TEXAS STATE VITA

I. ACADEMIC/PROFESSIONAL BACKGROUND

A. Name: MAR HUERTAS **Title: ASSOCIATE PROFESSOR**

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
Ph.D.	2006	University of Barcelona	Animal Biology	Studies into the effects of environmental signals on eel reproduction and chemical communication.
D.A.S.* M.S.	2002	University of Barcelona	Animal Biology	Recovery of Siberian sturgeon yearlings after acute exposure to environmental nitrite
M.S.	2000	University of Barcelona	Animal Biology	Nitrite toxicity in Siberian sturgeon (*Acipenser baeri*, Brandt): An approach to toxicodynamics and toxicokinetics.
B.Sc.	1999	University of Barcelona	Organism and Systems	

*D.A.S. (Diploma of Advanced Studies) is equivalent to a Master of Advanced Studies in Europe.

"This degree exists in Spain under the name "Diploma de Estudios Avanzados" or "DEA". It confers a higher qualification credential than a master of philosophy or master of studies but lower than doctorate. The so-called "DEA" was achieved in two years: one year of coursework, which included research methods and theoretical approaches of the discipline at stake (depending on the area of specialization) and one year of research. All the work of the first and second years was defended before a panel. The DEA was a prerequisite for the preparation of the PhD proposal and the commencement of PhD research in Spain."

From Wikipedia

C. University Experience

Position	*Entity*	*Date*
Associate Professor	Texas State University	8/2022 - present
Assistant Professor	Texas State University	8/2016 – 8/2022
Adjunct Assistant Professor	University of New Mexico	12/2015 – 12/2018
Senior Research Assistant	Michigan State University	2012 - 2016
Postdoctoral Fellow	University of Algarve	2006 - 2012
Ph.D. Fellow	Institute of Technological and Agro-alimentary Research	2001 - 2006

Research Assistant	University of Barcelona	1998 - 2001

D. Relevant Professional Experience

Position	*Entity*	*Date*
Visiting Professor (Training abroad)	Kavli Institute. Norway	2024 (4 months)
Visiting Professor (Training abroad)	University of Insubria. Italy.	2023-2024 (4 months)
Research Assistant (Training abroad)	Michigan State University. US.	2008 – 2009 (9 months)
Research Assistant (Training abroad)	University of Algarve. Portugal.	2004 – 2005 (5 months)
Research Assistant (Training abroad)	Centre for Environment Fisheries and Aquaculture Science. UK.	2003 – 2004 (5 months)

E. Other Professional Credentials

- ***CITI certificate*** (Collaborative Institutional Training Initiative). 2018 Basic Course Human Research. Social and Behavioral Research.
- ***CITI certificate*** (Collaborative Institutional Training Initiative). 2018 Human Research Biomedical Research Investigators and Key Personnel.
- ***Certificate of training in hazardous waste and Hazard Communication***. 2016 to date Environmental Health, Safety, and Risk Management. Texas State University.
- ***CITI certificate*** (Collaborative Institutional Training Initiative). 2016 Basic Course and Working with Fish in Research Settings.
- ***Certificate of competence in animal experimentation***. 2010 by DGV (Direcçao-Geral de Veterinaria) in Lisbon, Portugal.
- ***Biosafety principles for animal users, security awareness and medical waste.*** 2009 until present**.** Web course Office of Radiation, Chemical and Biological Safety. Michigan State University, East Lansing, US.
- ***Radiation safety initial.*** 2008 until present. Office of Radiation, Chemical and Biological Safety. Michigan State University, East Lansing, US
- ***Techniques for analytical separation: practical study of gas chromatography*** 2002. Postgraduate course. University of Barcelona (UB), Barcelona, Spain.
- ***Certified Researcher of Animal Experimentation***. 2001. Ethical committee of Animal Experimentation, University of Barcelona (UB) and Generalitat de Catalunya, Barcelona, Spain. Course credited by FELASA.

II. TEACHING AND MENTORSHIP

A. Courses taught

- ***Aquatic Resources Seminar - Writing course*** (BIO 7102). Spring 2019-to date Texas State University, San Marcos.

- ***Vertebrate Endocrinology*** (BIO 4351A/5424D, includes a laboratory section). Fall 2017-to date. Texas State University, San Marcos.
- ***Fish Physiology*** (BIO 4343/5443, includes a laboratory section). Spring 2017-to date. Texas State University, San Marcos.
- ***Applications of Environment and Organismal Biology*** (ISB 202) (3 credits), 2015 fall semester. Integrative Studies in General Science program. Michigan State University.

B. Graduate Theses/Dissertations, Honors Theses, or Exit Committees (if supervisor, please indicate)

Graduated Bachelor Thesis

Student	Date	Internship Topic	University
Catia Santos (Supervisor)	2009	Histological changes in gill and kidney in toadfish "*Halobatrachus didactylus*" (Bloch and Schneider, 1801), exposed to high ammonia concentrations.	University of Algarve, Portugal
Soraia Santos (Supervisor)	2010	Non-invasive assessment of sexual maturation stage in European eel (*Anguilla anguilla*): Analysis of sex steroids in water.	University of Algarve, Portugal
Cláudia Guerreiro (Supervisor)	2011	Characterization of endocrine control in sexual maturation of European eel (*Anguilla anguilla*).	University of Algarve, Portugal
Toni MacCrossan	2019	Honors Thesis. Student stress and learning.	Texas State University, US
Celine Capra	2024	Nitrite transport in *Xenopus* oocytes	University of Insubria
Daniele Bodini	2024	Nitrate transport in *Xenopus* oocytes	University of Insubria

Graduated to MS/PhD degree students

Student	Date	Internship Topic	University
Catia Santos (Supervisor)	2009	Histological changes in gill and kidney in toadfish "*Halobatrachus didactylus*" (Bloch and Schneider, 1801), exposed to high ammonia concentrations.	University of Algarve, Portugal

Soraia Santos (Supervisor)	2010	Non-invasive assessment of sexual maturation stage in European eel (*Anguilla anguilla*): Analysis of sex steroids in water.	University of Algarve, Portugal
Cláudia Guerreiro (Supervisor)	2011	Characterization of endocrine control in sexual maturation of European eel (*Anguilla anguilla*).	University of Algarve, Portugal
Nicky Hahn	2017	**MS**.Rapid quantitative assessment to identify imperiled fishes.	Texas State University, US
Cory B. Goff	2019	**PhD**. The role of conservation physiology and environmental change in amphibian declines.	Texas State University, US
McKenna Bristow (Supervisor)	2017-2019	**MS**. Use of pheromones in species recognition and mating in mollies.	Texas State University, US
Melody Martinez (Supervisor)	2017-2020	**MS**. Effect of nitrites and nitrates in olfactory function in goldfish.	Texas State University, US
Arseniy Kolonin	2018-2020	**MS**. Effects of urbanization on the physiology, behavior, and life history of tolerant stream fish.	Texas State University, US
Kristie Miner	2018-2020	**MS**. Consequences of artificial light at night on the physiology and behavior of fish.	Texas State University, US
Zachery Forsburg	2017-2020	**PhD**. Consequences of artificial light at night on the physiology and behavior of amphibians.	Texas State University, US
Whitney Ortiz (Supervisor)	2019-2021	**MS**. Effect of nitrites and nitrates in olfactory microbiota in goldfish.	Texas State University, US
Fabiola Mancha (Supervisor)	2018-2021	**MS**. Olfactory-Immuno Pathway of Infectious Hematopoietic NecrosisVirus and Yersinia Ruckeri in Rainbow Trout	Texas State University, US
Ashley Hendrix (supervisor)	2019-2022	**MS non-thesis**. Use of multimodal signals in species recognition and mating in mollies.	Texas State University, US

Sofia Diaz de Villegas	2021-2023	**MS.** Prior heat stress affects pathogen susceptibility in the cnidarian model Exaiptasia diaphana	Texas State University, US
Mercedes Crawford	2021-2023	**MS non-thesis**	Texas State University, US
Anne Saika	2021-2023	**MS.** Characterizing the Metal Stress Response in Pseudogymnoascus destructans	Texas State University, US
Hribhu Chowdhury	2021-2023	**MS.** A smart circular economy for integrated organic hydroponic-aquaponic farming	Texas State University, US
Skyler Shibuya	2022-2023	**MS.** Impacts of anthropogenic stressors on sperm quality and mating behavior in a live-bearing fish	Texas State University, US
Ashley Franklin (supervisor)	2021-2024	**MS.** Effects of nitrite and probiotics on physiology, olfaction, and disease susceptibility in channel catfish.	Texas State University, US
Hanna Hughes (supervisor)	2021-2023	**MS.** The effects of chronic nitrite exposure on tissue morphology and physiology.in *Xiphophorus couchianus*.	Texas State University, US

