biology and Histology, U. of Murcia. Spain. (Subject: Study of extracellular matrix molecules involved in the reproductive and immune systems in teleost fish)

Sep - Dec 2009 **Research Visitor**. M Nilges Lab, Department of Structural Biology and Chemistry, Institute Pasteur. France. (Subject: Use of bioinformatics for modelling of collagen receptors in the teleost fish gilthead seabream, *Sparus aurata* L.)

Sep - Dec 2008 **Research Visitor**. RW Farndale Lab, Department of Biochemistry, University of Cambridge. United Kingdom. (Subject: Presence and binding activity of collagen receptors in a teleost fish using toolkits for collagens II and III)

Oct - Dec 2005 **Research Personnel**. University of Azuay. Ecuador. (Subject: Definitive environmental impact studies of Mazar hydroelectric project to ACOTECNIC Cía. Ltda.)

Jun - Dec 2003 **Volunteer Internship**. Charles Darwin Foundation Galapagos. Ecuador. Vertebrates Ecology and Climate Monitoring, Herpetology Section.

Jun 2002 **Internship**. Oceanographic Institute of Naval Army (INOCAR). Oceanographic Cruise I-02. Ecuador.

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## PUBLICATIONS

### Scientific Papers

**P Castillo-Briceno**, L Kodjabachian. (2014) *Xenopus* embryonic epidermis as a mucociliary cellular ecosystem to assess the effect of sex hormones in a non-reproductive context. *Frontiers in Zoology* 11(1):9. doi:10.1186/1742-9994-11-9.

**P Castillo-Briceno**, S Águila-Martínez, S Liarte, A García Alcázar, J Meseguer, V Mulero, A García-Ayala. (2013) In situ forming microparticle implants for delivery of sex steroids in fish: Modulation of the immune response of gilthead seabream by testosterone. *Steroids* 78(1):26-33.

S Águila-Martínez, **P Castillo-Briceno**, M Sánchez, A García Alcázar, J Meseguer, V Mulero, A García-Ayala (2013) Specific and non-overlapping functions of testosterone and 11-ketotestosterone in the regulation of professional phagocyte responses in the teleost fish gilthead seabream. *Mol Immunol.* 53:218-26

**P Castillo-Briceno**, D Bihan, M Nilges, S Hamaia, J Meseguer, A García-Ayala, RW Farndale, V Mulero (2011) A role for specific collagen motifs during wound healing and inflammatory response of fibroblasts in the teleost fish gilthead seabream. *Mol Immunol.* 48(6-7):826-34.

**P Castillo-Briceno**, I Cabas, M Arizcun-Arizcun, J Meseguer, V Mulero, A García-Ayala (2011) Identification of an integrin beta 1 isoform with a restricted tissue expression in a teleost fish. *Reprod Fertil Dev.* 23(5):654-64.

**P Castillo-Briceno**, M Arizcun-Arizcun, J Meseguer, V Mulero, A García-Ayala (2010) Correlated Expression Profile of Extracellular Matrix-Related Molecules during the Inflammatory Response of the Teleost Fish Gilthead Seabream. *Dev Comp Immunol.* 34(10):1051-8.

**P Castillo-Briceno**, MP Sepulcre, E Chaves-Pozo, J Meseguer, A García-Ayala, V Mulero (2009) Collagen regulates the activation of professional phagocytes of the teleost fish gilthead seabream. *Mol Immunol.* 46:1409-15.

E Chaves-Pozo, **P Castillo-Briceno**, A García-Alcázar, J Meseguer, V Mulero, A García-Ayala. (2008) A role for matrix metalloproteinases in granulocyte infiltration and testicular remodeling in a seasonal breeding teleost. *Mol Immunol.* 45(10):2820-30.

**P Castillo-Briceno**, C Márquez, D Wiedenfeld, H Snell y A Jaramillo. (2004) El Niño - Southern Oscillation and health status of Galapagos marine iguana (*Amblyrhynchus cristatus*). *Ecol apl.* (ISSN 1726-2216) 3(1-2):92-7.

### Books & Book chapters

R Basantes Serrano, L Maisincho Guagrilla, V Cevallos Viteri, JL Santos Dávila, ... **P Castillo-Briceno**. (2017). Avances de la Adaptación al Cambio Climático en Ecuador." En: Tercera Comunicación Nacional del Ecuador sobre Cambio Climático. pp1,3,255-452. Ministerio del Ambiente del Ecuador – MAE. Quito, Ecuador. ISBN 976-994-22-145-2.

XE Barandiaran, D Araya y D Vila-Viñas (authors); **P Castillo-Briceno**, N Baur & A Calleja-López (contributors). (2015) Ciencia Investigación colaborativa, participativa y abierta. En: Buen Conocer - FLOK Society. Modelos sostenibles y políticas públicas para una economía social del conocimiento común y abierto en el Ecuador. Quito, Ecuador: IAEN-CIESPAL. ISBN 978-9942-21-120-0. <http://book.floksociety.org/ec/>.

**P Castillo-Briceno** (2010) Implication of extracellular matrix related molecules in the immune response and spermatogenesis in the teleost fish gilthead seabream. / Regulación de la espermatogénesis y respuesta inmunitaria por moléculas de la matriz extracelular en peces teleosteos. Book. University of Murcia. ISBN: 978-84-693-8998-0.

### Conference Proceedings & Abstracts

**P Castillo-Briceno**, F Navarrete-Mier. (2016) Ocean Acidification & Equatorial – Tropical Systems. **3rd International Symposium & 5th Consulting Committee Meeting on Marine Science & Technology between ROK and Latin America: Climate Change in the Ocean- Impact and Policy**. Rep. Korea. Invited talk.