D. Other

Intern undergraduate students

Student	Date	Internship Topic	University
Soraia Santos (Supervisor)	2010-2013	Chemical communication in European eel.	University of Algarve, Portugal
Samantha Pace (Supervisor)	2013-2014	Sea lamprey chemical communication.	Michigan State University, US
Michael Connolly (Supervisor)	2014-2015	Sea lamprey endocrinology.	Michigan State University, US
Isabella Jaime (Supervisor)	2016-2018	Sea Bass Stress Response.	Texas State University, US

Emily Arzola (Supervisor)	2017-2018	Goldfish reproductive behavior.	Texas State University, US
Cullen Sunnier (Supervisor)	2017-2018	Goldfish reproductive behavior.	Texas State University, US
Justin Cornuvier (Supervisor)	2017-2018	Goldfish reproductive behavior.	Texas State University, US
Hayden Stoeber (Supervisor)	2016-2019 date	Striped Bass stress and goldfish olfaction.	Texas State University, US
Diego Valdez-Oranday (Supervisor)	2018-2019	Neurodegeneration in goldfish brain.	Texas State University, US
Travis Moore (Supervisor)	2018-2019	Guadalupe Bass stress.	Texas State University, US
James Hanna (Supervisor)	2018-to 2020	Florida Bass stress.	Texas State University, US
Isaac Trujillo (Supervisor)	2019-to 2020	Goldfish behavior.	Texas State University, US
Kafayat Oyejide (Supervisor)	2019-to 2020	Student stress and learning.	Texas State University, US
Ande Beasley (Supervisor)	2019-to 2021	Effect of nano plastics in olfaction	Texas State University, US
Kayla Hayes	2019-to 2020	Mussel physiology	Texas State University, US
Hanna Hugues (Supervisor)	2021	Aquaponics	Texas State University, US
Iqra Amjad (Supervisor)	2021	Aquaponics	Texas State University, US
Elijah Wheat (Supervisor)	2021-2022	Aquaponics	Texas State University, US
Will Ortiz (Supervisor)	2021-2024	Aquaponics	Texas State University, US

Meg Grizzaffi (Supervisor)	2022	Trout behavior	Texas State University, US
Travis Anderson (Supervisor)	2022	Steroid biochemistry	Texas State University, US
Alex Tran (Supervisor)	2022-2023	Aquaponics	Texas State University, US
Nicole Restrepo (Supervisor)	2022-2023	Catfish microbiome	Texas State University, US
Natalie Leukie (supervisor)	2024-2025	Catfish histology	Texas State University, US
Mark Rodriguez (supervisor)	2024-2025	Steroid extraction methods	Texas State University, US
Sydney Kirchem (supervisor)	2024- to date	Catfish histology	Texas State University, US
Kailee Smith (supervisor)	2024- to date	Catfish histology	Texas State University, US
Andrew Smallwood (supervisor)	2024- 2025	Catfish histology	Texas State University, US
Ruby Monterroso (supervisor)	2024- to date	Xiphophorus behavior	Texas State University, US

Current MS and PhD advisees

Student	Date	Internship Topic	University
Maruf Billah (supervisor)	2021-to date	**PhD.** Olfactory sensing of pathogens in trout.	Texas State University, US
Chironjib Chandan (supervisor)	2021- to date	**PhD.** Effects of handling stress in bass maternal transfer.	Texas State University, US

Elijah Wheat (Supervisor)	2023-to-date	**MS.** Aquaponics	Texas State University, US
Andreia Teixeira Alves	2023-to-date	**PhD.** Impact of drying and rewetting and fish presence on the structure of macroinvertebrate communities in intermittent streams.	Texas State University, US
Nicole Restrepo (supervisor)	2024-to date	**MS.** Characterization of non-canonical production of NO in Goldfish.	Texas State University, US
Trinity Parker (supervisor)	2024-to date	**MS.** Effects of nitrite in maternal transfer during pregnancy.	Texas State University, US
Sijan Shahi (supervisor)	2025-to date	**MS.** Effects of nitrite on embryo and juvenile behavior.	Texas State University, US
Kimia Fez	2025-to date	**MS.** Lateral line morphogenesis in salamanders.	Texas State University, US
Nisa Sindhi	2025-to date	**PhD.** Lateral line morphogenesis in salamanders.	Texas State University, US
Mandi Davis	2025-to date	**MS.** Effects of bee pollen in goat pregnancy.	Texas State University, US
Anne Saika	2025-to date	**PhD**. Identifying novel oncogenic differentiation-blocking genes from the human druggable receptome in neuroblastoma cells	Texas State University, US
Ireen Lin	2025-to date	**PhD.** Sex-specific aging of the BPII strain in *Xiphophorus maculatus*.	Texas State University, US
Aby Quinby	2025-to date	**PhD.** Pax3 (and/or Pax7) role in growth and satellite cell maintenance in fish muscle	Texas State University, US
Isobel Boffun-Robins	2025-to date	**MS.** Effects of peroxide treatments on the aquaponics microbiome	Texas State University, US

Jazmin Montes	2025-to date	**MS.** Endocrine parameters associate to grimace in cows.	Texas State University, US
Milon Hosen	2025-to date	**MS.** Effects of copper on fungus.	Texas State University, US

Postdoctoral advisees

Name	Date	Internship Topic	University
Allison Churcher	2010-13	Transcriptomics in eel	University of Algarve, Portugal
Laura Ellis	2020-to 2022	Olfactory sensing of pathogens in zebrafish.	Texas State University, US
Mar Moretta	2025-to-date	NO sensing in goldfish	Texas State University, US

III. SCHOLARLY/CREATIVE

A. Works in Print

H-index = 21, **i10-index** = 30

1. Books

Chapters in Books (3)

1. Raschka, S., Scott, A. M., **Huertas, M.**, Li, W., and Kuhn, L. A. (2018). Automated Inference of Chemical Discriminants of Biological Activity, In *Methods Mol Biol* ed., pp 307-338.
2. Davidson, Y. W. C., **Huertas, M.**, and Li, W. M. (2011). A Review of Research in Fish Pheromones, In *Chemical Communication in Crustaceans* (Breithaupt, T., and Thiel, M., Eds.), pp 467-482, Springer, New York.
3. Power, D. M., Guerreiro, P. M., Hubbard, P. C., **Huertas, M.**, and Morgado, I. M. (2010). Endocrinology applied to aquaculture of finfish, In *Recent advances in aquaculture research* (Koumondouros, G., Ed.), pp 1-55, Transworld Research Network, Kerala, India.

2. Articles

Referred Journal Articles (31)

1. Ortiz, W.E., Carlos-Shanley, C., and **Huertas, M.** (2023). Impact of sublethal concentrations of nitrite on goldfish (C*arassius auratus*) microbiomes. *Microb Ecol* 86 (2), 1331-1342.
2. Kraus, A., **Huertas, M.**, Ellis, L., Boudinot, P., Levraud, J.P., Salinas I. (2022). Intranasal delivery of SARS-CoV-2 spike protein is sufficient to cause olfactory damage, inflammation and olfactory dysfunction in zebrafish. *Brain Behav Immun* 102, 341-359.
3. Miner, K.A., **Huertas, M.**, Aspbury, A.S., Gabor, C.R. (2021). Artificial light at night alters the physiology and behavior of western mosquitofish (*Gambusia affinis*). *Front Ecol Evol 9*, 69.
4. Buchinger, T., Scott, A., Fissette, S., Brant, C., **Huertas, M.**, Li, K., Johnson, N. and Li, W. (2020). A pheromone antagonist liberates female sea lamprey from a sensory trap to enable reliable communication. *PNAS 117*, (13) 7284-7289.
5. Nair, P., **Huertas, M.**, and Nowlin, W. H. (2020). Metabolic responses to long-term food deprivation in subterranean and surface amphipods. *Subterr Biol 33*, 1-15.
6. Sepahi, A., Kraus, A., Casadei, E., Johnston, C. A., Galindo-Villegas, J., Kelly, C., García-Moreno, D., Muñoz, P., Mulero, V., **Huertas, M.**, and Salinas, I. (2019). Olfactory sensory neurons mediate ultrarapid antiviral immune responses in a TrkA-dependent manner. *PNAS 116*, 12428-12436.
7. Raschka, S., Scott, A. M., Liu, N., Gunturu, S., **Huertas, M.**, Li, W., and Kuhn, L. A. (2018). Enabling the hypothesis-driven prioritization of ligand candidates in big databases: Screenlamp and its application to GPCR inhibitor discovery for invasive species control. *J Comput-Aided Mol Des 32*, 415-433.
8. Li, K., Brant, C. O., **Huertas, M.**, Hessler, E. J., Mezei, G., Scott, A. M., Hoye, T. R., and Li, W. (2018). Fatty-acid derivative acts as a sea lamprey migratory pheromone. *PNAS 115*, 8603-8608.
9. Buchinger, T. J., Marsden, J. E., Binder, T. R., **Huertas, M.**, Bussy, U., Li, K., Hanson, J. E., Krueger, C. C., Li, W., and Johnson, N. S. (2017). Temporal constraints on the potential role of fry odors as cues of past reproductive success for spawning lake trout. *Ecol Evol 7*, 10196-10206.
10. Buchinger, T. J., Li, K., **Huertas, M.**, Baker, C. F., Jia, L., Hayes, M. C., Li, W. M., and Johnson, N. S. (2017). Evidence for partial overlap of male olfactory cues in lampreys. *J Exp Biol 220*, 497-506.
11. Buchinger, T. J., Bussy, U., Li, K., Wang, H., **Huertas, M.**, Baker, C. F., Jia, L., Hayes, M. C., Li, W., and Johnson, N. S. (2017) Phylogenetic distribution of a male pheromone that may exploit a nonsexual preference in lampreys. *J Evol Biol 30*, 2244-2254.
12. Smith, S. E., Sitar, S. P., Goetz, F. W., **Huertas, M.**, Simchik, C., Armstrong, B. M., Bartholomew, A., Chopra, K., and Murphy, C. A. (2016). Differential physiological response to sea lamprey parasitism between lake trout morphotypes (*Salvelinus namaycush*) from Lake Superior. *Can J Fish Aquat Sci 73*, 1-15.
13. Bussy, U., **Huertas, M.**, Chung-Davidson, Y. W., Li, K., and Li, W. M. (2016). Chemical derivatization of neurosteroids for their trace determination in sea lamprey by UPLC-MS/MS. *Talanta 149*, 326-334.
14. Brant, C. O., **Huertas, M.**, Li, K., and Li, W. M. (2016). Mixtures of two bile alcohol sulfates function as a proximity pheromone in sea lamprey. *Plos One 11*.

15. Li, K., **Huertas, M.**, Brant, C., Chung-Davidson, Y. W., Bussy, U., Hoye, T. R., and Li, W. M. (2015). (+)- and (-)-Petromyroxols: Antipodal tetrahydrofurandiols from larval sea lamprey (*Petromyzon marinus* l.) that elicit enantioselective olfactory responses. *Org Lett 17*, 286-289.
16. Churcher, A. M., Pujolar, J. M., Milan, M., **Huertas, M.**, Hubbard, P. C., Bargelloni, L., Patarnello, T., Marino, I. A. M., Zane, L., and Canario, A. V. M. (2015). Transcriptomic profiling of male European eel (*Anguilla anguilla*) livers at sexual maturity. *Comp Biochem Physiol E Genom Proteom 16*, 28-35.
17. Churcher, A. M., Hubbard, P. C., Marques, J. P., Canario, A. V. M., and **Huertas, M.** (2015). Deep sequencing of the olfactory epithelium reveals specific chemosensory receptors are expressed at sexual maturity in the European eel *Anguilla anguilla*, *Mol Ecol 24*, 822-834.
18. Bryan, M. B., Chung-Davidson, Y. W., Ren, J. F., Bowman, S., Scott, A. P., **Huertas, M.**, Connolly, M. P., and Li, W. M. (2015). Evidence that progestins play an important role in spermiation and pheromone production in male sea lamprey (*Petromyzon marinus*). *Gen Comp Endocrinol 212*, 17-27.
19. **Huertas, M.**, Almeida, O. G., Canario, A. V. M., and Hubbard, P. C. (2014). Tilapia male urinary pheromone stimulates female reproductive axis. *Gen Comp Endocrinol 196*, 106-111.
20. Churcher, A. M., Pujolar, J. M., Milan, M., Hubbard, P. C., Martins, R. S. T., Saraiva, J. L., **Huertas, M.**, Bargelloni, L., Patarnello, T., Marino, I. A. M., Zane, L., and Canario, A. V. M. (2014). Changes in the gene expression profiles of the brains of male European eels (*Anguilla anguilla*) during sexual maturation. *BMC Genomics 15*.
21. Li, K., Brant, C. O., **Huertas, M.**, Hur, S. K., and Li, W. M. (2013). Petromyzonin, a hexahydrophenanthrene sulfate isolated from the larval sea lamprey (*Petromyzon marinus* L.). *Org Lett 15*, 5924-5927.
22. Hubbard, P. C., **Huertas, M.**, and Canario, A. V. M. (2012). The third Faro workshop bioactive water borne chemicals. *Behaviour 149*, 897-899.
23. **Huertas, M.**, Hagey, L., Hofmann, A. F., Cerda, J., Canario, A. V. M., and Hubbard, P. C. (2010). Olfactory sensitivity to bile fluid and bile salts in the European eel *(Anguilla anguilla*), goldfish (*Carassius auratus*) and Mozambique tilapia (*Oreochromis mossambicus*) suggests a 'broad range' sensitivity not confined to those produced by conspecifics alone. *J Exp Biol 213*, 308-317.
24. Scott, A. P., Hirschenhauser, K., Bender, N., Oliveira, R., Earley, R. L., Sebire, M., Ellis, T., Pavlidis, M., Hubbard, P. C., **Huertas, M.**, and Canario, A. (2008). Non-invasive measurement of steroids in fish-holding water: important considerations when applying the procedure to behaviour studies. *Behaviour 145*, 1307-1328.
25. **Huertas, M.**, Canario, A. V. M., and Hubbard, P. C. (2008). Chemical communication in the Genus Anguilla: a minireview. *Behaviour 145*, 1389-1407.
26. **Huertas, M.**, Hubbard, P. C., Canario, A. V. M., and Cerda, J. (2007). Olfactory sensitivity to conspecific bile fluid and skin mucus in the European eel *Anguilla anguilla* (L.). *J Fish Biol 70*, 1907-1920.
27. **Huertas, M.**, Scott, A. P., Hubbard, P. C., Canario, A. V. M., and Cerda, J. (2006). Sexually mature European eels (*Anguilla anguilla* L.) stimulate gonadal development of neighbouring males: Possible involvement of chemical

communication. *Gen Comp Endocrinol 147*, 304-313. **[This research was highlighted in Journal of Experimental Biology by M. Danielle McDonald (2006). Is sexual maturation contagious? 209, p. V]**.

28. **Huertas, M.**, and Cerda, J. (2006). Stocking density at early developmental stages affects growth and sex ratio in the European eel *(Anguilla anguilla*). *Biol Bull 211*, 286-296.
29. Scott, A. P., Pinillos, M. L., and **Huertas, M.** (2005). The rate of uptake of sex steroids from water by *Tinca tinca* is influenced by their affinity for sex steroid binding protein in plasma. *J Fish Biol 67*, 182-200.
30. Gisbert, E., Rodriguez, A., Cardona, L., **Huertas, M.**, Gallardo, M. A., Sarasquete, C., Sala-Rabanal, M., Ibarz, A., Sanchez, J., and Castello-Orvay, F. (2004). Recovery of Siberian sturgeon yearlings after an acute exposure to environmental nitrite: changes in the plasmatic ionic balance, Na+-K+ ATPase activity, and gill histology. *Aquaculture 239*, 141-154.
31. **Huertas, M.**, Gisbert, E., Rodriguez, A., Cardona, L., Williot, P., and Castello-Orvay, F. (2002). Acute exposure of Siberian sturgeon (*Acipenser baeri*, Brandt) yearlings to nitrite: median-lethal concentration (LC50) determination, haematological changes and nitrite accumulation in selected tissues. *Aquat Toxicol 57*, 257-266.

Conference papers in Journals (35)

1. Billah, M.M., Grizzaffi, M. and **Huertas, M.** (2023). Pathogen odors elicit distinct neurosteroid and behavioral responses in Rainbow trout (*Oncorhynchus mykiss*). *Physiology*, 38 (S1).

2. Franklin, A., Ortiz, W., Matthews, M., Prangnell, D., Carlos-Shanley, C. and **Huertas, M.** (2023). The impact of nitrite and *Edwardsiella ictaluri* on channel catfish (*Ictalurus punctatus*) nose morphology. Integrative and Comparative Biology, *63* (S1), S1–S522.