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- A Terán Sornoza, P Castillo-Briceno, F Navarrete-Mier. (2016) A role for ports of Manabí on the conservation of fish biodiversity (in Spanish). **Simposio Internacional de Biodiversidad, Manejo y Gestión Ambiental**. Guayaquil, Ecuador. Poster
- C Palma-Alvia, H Castaño-Posligua, F Navarrete-Mier, P Castillo-Briceno. (2016) Generación de herramientas para evaluar los efectos del cambio climático en post-larvas de camarón (*Litopenaeus vannamei*) en Manabí. **III Congreso de Biología marina y Ambiente PUCEM 2016**. Portoviejo. Ecuador. Poster
- L Landivar-Merchan, P Castillo Briceno, F Navarrete-Mier. (2016) Metodología para analizar la capacidad innata de reconocimiento de claves químicas de predadores en camarón blanco *Litopenaeus vannamei*. **XL Jornadas Ecuatorianas de Biología**. Guayaquil, Ecuador. Poster
- P Castillo-Briceno. (2016) Biomedicine applied to measure Animal Welfare in Aquatic Systems (in Spanish). **V Congreso Internacional de Acuicultura en Aguas Continentales**. ISSN 1390-7360. Ecuador. Invited Talk.
- P Castillo-Briceno, F Navarrete-Mier. (2016) Building capacities and bridging gaps on Ocean Acidification research for equatorial developing countries: Ecuadorian experience. **4th International Symposium on the Ocean in a High-CO2 World, and 3rd Global Ocean Acidification Observing Network (GOA-ON) Science Workshop**. Australia. Poster.
- F Navarrete-Mier, P Castillo-Briceno (2016) Generating capacities to develop Ocean Acidification research in developing countries: Ecuador (in Spanish). **1er Congreso Anual de Cambio Climático en el Ecuador**. ISBN: 978-9942-14-354-9. Ecuador. Talk.
- P Castillo-Briceno, F Navarrete-Mier. (2016) Biomedicine Applied to Climate Change & Biodiversity Research in Aquatic Ecosystems (in Spanish). **Simposio Científico de Universidades e Institutos de Investigación del Ecuador**. Ecuador. Invited Talk.
- P Castillo-Briceno, F Navarrete-Mier. (2015) Limbs regeneration in juveniles of a native marine fish of Ecuador (*Abudefduf troschelii*) quantified by image analysis. **XXXIX National Meeting of Biology. Ecuador**. Talk.
- P Castillo-Briceno, F Navarrete-Mier. (2015) Sciences, Arts and Community: A Proposal for Integrative and Open Knowledge. **International Congress of Pedagogy. Cuba**. Poster.
- F Navarrete-Mier, P Castillo Briceno. (2014) Evidence of Early development of Behavioural traits (proactivity-reactivity axis) in an Equatorial reef fish: Sergeant major *Abudefduf troschelii*. **ASAB Winter Meeting. United Kingdom**. Poster.
- F Navarrete-Mier, P Castillo Briceno. (2014) Evidence of behavioural traits (proactivity-reactivity axis) in marine fish of Ecuador: study in juveniles of *Abudefduf troschelii*. **XXXVIII National Meeting of Biology. Ecuador**. Talk.
- P Castillo-Briceno. (2013) Use of biomolecular tools and cellular cultures for studying processes of wound healing in aquatic and terrestrial animals. **II Forum of Ecuadorian Students in Europe. Italy**. Talk.
- P Castillo-Briceno, L Kodjabachian. (2012) Effect of sex steroids on *Xenopus* skin mucociliary epithelium. **14th International Xenopus Conference. France**. Poster.
- P Castillo-Briceno, FW Farndale, A García-Ayala, V Mulero. (2010) Specific collagen motifs promote adhesion and induce a pro-inflammatory response in fibroblasts of the teleost fish gilthead seabream. **9th International Congress on the Biology of Fish, American Fisheries Society. Spain**. Poster.
- M Sánchez-Hernández, P Castillo-Briceno, E Abellán, A García-Alcázar, A García-Ayala, V Mulero. (2010) Seasonal changes in the expression of immune related molecules in the teleost fish gilthead seabream. **9th International Congress on the Biology of Fish (American Fisheries Society). Spain**. Poster.
- S Águila-Martínez, P Castillo-Briceno, J Meseguer, V Mulero, A García-Ayala. (2010) Testosterone modulates the immune response in vivo of the teleost fish gilthead seabream. **First Symposium of the European Organisation of Fish Immunology (EOFFI). Italy**. Poster.
- P Castillo-Briceno, I Cabas, S Liarte, J Meseguer, A García-Ayala, V Mulero. (2009) A possible role of extracellular matrix molecules in the immune response of gilthead seabream *Sparus aurata* L. **Evo-Devo Meets Marine Ecology: New Frontiers in Ocean Science through Integrative Biology. EMBO Workshop. Italy**. Poster.
- P Castillo-Briceno, SW Hamaia, V Mulero, RW Farndale and A García-Ayala. (2009) Identification of the collagen motifs recognized by fibroblasts and immune cells from the bony fish gilthead seabream. **11th Congress of the International Society of Developmental and Comparative Immunology - ISDCI. Czech Republic**. Talk.
- P Castillo-Briceno, S Liarte, I Cabas, J Meseguer, A García-Ayala, V Mulero. (2009) Expression of extracellular matrix molecules in immune cells and tissues of the gilthead seabream. **11th Congress of the International Society of Developmental and Comparative Immunology - ISDCI. Czech Republic**. Talk.
- J. Meseguer, E. Chávez Pozo, S. Liarte, A. García Alcázar, P Castillo-Briceno, L. Fernández, V. Mulero y A. García Ayala. (2007) Leukocytes and cytokines in the gilthead seabream (*Sparus aurata*) testis. **13th International Congress of Immunology - Immuno Rio. Brasil**. Poster.
- P Castillo-Briceno. (2007) Molecular Biology in Sea Life (La biología molecular en vida marina). **International Scientific Meeting - ECI 2007 Winter edition. Peru**. Invited Speaker, Plenary session.
- P Castillo-Briceno, MP Sepulcre, E Chaves Pozo, J Meseguer, A García Ayala y V Mulero. (2007) Collagen is a potent activator of fish phagocytes (El colágeno es un potente activador de los Fagocitos de peces). **International Scientific Meeting - ECI 2007 winter edition. Peru**. Talk.

F Navarrete-Mier, P Castillo-Briceno. (2007) Parental care substitution in the culture of Siam fighter *Betta splendens*, Reagan 1910. (Sustitución del cuidado parental en el cultivo del combatiente de Siam (*Betta splendens*, Reagan 1910). **International Scientific Meeting - ECI 2007 Winter edition. Peru.** Talk.