3. Billah, M.M., Grizzaffi, M. and **Huertas, M.** (2023). Neuromodulation of Olfactory Immune Responses In Rainbow Trout (*OncorhynchusMykiss*). Integrative and Comparative Biology, *63* (S1), S1–S522.

4. Hughes, H and **Huertas, M.** (2023). Effects of Chronic Nitrite Exposure on Gonad and Embryo Morphology in *Xiphophorus couchianus*. Integrative and Comparative Biology, *63* (S1), S1–S522.

5. **Huertas, M.**, Billah, M.M. (2023). Pathogen odors elicit distinct neurosteroid and behavioral responses in Rainbow trout (*Oncorhynchus mykiss*). Physiology, *38* (S1), 5795814.
6. Wheat, E., Ortiz, W., and **Huertas, M.** (2022). Effect of black fly larva diet supplement on goldfish (*Carassius auratus*) reproduction in an aquaponics system. The FASEB Journal *36*.

7. Hughes, H., and **Huertas, M**. (2022). Morphological description of olfactory organ changes after acute nitrite exposure in *Xiphophorus couchianus*. The FASEB Journal *36*.
8. Franklin, A., Ortiz, W., Matthews, M., Prangnell, D., Carlos-Shanley, C., and **Huertas, M.** (2022). Chronic exposure to sublethal concentrations of aquatic nitrite change nose and gut morphology and associated microbiomes in channel catfish. The FASEB Journal *36*.
9. Billah, M.M., Mancha, F., Ellis, L., and **Huertas, M.** (2022). Neurosteroid role in the integration of olfactory immune responses in rainbow trout (*Oncorhynchus mykiss*). The FASEB Journal *36*.
10. Hendrix, A., and **Huertas, M**. (2020). Multimodal communication modulates swimming behavior in sailfin molly (*Poecilla Latipinna)*, In *FASEB 34*, 1-1.
11. Mancha, F. and **Huertas, M.** (2020). Tracing the Olfactory Circuit of Bacteria and Virus in Rainbow Trout (*Oncorhynchus mykiss*), In *FASEB 34*, 1-1.
12. Oyejide, K., Hanna, J., Daniel, K. and **Huertas, M.** (2020). Can Classrooms Have an Impact on Student Stress?, In *FASEB 34*, 1-1.
13. Hanna, J., Pragnell, D., Mattews, M. and **Huertas, M.** (2020). Maternal Stress Effects on Hatching Success and Larval Malformation Prevalence in Palmetto Bass, In *FASEB 34*, 1-1.
14. Trujillo, I., Martinez, M., and **Huertas, M**. (2020). Behavioral Effects of Nitrite on Goldfish (*Carassius auratus*), In *FASEB 34*, 1-1.
15. Martinez, M., Gomes, A., Mancha, F. C. and **Huertas, M.** (2020). Toxicokinetic of sublethal concentrations of nitrite in goldfish (*Carassius auratus*), In *FASEB 34*, 1-1.
16. Ortiz, W., Carlos-Shanley, C. and **Huertas, M.** (2020). The impacts of sublethal nitrite exposure on goldfish (*Carassius auratus*) microbiomes, In *FASEB 34*, 1-1.
17. Valdez-Oranday, D. F., Martinez, M., and **Huertas, M.** (2019). Biomarkers of neurodegeneration in goldfish exposed to nitrite, In *FASEB 33*, 662.613-662.613.
18. Stoeber, H., and **Huertas, M.** (2019). Effects of polystyrene nanoplastics on goldfish olfactory function, In *FASEB* 33, b616-lb616.
19. McKenna, B., Gabor, C. R., and **Huertas, M.** (2019). Conspecific chemical communication in a live-bearing fish, *Poecilia latipinna*, In *Integr Comp Biol.* 59
20. Martinez, M., and **Huertas, M.** (2019). Nitrite disruption in olfaction and internal physiology in goldfish (*Carassius auratus*), In *FASEB 33*, 813.817-813.817.
21. Mancha, F., Salinas, I., and **Huertas, M.** (2019). Neural circuits and olfactory responses to neurotropic viruses in trout, In *FASEB 33*, lb618-lb618.
22. Daniel, K., Mac Crossan, A., and **Huertas, M.** (2019). Student hormonal stress responses in two learning environments, In *European Science Education Research Association*, Bologna, Italy.
23. Bristow, M. L., Gabor, C., and **Huertas, M.** (2019). Conspecific chemical cues modulate reproductive physiology and behavior in a live-bearing fish, In *FASEB 33*, lb429-lb429.
24. Sepahi, A., Kraus, A., Galindo-Villegas, J., Kelly, C., Garcia-Moreno, D., Mulero, V., **Huertas, M.**, and Salinas, I. (2018). The immunological role of crypt olfactory neurons against neurotropic viruses in teleost fish, In *J Immunol*, *173*.115-173.115.

25. Martinez, M., and **Huertas, M.** (2018). Effects of nitrite in goldfish (*Carassius auratus*) olfactory function, In *FASEB 32*, 692.698,.
26. Buchinger, T. J., Bussy, U., Wang, H., Baker, C. F., **Huertas, M.**, Jia, L., Hayes, M. C., Li, W., and Johnson, N. S. (2017). Evolution of pheromone communication in lampreys, In *Integr Comp Biol 57*, E213-E213.
27. Kuhn, L. A., Liu, N., Scott, A., Gunturu, S., Raschka, S., **Huertas, M.**, and Liu, W. (2014). Screening and identifying pheromone receptor antagonists for invasive species control, In *Abstracts of Papers of the American Chemical Society 248*.
28. Scott, A. M., **Huertas, M.**, Liu, N., Gunturu, S. K., Kuhn, L. A., and Li, W. (2013). Development of pheromone antagonists for sea lamprey control, In *Soc Neuro 43*.
29. **Huertas, M.**, Buchinger, T., Li, W., and Johnson, N. (2013). Olfactory sensitivity to pheromone 3-ketopetromyzonol sulfate and bile acids in several lamprey species, In *Soc Neuro 43*.
30. **Huertas, M.**, Hubbard, P. C., and Canario, A. V. M. (2011). Steroidogensis dynamics during maturation in the male European eel, In *Proceedings of the 9th International Symposium on Reproductive Physiology of Fish* 147-148.
31. **Huertas, M.**, Canario, A. V. M., and Hubbard, P. C. (2011). Olfactory sensitivity to Ca2+ and Na+ in the European eel (*Anguilla anguilla*), In *Chem Senses 36*, E67-E68.
32. Hubbard, P. C., **Huertas, M.**, Almeida, O. G., and Canario, A. V. M. (2011). Male tilapia urinary pheromone induces endocrine sex responses in conspecific females., In *Proceedings of the 9th International Symposium on Reproductive Physiology of* 98-99.
33. **Huertas, M.**, Canario, A. V., and Hubbard, P. C. (2009). Follow your nose: Chemical communication throughout the European eel (*Anguilla anguilla*, L.) life-cycle, In *Comp Biochem Physio A-Mol Integr Physio.153A*, pp S90-S90.
34. **Huertas, M.**, Canario, A. V. M., and Hubbard, P. C. (2008). changes in olfactory sensitivity during the european eel (*Anguilla Anguilla*) Life Cycle, In *Chem Senses 33*, p S150.
35. **Huertas, M.**, Hubbard, P. C., Scott, A. P., Canario, A. V. M., and Cerda, J. (2005). Evidence for involvement of chemical communication in reproduction of the eel *Anguilla anguilla*, In *Comp Biochem Physiol A-Mol Integr Physiol141*, S90-S90.

B. Works not in print

1. Papers/posters presented at national and international meetings (67)

1. Huertas, M. (2025). Double-edged sword effects of environmental nitrite on fish sense of smell. Society for Neuroscience (SFN) Annual Meeting 2025. November 15th-19th. San Diego, California.

2. Billah, M.M. and **Huertas, M.** (2025). Olfactory responses to bacteria activate distinct neurosteroidogenic pathways in rainbow trout brain. 2025 TXST Graduate Student Research Conference. April 8. San Marcos, Texas.

3. Restrepo, N. and **Huertas, M.** (2025). Effects of chronic nitrite exposure in goldfish hemoglobin variants. NDiSTEM SACNAS Conference 2025. October 29 – November 1st. Columbus, Ohio.