P Castillo-Briceno, MP Sepulcre, E Chaves Pozo, J Meseguer, A García Ayala y V Mulero. (2007) Collagen is a potent activator of fish phagocytes (El colágeno es un potente activador de los Fagocitos de peces). **XII Congress of the Spanish Society for Cell Biology. Spain.** Talk.

P Castillo-Briceno, C Márquez, D Wiedenfeld, H Snell y A Jaramillo. (2003) El Niño - Southern Oscillation and health status of galapagos marine iguana (*Amblyrhynchus cristatus*). **XXVII National Meeting of Biology. Biology Society of Ecuador. Ecuador.** Talk.

#### Science Communication & Outreach

**P Castillo-Briceno**, F Navarrete-Mier (2015) Potential Impacts of Ocean Acidification on Fisheries and Aquaculture in Ecuador (in Spanish). **Tilapia & Camarones, Magazine of the Latin-American Society of Aquaculture - SLA** 7(24): 28-33. Article.

P Castillo-Briceno, F Navarrete-Mier. (2015) Ocean Acidification: Impact on World Aquaculture and Fisheries. **Workshop - Talks N° 66, Latin-American Society of Aquaculture - SLA.** Ecuador. Talk.

P Castillo-Briceno. (2014) The art of Science - The science of Art. **Campus Party Quito 4. Ecuador.** Science Zone. Invited talk.

P Castillo-Briceno. (2013) *Xenopus* (Anura, Amphibia) embryonic epidermis as a mucociliary cellular ecosystem: Effects of sex hormones in a non-reproductive context. **5ème Série de Mini-Conférences du Master 1 Développement-Immunologie - Luminy 2013-2014. France.** Talk.

P. Castillo-Briceno. (2007) **Collagen and its derived molecules as activators of phagocytic cells in fish and mammals.** University of Murcia. Spain. Master Thesis. <https://alejandria.um.es>. Talk & Report.

P Castillo-Briceno. (1999) Local crustaceans: Biological aspects. Workshop: **Exploitation practices of Marine and Mangrove species.** Catholic University of Ecuador (PUCE), Mangrove Project. Ecuador. Talk.

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#### Fellowships, Grants and Competitive Distinctions

International Visitor Leadership Program (IVLP), Hidden No More: Empowering Women in STEM. Ecuador Nominee. United States. Exchange project fellowship. Oct 2017. 22500 USD

Global Ocean Acidification - Observing Network, GOA-ON Workshop. IAEA Bursary. Australia. May 2016. 2 500 USD

Latin-American Ocean Acidification - LAOCA Meeting. Bursary. Chile. Dec 2015. 2 000 USD

Latin-American Workshop on Ocean Acidification - LAOCA. Bursary. Chile. Nov 2014. 2 000 USD

Yeosu Academy of the Law of the Sea. Korean Maritime Institute. South Korea. Bursary. Oct 2014. 6 000 USD

Secretary of Higher Education and Science - SENESCYT. Prometeo Grant. Ecuador. Feb 2014 - Feb 2015. 64 640 USD

SENESCYT. Bursary for abroad international scientific events participation. Ecuador. Jan 2013. 1 200 USD

Foundation for Research in Medicine - FRM. Postdoctoral grant. France. Feb 2012 - Nov 2013. 88 800 euros.

University Aix Marseille II. Postdoctoral fellowship. France. Nov 2010 - Oct 2011. 28 800 euros.

University of Murcia. Postdoctoral grant for research continuity. Spain. Dec 2010. 2 000 euros.

University of Murcia. Collaboration fellowship for researching. Project 04538/GERM/06. Abr - Sep 2010. 6 000 euros.

Ministry of Science and Innovation of Spain - MICINN. Mobility grant FPU. Spain. Sep - Dec 2009. 4 500 euros.

Int. Soc. of Developmental and Comparative Immunology - ISDCI. Travel bursary. Czech Rep. Jul 2009. 200 euros.