4. Restrepo, N., Casoli, G., Brusa-Pasque, C., Bossi, E. and **Huertas, M.** (2025). Nitrite and nitrate transport by an anion transporter expressed in *Xenopus laevis* oocytes. ABRCMS 2025. November 19 – 22nd, San Antonio, TX.
5. Parkman, T., Lu, Y., and **Huertas, M.** (2025). Effects of Nitrite Exposure on Pregnancy and Maternal Transfer in *Xiphophorus Couchianus*. 2025 SETAC North America 46th Annual Meeting. November 16-20th. Portland, Oregon.

6. **Huertas, M.,** Wheat, E., Shultz, R., and Bahram, A. (2025). Effects of fish peroxide treatments in aquaponics. European Aquaculture 2025. September 22 – 25. Valencia. Spain.
7. Kirchem, S., Franklin, A., and **Huertas, M.** (2025). Probiotics avoid the effects of nitrogenous waste on catfish in aquaculture: relevance of fish kidney in the fight against bacterial infection. Undergraduate Research Expo TXST. April 25th. San Marcos, Texas.
8. Smallwood, A., Franklin, A., and **Huertas, M.** (2025). Effects of chronic nitrite exposure and probiotic supplementation on the morphology of the spleen and head kidney of channel catfish (*Ictalurus punctatus).* Undergraduate Research Expo TXST. April 25th. San Marcos, Texas.
9. Smith, K., Franklin, A., and **Huertas, M.** (2025). Probiotics reduce nitrite toxicity in the gut and liver of channel catfish. Undergraduate Research Expo TXST. April 25th. San Marcos, Texas.

10. Franklin, A., Restrepo, N., Carlos-Shanley, C. and **Huertas, M.** (2023). Bacteria and nitrite change the smelling ability of catfish. 2023 TXST Stem Conference. March 24th. San Marcos, Texas.

11. Ortiz, W., Tran, A. and **Huertas, M.** (2023). The dynamics of ammonia excretion of green swordtails (*Xiphophorus hellerii*) in an aquaponics environment. 2023 TXST Stem Conference. March 24th. San Marcos, Texas.

12. Singha, C., Andersen, L. K., Clark, R.W., Reading, B. J. and **Huertas, M.** (2023). Striped bass (*Morone saxatilis*) possess olfactory sensitivity to conspecific chemicals during reproduction. 2023 TXST Stem Conference. March 24th. San Marcos, Texas.

13. Restrepo, N., Franklin, A., **Huertas, M.** and Carlos-Shanley, C. (2023). Characterization of microbiome-derived probiotics used for disease mitigation in channel catfish. 2023 TXST Stem Conference. March 24th. San Marcos, Texas.

14. Torres, C.D., Renner, O.J., Asiabanpour, B., Chowdhury, H., Wagner, N. and **Huertas, M.** (2023). Experimental growth of halophytes in secondary farming. 2023 TXST Stem Conference. March 24th. San Marcos, Texas.

15. Franklin, A., Ortiz, W., Matthews, M., Prangnell, D., Carlos-Shanley, C. and **Huertas, M.** (2023). The impact of nitrite and *Edwardsiella ictaluri* on channel catfish (*Ictalurus punctatus*) nose morphology. SICB 2023. January 3-7th, Austin, US.

16. Hughes, H and **Huertas, M.** (2023). Effects of Chronic Nitrite Exposure on Gonad and Embryo Morphology in *Xiphophorus couchianus*. SICB 2023. January 3-7th, Austin, US.

17. Franklin, A., Ortiz, W., Matthews, M., Prangnell, D., **Huertas, M.** and Carlos-Shanley, C. Development of nasal probiotics for pathogen, *Edwardsiella ictaluri*. Aquaculture America 2023. February 23-26th. New Orleans, US.

18. Wheat, E., Ortiz, W., and **Huertas, M.** (2022). Effect of black fly larva diet supplement on goldfish (*Carassius auratus*) reproduction in an aquaponics system. Experimental Biology meeting 2022. April 2-5th, Philadelphia, Pennsylvania, US.

19. Hughes, H., and **Huertas, M**. (2022). Morphological description of olfactory organ changes after acute nitrite exposure in *Xiphophorus couchianus*. April 2-5th, Philadelphia, Pennsylvania, US.

20. Franklin, A., Ortiz, W., Matthews, M., Prangnell, D., Carlos-Shanley, C., and **Huertas, M.** (2022). Chronic exposure to sublethal concentrations of aquatic nitrite change nose and gut morphology and associated microbiomes in channel catfish. April 2-5th, Philadelphia, Pennsylvania, US.

21. Billah, M.M., Mancha, F., Ellis, L., and **Huertas, M.** (2022). Neurosteroid role in the integration of olfactory immune responses in rainbow trout (*Oncorhynchus mykiss*). April 2-5th, Philadelphia, Pennsylvania, US.

22. Hughes, H. M., Amjad, I., Smith, S., Wheat, E., Akanda, M. M. H., Asiabanpour, B., **Huertas Pau, M.**, (2021). Creating, Maintaining, and Automating a Mid-Scale Aquaponic System. Aquaculture America. August. San Antonio, TX, US.

23. Beasley, A. and **Huertas, M.** (2020). Do different classrooms have an effect on student stress? SURE symposium, Texas State University, San Marcos, US, November 2020.

24. Ortiz, W.E., **Huertas, M.** and Carlos-Shanley, C. (2019). Characterization of the goldfish (*Carassius auratus*) nasal, gut, and gill microbiomes. S Texas branch - American Society of Microbiology. November 8th. San Antonio, TX, US.

25. Oyejide, K. and **Huertas, M.** (2019). Can learning environments have impact in student stress? SURE symposium, Texas State University, San Marcos, US, August 2019.

26. Scott, A.E., Calton, S., **Huertas, M.**, Lindsay, C. and Huffman, D.G. (2019). Hematological indicators of physiological stress as a result of parasitism in blacktail shiner, and conservation implications of invasive trematodes in Texas spring systems. Joint Annual Conference of the American Fisheries Society and the Wildlife Society. October. Reno, NV, US.

27. Melody, M., **and Huertas, M.** Nitrite disruption in olfaction and internal physiology in goldfish (*Carassius auratus*). (2019). Experimental Biology meeting 2019. April 6-9th, Orlando, Florida, US.

28. Bristow, M. **and Huertas, M.** Conspecific chemical cues modulate reproductive physiology and behavior in a live-bearing fish. (2019). Experimental Biology meeting 2019. April 6-9th, Orlando, Florida, US.

29. Mancha, F., Salinas, I., **and Huertas, M.** Neural circuits and olfactory responses to neurotropic viruses in trout. (2019). Experimental Biology meeting 2019. April 6-9th, Orlando, Florida, US.

30. Stoeber, H. **and Huertas, M.** Effects of polystyrene nanoplastics on goldfish olfactory function. (2019). Experimental Biology meeting 2019. April 6-9th, Orlando, Florida, US.

31. Valdez-Oranday, D**.,** Melody, M., Stoeber, H., **and Huertas, M.** (2019). Biomarkers of neurodegeneration in goldfish exposed to nitrite. Experimental Biology meeting 2019. April 6-9th, Orlando, Florida, US.

32. Nair, P., **Huertas, M**. and Nowlin, W (2019). Metabolic responses to long-term food deprivation in subterranean and surface amphipods. Society for Freshwater Science, 19-23rd May, Salt Lake City, Utah, US.

33. Bristow, M., C. Gabor and **M. Huertas**. Conspecific chemical cues modulate reproductive physiology and behavior in a live-bearing fish. SICB, 3th-7th January, 2019, Tampa, Florida.

34. Valdez-Oranday, D., M. Martinez and **M. Huertas.** Nitrite is an Olfactory Disruptor in Goldfish *(Carassius auratus).* SURE symposium, Texas State University, San Marcos, US, August 2018.

35. Bristow, M., B. Jaime, C. Gabor and **M. Huertas.** Chemical communication modulates reproduction in the sailfin molly. ISRPF 2018, 4th-9th June, Manaus, Brazil.

36. Martinez, M. and **M. Huertas**. Effects of nitrite in goldfish (Carassius auratus) olfactory function. Experimental biology meeting April 21–25, 2018 - San Diego, California.

37. Jaime, I., D. I. Prangnell, M. D. Matthews and M. Huertas. Effects of maternal stress on striped bass (*Morone saxatilis*) larvae malformations. WISE symposium, Texas State University, San Marcos, US, March 2018.

38. Bristow, M., C. Gabor and **M. Huertas**, Joint meeting of ichthyologists and herpetologists, "A characterization of sex pheromone response in *Poecilia latipinna*," JMIH, Renaissance, July 12, 2017, Austin, TX, United States.

39. Scott, A**., M. Huertas**, N. Liu, S. Gunturu, S. Raschka, L. A. Kuhn, and W. Li. Identification of pheromone receptor antagonists for invasive sea lamprey control'. International Congress on the Biology of Fish, Heriot-Watt University, UK, 3-7 August, 2014.

40. Raschka, S., N. Liu, S. Gunturu, A.M. Scott, **M. Huertas**, W. Li and L.A. Kuhn. A Hypothesis-Driven Virtual Screening Methodology for Structure-Based Inhibitor Discovery. Quantitative Biology Symposium, Michigan State University, East Lansing, August 18, 2014.
41. **Huertas, M**., T. Buchinger, W. Li, and N.J. Johnson. Olfactory sensitivity to pheromone 3-ketopetromyzonol sulfate and bile acids in several lamprey species. Neuroscience 2013, Nov 9-13th, San Diego, CA, USA.
42. Scott, A., **M. Huertas**, N. Liu, S. Gunturu, L. Kuhn, and W. Li. Development of pheromone antagonists for sea lamprey control. Neuroscience 2013, Nov 9-13th, San Diego, CA, USA.
43. Churcher, A.M., P.C. Hubbard, A.V.M. Canário and **M. Huertas** (2013) Differential gene expression in the olfactory epithelium of the European eel *Anguilla anguilla*. XIV European Society for Evolutionary Biology meeting. 19th -24th August, Lisbon, Portugal.
44. Gunturu, S., A. Scott, **M. Huertas**, W. Li, and L. Kuhn (2013). Discovery of 3kPZS Antagonists for Sea Lamprey Control. Biochemistry and Molecular Biology Undergraduate Poster Session, April 19, 2013 in Michigan State University. East Lansing, US. S.
    ***S. Gunturo winner of Michigan society of toxicology poster prize.**
45. Churcher, A.M., W. Li, S. Libants, A. Coppe, L. Zane, A.V.M. Canário and **M. Huertas** (2012). Characterization of chemosensory receptors in the olfactory epithelium of the European eel *Anguilla anguilla*. Society of Experimental Biology meeting 2012, Salzburg, Austria. June 29th- July 2nd.
46. Santos, S.G., P.C. Hubbard and **M. Huertas**. (2012). Changes in olfactory epithelial structure according to physiological state in European eel (*Anguilla Anguilla*). Society of Experimental Biology meeting 2012, Salzburg, Austria. June 29th- July 2nd.
47. Santos, S.G., P.C. Hubbard and **M. Huertas** (2011). Changes in olfactory epithelial structure according to physiological state in European eel (*Anguilla anguilla*). Workshop: Bioactive Water Borne Chemicals: Pheromones and Welfare Indicators in Fish, Faro, Portugal.
48. **Huertas, M**., P.C. Hubbard and A.V.M. Canário (2011). Steroidogenesis dynamics during maturation in the male European eel. 8th International Symposium on Reproductive Physiology of Fish, Kochin, India.
49. **Huertas, M**., D. Pereira, S. Silva, A.V. M. Canário and P.C. Hubbard (2011). Anosmia impairs reproduction in the Mozambique tilapia. 8th International Symposium on Reproductive Physiology of Fish, Kochin, India.
50. **Huertas, M**., A.V.M. Canário and P.C. Hubbard (2010). Olfactory sensitivity to Ca^{2+} and Na^{+} in the European eel (*Anguilla anguilla*). *ECRO 2010* (European Chemoreception Research Organization). Avignon. France.
51. **Huertas, M**. and Weiming Li (2009). Is there a steroid binding protein system in the sea lamprey? 16th International Congress of Comparative Endocrinology 2009. Hong Kong. China.
52. **Huertas, M**., P.C. Hubbard and A.V.M. Canário (2009). Novel sex steroid production in testicular tissue of the European eel (*Anguilla anguilla*, L.). 16th

International Congress of Comparative Endocrinology 2009. Hong Kong. China.

53. Huertas, M., A.V.M. Canário and P.C. Hubbard (2008). Changes in olfactory sensitivity during the European eel (A*nguilla anguilla*) life cycle**.** *XV International symposium on olfaction and taste*. San Francisco, USA.

54. Pereira, D., **M. Huertas**, P.C. Hubbard, A.V.M. Canário (2008). Efeito da anosmia na endocrinologia de machos de tilápia moçambicana (*Oreochromis mossambicus,* Peters). Universidade do Algarve student congress. Faro. Portugal.***Best student poster award of biology society to Diana Pereira.**

55. Huertas, M., J. Cerdá (2007). Stocking density at early developmental stages affects growth and sex ratio in the European eel (*Anguilla anguilla*). 8th International Symposium on Reproductive Physiology of Fish, Saint-Malo, France.

56. Huertas, M., J. Cerdá, A.V.M Canário and P.C. Hubbard (2006). A role for bile acids in inter-specific communication in teleosts? VIIth International Congress of the Biology of Fish, Newfoundland, Canada.

57. Huertas, M., P.C. Hubbard, A.P. Scott, A.V.M. Canário and J. Cerdà (2005). Evidence for involvement of chemical communication in reproduction of the eel *Anguilla anguilla*. Annual Main Meeting of the Society for Experimental Biology, Barcelona, Spain.

58. Huertas, M., A.P. Scott and J. Cerdà (2004). Partial characterization of a plasma steroid binding protein in the European eel (A*nguilla anguilla*). 5th International Symposium on Fish Endocrinology, Castellón, Spain.

59. Huertas, M., A.P. Scott and J. Cerdà (2004). Evidence for the existence of a male-secreted pheromone that stimulates gonad maturation in the European eel. 5th International Symposium on Fish Endocrinology, Castellón, Spain.

60. Calderer, A. Rodríguez, M. Huertas, L. Cardona and F. Castelló (2003). Evaluación del impacto ambiental del cultivo intensivo de dorada (*Sparus aurata*) en jaulas flotantes en el litoral catalán. IXº Congreso Nacional de Acuicultura, Cádiz, Spain.

61. Huertas, M., F. Castelló-Orvay and J. Cerdà (2003). Análisis del crecimiento y la composición bioquímica de la angula (*Anguilla anguilla*) durante el proceso de metamorfosis en condiciones intensivas de cultivo. IXº Congreso Nacional de Acuicultura, Cádiz, Spain.

62. Huertas, M., J. Cerdà and F. Castelló-Orvay (2002). Determination of a critical period for dietary changes during the early growth of glass eels (*Anguilla anguilla*). Aquaculture Europe 2002: Seafarming: today and tomorrow, Trieste, Italy.***First award of European aquaculture society to M. Huertas.**

63. Huertas, M., J. Cerdà, A. Estévez y F. Castelló-Orvay (2001). Estudio del crecimiento de la angula (*Anguilla anguilla*) bajo diferentes condiciones de temperatura, salinidad y dieta: resultados preliminares. VIIIº Congreso Nacional de Acuicultura, Santander, Spain.

64. Rodríguez, **Huertas, M.**, E. Gisbert, Rodríguez, A. y F. Castelló-Orvay (2001). Efecto del ayuno sobre juveniles de esturión siberiano (*Acipenser baer*i). VIIIº Congreso Nacional de Acuicultura, Santander, Spain.

65. **Huertas, M**., E. Gisbert, A. Rodríguez, L. Cardona y F. Castelló-Orvay (2001). Aproximación a la toxicocinética y toxicodinámica de una exposición aguda de nitritos en individuos de esturión siberiano *(Acipenser baeri)*. VIIIº Congreso Nacional de Acuicultura, Santander, Spain.
66. **Huertas, M**., E. Gisbert, L. Cardona, A. Rodriguez y F. Castelló-Orvay (1999). Determinación de la LC_{50} de nitritos en juveniles de esturión siberiano *(Acipenser baeri*): Evolución de parámetros sanguíneos. VIIº Congreso Nacional de Acuicultura, Canarias, Spain.
67. **Huertas, M**., E. Gisbert, L. Cardona, A. Rodriguez and F. Castelló-Orvay. Acute toxicity of nitrite to Siberian sturgeon (*Acipenser baer*i) -preliminary results (1998). Aquaculture Europe 1998, Bordeaux, France.