University of Murcia. Funding to participate in scientific congresses and meetings. Spain. Jun 2009. 380 euros.

Ministry of Science and Innovation of Spain - MICINN. FPU Mobility grant. Spain. Sep - Dec 2008. 4 500 euros.

Ministry of Science and Innovation of Spain - MICINN. FPU Doctoral grant. Spain. Oct 2006 - Mar 2010. 42 000 euros.

Belgian Technical Cooperation Scholarships. Master studies in Aquaculture. Oct 2004 - Ago 2006. 6000 euros.

Charles Darwin Foundation - FCD. Volunteer bursary. Jun - Dic 2003. Belgium-Ecuador. 960 USD.

SENESCYT's Certification for University Research (REG-INV-16-01414). Ecuador. Validity: 2016-2021.

SENESCYT's Certification for University Teaching (Register 2079549). Ecuador. Validity: 2014-2019.

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#### Projects Participation

Effects of Ocean Acidification on health of fish from Equatorial waters: Impact on epithelial repairing processes. Entity: ESPOL - SENESCYT. 02/2014 - 02/2015. PI: P. Castillo-Briceno.

Sciences, Arts and Community in Ecuador. ESPOL and SENESCYT. Ecuador. 05/2014 - 01/2015. PI: P. Castillo-Briceno.

Equatorial Biome & Ocean Acidification Program. Ecuador. 03/2014 - open. PI: P. Castillo-Briceno, F. Navarrete-Mier.

Effect of sex steroids on vertebrate mucociliary epithelia. FRM. France. 02/2012 - 11/2013. PI: P. Castillo-Briceno.

Control of motile ciliogenesis in tetrapod. ANR. France. 01/2011 - 12/2014. PI: L. Kodjabachian.

Improvement of production in the Mediterranean aquaculture by the use of biotechnological tools. Seneca Foundation. Spain. 01/2008 - 12/2012. 04538/GERM/06. PI: A García-Ayala, V Mulero.

Effect of environmental pollutants of estrogenic nature in the immune response and breeding of fish. Entity: MICINN, Spain. 01/2009 - 12/2011. AGL2008-04575-c02-01. PI: A García-Ayala.

Study of evolution in the immune response of vertebrates (part I and II). Entity: Marcelino Botín Foundation. 01/11/2008 - 01/11/2010 and 11/2010 - 10/2012. PI: V Mulero.

## Networking; Cooperation Projects & Memberships

Counterpart by Ecuador. INT7019 Supporting a GOA-ON. Technical Cooperation Project coordinated by the International Atomic Energy Agency – IAEA.

Delegate of Ecuador. LAOCA – Latin American Ocean Acidification Network. Network for regional research on ocean acidification.

Member. GOA-ON Global Ocean Acidification – Observing Network. Network for global research on ocean acidification.

Founder Member. REIMAR – Red de Investigaciones Marinas y Gestión Marítima del Ecuador. Network for Marine Research and Maritime Management of Ecuador coordinated by the national Technical Secretariat of the Sea (SETEMAR).

Member. RIIN – Red de Investigadores sobre Identidades Nacionales Multidisciplinary network of researchers on national identities.

Member. MARiNET Iberoamerican Network for Environmental and Marine Research.

Member. Fauna Latina Network of Wild Fauna researchers for in situ and ex situ Conservation in Latin America.

Member. OSF - Oceanógrafos sin Fronteras ONG for Climate Change related to marine research, knowledge generation and management.

Founder member. Red Aquae Network for researching, divulgation, cooperation and knowledge transfer on aquatic sciences.

Member. SLA – Sociedad Latinoamericana de Acuicultura Network of professionals on Aquaculture production and applied research.

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## Teaching Experience

Nov 2016 - current Research Professor of Physiology. Faculty of Marine Sciences. ULEAM University. Ecuador.

Mar – Oct 2016 Research Associate Professor. Fac. of Marine Sciences, ULEAM University. Ecuador.

May - Sep 2014 Lecturer in Biology (for Engineers). FIMCBOR, ESPOL. Ecuador.

May - Sep 2014 Lecturer in Biology (for Engineers). FIMCBOR, ESPOL. Ecuador.