2. Invited Talks, Lectures, and Presentations (41)

1. **Huertas, M. (2025)**. A New Tale About Environmental Pollution: Water-Borne Nitrite Effects in the Chemical Senses of Fish. Neuroethology: Behavior, Evolution and Neurobiology Gordon Research Conference. June 29th-July 4th, Lucca, Italy.
2. **Huertas, M. (2025)**. Double-edged sword effects of agricultural-derived nitrite and nitrate in fish chemical senses. Neurobiology in Changing Environment Conference. Kavli/Allen Institute. April 14-16th, Seattle, Washington.
3. **Huertas, M. (2025)**. We are grasped by what we cannot grasp: the hidden physiological effects of long-term exposure to nitrites in finfish. Aquaculture America. March 6-10th, New Orleans, Texas.
4. Hughes, H., Fuess, L., Gabor, C. and **Huertas, M**. (2024). *Xiphophorus couchianus* as a model to study the effects of water-borne nitrite ingestion during pregnancy. Aquatic Models for Human Disease Conference 2024. October 5-9th, San Antonio.
5. **Huertas, M.** (2024). The double-edged sword effects of nitrite, nitrate, and agricultural pollution in fish. Seminars at the Department of Biology. Texas State, September.
6. Billah, M. and **Huertas, M**. (2024). Olfactory responses to bacteria activate distinct neurosteroidogenic pathways in rainbow trout brain. International Symposium Fish Endocrinology 2024. September 15-19th. Baltimore, Maryland.
7. Wheat, E. (presenter), Shultz, R., Bahram, A. and **Huertas, M.** (2024). Perilous peroxide: investigating the impact of hydrogen peroxide on aquaponic systems. Aquaponics Association. September 12-15th, Dallas, Texas.
8. **Huertas, M**. (2024). A new tale about environmental pollution: Water-borne nitrite effects in the chemical senses of aquatic vertebrates. Kavli Institute seminar. April 2024, Trondheim, Norway.

9. Chandan, C. S. S., Andersen, L. K., Clark, R. W., Reading, B.J. and **Huertas, M**. (2024). Olfactory sensitivity to conspecific odors released by striped bass (*Morone saxatilis*) during reproduction. Aquaculture America. February 18-21st, San Antonio, Texas.

10. **Huertas, M.** Franklin, A., Restrepo, N., Ortiz, W., Matthews, M., Prangnell, D., Carlos-Shanley, C. (2024). Development of nasal and gut probiotics to protect intensive catfish culture against Edwardsiella ictaluri infections. Aquaculture America. February 18-21st, San Antonio, Texas.

11. **Huertas, M.** (2024). Do fish have nose? Covid, infections, pollutants, and other horror stories. University of Insubria. February.

12. Billah, M.M. (presenter), Grizzaffi, M. and **Huertas, M.** (2023). Neuromodulation of Olfactory Immune Responses In Rainbow Trout (*OncorhynchusMykiss*). SICB 2023. January 3-7th, Austin, US.
13. Chandan, C. S. S., Andersen, L. K., Clark, R. W., Reading, B.J. and **Huertas, M.** (presenter). (2023). Olfactory sensitivity to conspecific odors released by striped bass (*Morone saxatilis*) during reproduction. 12th International Symposium on Reproductive Physiology of Fish, 15-19 May, Crete, Greece.
14. **Huertas, M.** (2022). When the nose fails: a tale of anthropogenic pollution. International Symposium of fish Biology. Montpellier, France.
15. Franklin, A. (presenter), Ortiz, W., Matthews, M., Prangnell, D., Carlos-Shanley, C. and **Huertas, M.** (2022). Nitrite induces changes in the channel catfish nose and gut microbiome WAS 2022 San Diego, CA, US.
16. Ortiz, W.E. (presenter), **Huertas, M.** and Carlos-Shanley, C. (2021). The impacts of sublethal nitrite exposure on goldfish microbiomes. Aquaculture America. August. San Antonio, TX, US.
17. **Huertas, M.**, Conkle, J. and Sayes, CM. (2021)**.** Effects of microplastics in olfactory function of Texas bass species**.** 2021 Texas Plastic Pollution Symposium.
18. **Huertas, M.**, Martinez, M., Valdez-Oranday, D., and Stoeber, H. (2019). Environmental nitrite disrupts goldfish olfaction. Society of Experimental Biology. Sevilla, Spain. June 5th-10th.
19. Prangnell, D. (presenter), Matthews, M., Jaime, B. and **Huertas, M.** (2019). The impact of maternal stress on *Micropterus* spp. Biochemistry and fry performance. Aquaculture 2019. .March 7-10th. New Orleans, US.
20. **Huertas, M.** (2018). Fish nose as a biosensor for chemical signals, olfactory disruptors and pathogens. September 24th. Department of Chemistry and Biochemistry. Texas State University, US.
21. **Huertas, M**., M. Martinez, A. Sepahi and I. Salinas. (2018). Olfactory sense as a portal of nerve disruptors and pathogens. 13th International Congress on the Biology of Fish, Calgary, Canada. July 15-19th.
22. **Huertas, M**. and W. Li (2016). The irresistible smell: applications of electrophysiology in lamprey pheromone research. 12th International Congress on the Biology of Fish, San Marcos, US. June 12-16th.
23. **Huertas, M.** (2016). Love at first sniff: Pheromones and other smelly stories. Department of Biology. Texas State University, US.

24. **Huertas, M.** (2015). Love at first sniff: the alluring world of lamprey pheromones. Department of Biology. University New Mexico, US.
25. **Huertas, M**., S. Pace, H. Wang, U. Bussy and W. Li. (2014)**.** Evidence for a lack of high affinity steroid binding protein in the sea lamprey. 10th International Symposium on Reproductive Physiology of Fish, Olhão, Portugal. 25-30th May 2014.
26. Kuhn, L.A. (presenter), N. Liu, A. Scott, S. Gunturu, S. Raschka, **M. Huertas**, and W. Li. (2014) "Screening and Identifying Pheromone Receptor Antagonists for Invasive Species Control", talk for ACS Division of Environmental Chemistry Session: Great Lakes Restoration Initiative: An Environmental Chemistry Challenge", 248th ACS National Meeting and Exposition San Francisco, CA, August 10-14th, 2014.
27. Churcher, A.M. (presenter), P.C. Hubbard, **M. Huertas** and A.V.M. Canario. (2014) Differential gene expression in the olfactory epithelium of *Anguilla anguilla*. *Eel genome meeting 2014*, 16-17th January Amsterdam, Netherlands.
28. **Huertas, M.** (2013). The amazing life cycle of the European eel". Biological Sciences Department. University of Windsor, Canada.
29. **Huertas, M**., Canario, A.V.M. and Hubbard, P.C. (2012). Olfactory transduction in fish: do fish smell the same way as mammals? Society of Experimental Biology meeting 2012, Salzburg, Austria. June 29th- July 2nd.
30. **Huertas, M**., Canario, A.V.M. and Hubbard, P.C. (2012). Is olfaction an osmoregulatory sense in European eel? 10th International Congress on the Biology of Fish, Madison, US. July 15th-19th.
31. **Huertas, M**., Almeida, O.G.**,** A.V.M. Canário and P.C. Hubbard (2011). Male tilapia urinary pheromone induces endocrine sex responses in conspecific females. Workshop: Bioactive Water Borne Chemicals: Pheromones and Welfare Indicators in Fish, Faro, Portugal.
32. Hubbard, P.C. (presenter), **M. Huertas** and Adelino V.M. Canário (2011). Olfactory sensitivity to inorganic cations in fish: possible mechanism. Workshop: Bioactive Water Borne Chemicals: Pheromones and Welfare Indicators in Fish, Faro, Portugal.
33. Hubbard P.C. (presenter), **M. Huertas**, O.G. Almeida and A.V.M. Canário(2011). Male tilapia urinary pheromone induces endocrine sex responses in conspecifics females. 9th International Symposium on Reproductive Physiology of Fish, Cochin, India.
34. **Huertas, M**., A.V.M. Canário and P.C. Hubbard (2011). Sniffing the aquatic media: Is olfactory sensitivity to Ca^{2+} and Na^{+} related to osmoregulation in the eel? Society of Experimental Biology 2011. Glasgow. Scotland.
35. **Huertas, M**., A.V.M. Canário and P.C. Hubbard (2009). Follow your nose: Chemical communication throughout the European eel (*Anguilla anguilla,* L.) life-cycle. Society of Experimental Biology 2009. Glasgow. Scotland.
36. **Huertas, M**., (2009) Reproduction in eel: The example of an amazing life cycle. *Seminarios do CCMAR*. Faro 2009. Portugal.
37. **Huertas, M**., A.V.M. Canário and P.C. Hubbard (2008). Changes in olfactory sensitivity during the European eel (A*nguilla anguilla*) life cycle**.** Aquaculture Europe 2008. Krakow, Poland.