2012 - Sep 2013 Supervision assistance of postgraduate students. IBDM, CNRS / Aix-Marseille University. France.

2008 - 2010 Co-supervision of pre- and postgraduate students. Dep. Cell Biology. U. Murcia. Spain.

Apr - Sep 2004 Lecturer in Ecology and Marine Ecology. PUCE, Coastal Resources Program. Ecuador.

Nov - Dec 2002. Instructor. 2<sup>nd</sup> & 3<sup>rd</sup> Theoretic - Practical Workshop Nutrition Alternatives: Soybean. Manta, Ecuador.

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## Reviewing and Evaluation Experience

Ene 2017 **External reviewer**. PhD in Cellular Biology with International Mention. UM. Spain. Subject: Functional characterization of mast cells and histamine in the immune system of gilthead seabream (*Sparus aurata*).

Dic 2016 **Peer reviewer**. Internal institutional assessment for CEAACES (the national council for higher education accreditation). UTA University. Ecuador.

Nov 2016 **Peer reviewer**. Internal institutional assessment for CEAACES (the national council for higher education accreditation). ULEAM University. Ecuador.

Jul 2016 **Peer reviewer**. Internal institutional assessment for CEAACES (the national council for higher education accreditation). UNEMI University. Ecuador.

Abr 2016 **Peer reviewer**. Internal institutional assessment for CEAACES (the national council for higher education accreditation). ULEAM University. Ecuador.

2014-2015 **Reviewer**. FLOK Society, Sustainable models and public policy making for a social economy of open and commoning knowledge in Ecuador. IAEN-CIESPAL. Ecuador.

Apr 2015 **Reviewer**. 'Banco de Ideas' Contest for Building the Social Innovation Ecosystem in Ecuador. SENESCYT. Ecuador.

Since 2014 **Member of the Editorial Board**. Journal 'Sathiri'. UPEC University. Ecuador.

Dec 2014 **Jury**. I Contest of IV Level Research Recognition: Grants 2014. National level. SENESCYT. Ecuador.

Jul - Aug 2014 **Jury**. II Contest of University Research Recognition: Grants 2014. Zonal and National levels. SENESCYT. Ecuador.

Oct 2013 **External reviewer**. PhD in Cellular Biology with International Mention. UM. Spain. Subject: Effect of testosterone on reproductive and immune systems of gilthead seabream (*Sparus aurata* L.). Identification of a constitutively active androgen receptor variant.

Since 2011 **Reviewer**. PLOS One Journal. Subject: Extracellular matrix environment, epithelial tissues, inflammation, immunity, sex steroids, endocrine disruptors.

Jul 2011 **Reviewer and jury**. PhD in Cellular Biology with European Mention. UM. Spain. Subject: Modulation of the immune response by hormones and reproductive factors in teleosts.

Oct 2004 **Reviewer and jury**. Marine Biology Degree. PUCE. Ecuador. Subject: Pathogenic bacteria to challenge test of *Litopenaeus vannamei* postlarvae.

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## Scientific Training and Events Participation

**Workshop Opportunities for Internationalization Research+Development+Innovation from national system and the EU and Ibero-American space.** SENESCYT, EU & OEI. 24 h. May 2017.

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**Writing in the Sciences.** Stanford University. 40h. Nov 2015

**Foot and Mouth Disease: Response to Reports and Sanitary Emergencies.** FAO RLC Policy Training Core. E-learning. Aug 2015

**Latin-American Workshop on Ocean Acidification (LAOCA).** Millennium Institute of Oceanography and Center for the Study of Multiple-drivers on Marine Socio-ecological Systems. Dichato, Chile. Nov 2014

**Yeosu Academy of the Law of the Sea - UNCLOS.** Maritime Territory Research Center of Korea Maritime Institute. Yeosu, South Korea. 40h. Oct-Nov 2014

**Workshop for applying to public non-refundable grants.** Ecuadorian Secretariat for Planning and Development – SENPLADES. Ecuador. Apr 2014

**1<sup>st</sup> Latin American Congress of Rays and Chimaeras.** Ecuadorian Technical Secretary of the Sea. Ecuador. Mar 2014

**Estimating the Geographic Distribution of a Species Using Presence-only Records.** US Geological Survey. On-line (Webinar platform). Sep 2011

**Estimation of Population Change from Survey Data.** US Geological Survey. On-line (Webinar platform). May 2010

**Sanitation, Safety and Environment Training.** Training Service of Institute Pasteur. France. Nov 2009

**Course Introduction to the University Teaching (CIDU-3).** Institute of Teaching Sciences, U. of Murcia. Spain. May 2008

**Course of Aquariology and Culture of fish: Immunopathology.** International University of the Sea, U. of Murcia. Spain. Sep 2007

**Inequality in Gender and Health.** 1<sup>st</sup> Journey. Dep. Socio – Sanitarian Sciences, U. Murcia. Spain. Feb 2007

**IV Iberoamerican Virtual Congress of Aquaculture - CIVA 2006.** Spain. Jan 2007

**X Course of Postgraduate Training Animal Cell Culture: Basic concepts and Applied Techniques.** U. of Murcia. Spain. Oct 2006

**Challenge of Implementation of Access Principles in Ecuador. Analysis of Experiences in the Access to Information, Participation and Environmental Justice in Latin America.** Forum. Ecuadorian Centre of Environmental Laws. Ecuador. Feb 2006

**VIII Ecuadorian Congress of Aquaculture.** National Centre of Aquaculture and Marine Research (CENAIM). Ecuador. Oct 2005

**1<sup>st</sup> Basic Course of Biotechnology.** Universities Web of Biotechnology. Ecuador. Jan 2003

**Seminary: Technical Production of Tropical Fish.** University of Nariño. Colombia. Mar 2001

**Seminary: The Importance of Microbiological Control in the Processing Industry of Seafood.** 3M. Ecuador. Nov 2000

**II Intensive Course of Ornamental Fish Culture and Introduction to Tilapia and Chame Culture.** Ecuador. Jul 2000

**I Seminary - Workshop of Marine Benthic Invertebrates.** University of Guayaquil, University of Heriot - Watt of Edinburgh and Darwin Initiative Project. Ecuador. Mar 2000

**International Seminary Marine and Costal Environment in the South-eastern Pacific.** CPPS - PNUMA Ecuador. Dic 1998

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### Complementary Merits

Writing Mention. International Literary Prize “Juan Montalvo”. Third edition: Geography, History, Migrations an Environment. E-Book selection E-Book doi: 10.13130/2035-7680/4148. pp. 324-5. 2013.

Writing Mention. Women, Images and Testimonies, Selection 2005: 3 Latin-American Contest. Ecuador. pp. 202-8. UNIFEM. Jun 2006.

Short story. In: Sincronicidad (ed) Gabri Ródenas. Amazon, Spain. ASIN: B00E4UD1CG. pp. 50-53. 2013.

French Language Course. Inter-departmental Centre of Languages. Aix-Marseille University. France. Jan 2011

French Language: Basic I Course. Vice-Chancellorate of Information, Communication and Innovation. U. Murcia, Spain. Jul 2007

Advance Diver Licence. PADI. Hesperides Centre. Spain. Apr 2008

Open Water Diver Licence. PADI. Hyperbaric Chamber of Puerto Ayora – Galápagos. Ecuador. Dec 2003

Natural Locations and Adventure Sports ENDA2007. Course. U. of Murcia. Spain. Oct 2007

Driving license type B (tourism car). Spain. Mar 2010

Signals during negotiations. Ministry of Labour and migration. Spain. Jul 2011.

Designing presentation with audio-visual resources. Ministry of Labour and migration. Spain. Jun 2011.

1st Social American Forum. Ecuador. Jul 2004

The Ocean Conservancy - PMRC - PUCE International Coastal Cleanup and Profound Commitment to the Marine Environment. Ecuador. Sep 2001

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### Other Skills

**Informatics** – Office; Image J and other image/multimedia editors; R, GraphPad Prism 5 and other statistics software, Bioinformatics’ tools.

**Various** - First aids, field survival, audiovisual devices, literary writing, photography and drawing.

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## References

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