38. **Huertas, M**., I. Morgado, J. Cerda, A.P. Scott and D.M. Power (2007). Characterization of sex steroid binding systems in eel plasma. Special EAS Thematic Group Workshop on European Eel Reproduction, Istanbul, Turkey.
39. **Huertas, M**., J. Cerda, A.P. Scott, A.V.M. Canario and P.C. Hubbard (2007). Olfaction in the eel: state of the art and future perspectives. Workshop: Bioactive Water Borne Chemicals: Pheromones and Welfare Indicators in Fish, Faro, Portugal.
40. **Huertas, M**., J. Cerda, A.P. Scott, A.V.M. Canario and P.C. Hubbard (2007). Olfaction in the eel: importance to reproduction. Special EAS Thematic Group Workshop on European Eel Reproduction, Istanbul, Turkey.
41. **Huertas, M**., Miranda, J. Cerdá, A.V.M. Canário and P.C. Hubbard (2005). Olfactory sensitivity to bile fluids and bile acids in teleost: a comparative study. V Congresso Associação Ibérica de Endocrinologia Comparativa, Faro, Portugal.

3. International researchers hosted (3)

Dr Ana Gomes. University of Bergen. Portugal. June to August 2018.
Dr Peter Hubbard. University of Algarve. Portugal. June to July 2018.
Dr Elena Bossy. University of Insubria. March to April 2025.

4. Other media

Web content

1. YouTube Allan Institute. Mar Huertas | Neurobiology in Changing Environments. Apr 30, 2025. https://www.youtube.com/watch?v=SmwHQazKyWo.
2. Kavli Foundation newspaper. How Global Change Tests the Limits of Neural Systems Jun 04, 2024. https://www.kavlifoundation.org/news/how-global-change-tests-the-limits-of-neural-systems.
3. Web content. Dal Texas a Varese per studiare l'olfatto dei pesci: storie quotidiane di internazionalizzazione tra sedi e laboratori dell'ateneo February 2024 University of Insubria paper 2023. https://www.uninsubria.it/ateneo/ci-presentiamo/comunicazione/tutte-le-notizie/dal-texas-varese-studiare-lolfatto-dei-pesci.

C. Grants and Contracts

1. Funded and submitted External Research Grants

2025 ***NOOA.*** *NOAA-OAR-CIPO-2025-31269.* The Cooperative Institute Fostering Aquaculture Research and Marketing (CIFARM). Principal Investigator, Dr. Willis PS, and several co-Principal Investigators and senior personnel: Dr. Mar Huertas. Amount requested $40,000,000 (Huertas Lab $400,000).

2025 ***U.S. Department of Agriculture.*** *USDA-NIFA-AFRI-011134.* Characterizing sex pheromones in striped bass to enhance aquaculture practices. Principal Investigator Dr. Mar Huertas and co-Principal Investigators Dr. Benjamin Reading. Amount requested $649,937.

2024 ***NIH.*** Texas Doctoral Bridges Program. Principal Investigator Dr. Steven Whitten, several co-Pi, preceptors Dr. Mar Huertas, and 40 other researchers/professors. Amount funded (September 2024) $3,399,683. One master's student fellowship in Huertas lab ($30000/year).

2024 ***NIH.*** *Support for Research Excellence (SuRE) Program* (*R16).* Maternal transfer factors and offspring development defects induced by nitrite. Principal Investigator Dr. Mar Huertas. Amount funded (May 2024) $592,844.

2023 ***U.S. Department of Agriculture.*** *USDA-NIFA-AFRI-009003.* SEED: Exploring novel fish cultures for small and midscale aquaponics systems. Principal Investigator Dr. Mar Huertas and co-Principal Investigators Dr. Bahram Asiabanpour. Amount funded $268,217.

2022 ***North Carolina Sea Grant***. Sex pheromones in striped bass, Principal Investigator Dr. Mar Huertas. Amount funded $9,324.

2022 ***National Science Foundation***. EAGER: Environmental nitrite is a nitric oxide donor that modulates fish olfactory function. Principal Investigator Dr. Mar Huertas. Amount funded $298,134

2021 ***U.S. Department of Agriculture.*** *USDA-NIFA-SRGP-007192.* Development of nasal and gut probiotic to protect intensive catfish culture against *edwardsiella ictaluri* infections. Principal Investigator Dr. Mar Huertas and co-Principal Investigator Dr. Carlos-Shanley. Amount funded $286,667.

2020 ***U.S. Department of Agriculture.*** Bluewater: a smart circular economy for integrated organic hydroponic-aquaponic farming to empower an underrepresented workforce. Co-Principal Investigator Dr. Mar Huertas and Dr. Nicole Wagner, Principal investigator Dr. Bahram Asiabanpour. Amount funded $250000.

2018 ***National Science Foundation***. A portal into the brain: olfactory crypt neurons modulate brain viral immunity in teleost, National Science Foundation, Federal. Co-Principal Investigator Dr. Mar Huertas, Principal investigator Dr. Irene Salinas. Amount funded $625,000.

2014 ***Great Lakes Fisheries Commission Project***, program of research for 2015. Project “Structure and function of sea lamprey pheromone components (Phase II)”. Co-Principal Investigator Dr. Mar Huertas and Dr. Ke Li, Principal investigator Dr Weiming Li. Amount funded $327,082.

2012 ***Great Lakes Fisheries Commission Project***, ***Technical assistance proposal.*** Technical Assistance to Support EOG Experiments for Development of Additional Sea Lamprey Control Agents. Principal investigator Dr. Weiming Li, Senior Research Associate Dr. Mar Huertas. Amount funded $224,227.

2009 ***Fundação para a Ciência e a Tecnologia*** (FCT), Portugal, national call for research and development. PTDC/MAR/113608/2009 Characterization of olfactory plasticity in the European eel (from February 2011 to February 2014). Principal Investigator Dr. Mar Huertas. Amount funded €140,052.

2008 ***Technology platform consumables grant at Max Planck Institute, Germany***. Marine Genomics Europe Technology Platforms: Sequencing of normalized library from European eel olfactory epithelia from several reproductive stages. Principal Investigator Dr. Mar Huertas. Amount funded €5,750.

2. Submitted but not Funded External Grants and Contracts

2025 ***NIH.*** R01. Leveraging an evolutionary cancer model to delineate cancer inhibitory mechanisms. Principal Investigator Dr. Yuan Lu, co-Pi: Dr Manfred and Dr. Mar Huertas. *Amount requested* (February 2025) $3,560,326.

2023 ***National Science Foundation.*** MRI: Track 2 Acquisition of State-of-the-Art Scanning Electron Microscope for Research and Education. PI: Dr. Marck Holtz; co-Pi: Haque, Ariful, Miyahara, Yoichi, Rhodes, Christopher, Betancourt, Tania, Senior Researcher: Dr. Mar Huertas. *Amount requested* (November 2023) $1,750,073.

2023 ***Southern SARE Graduate Student Grant program***. Optimization of nasal vaccines for rainbow trout (Oncorhynchus mykiss) aquaculture. Pi: Dr. Mar Huertas and co-Pi: Maruf Billah, Amount requested: $16,426.

2023 ***Southern SARE Graduate Student Grant program***. dentification of striped bass pheromones for population management and aquaculture. Pi: Dr. Mar Huertas and co-Pi: Chironjib Shing Samanta Chandan, Amount requested: $16,500.

2022 ***NIH.*** Texas Doctoral Bridge Program. Sex pheromones in striped bass, 23 co-investigators, co-Principal Investigator Dr. Mar Huertas. Amount requested $3,158,966.

2021 ***National Science Foundation***. CAREER: Environmental nitrite is a nitric oxide donor that modulates fish olfactory function. Principal Investigator Dr. Mar Huertas. Amount requested $981,890

2021 ***U.S. Department of Agriculture. USDA-NIFA-AFRI***. Characterizing the endocrine-immunity maternal factor transfer across bass species after handling stress. Principal Investigator Dr. Mar Huertas. Amount requested $616,968.

2021 ***Sea Grant Texas.*** BASSNOSMIC: Effects of sub lethal nitrite exposure in bass species olfaction. Principal Investigator Dr. Laura V Ellis and co-Principal Investigator Dr. Mar Huertas. Amount requested $237,595.

2020 ***National Science Foundation***. CAREER: Environmental nitrite is a nitric oxide donor that modulates fish olfactory function. Principal Investigator Dr. Mar Huertas. Amount requested $1,175,451.

2020 ***WiSTEM2D Scholars Award Program***. IMMUNOSMIC: Unraveling the integration of olfactory-immune function and associated anosmia. Principal Investigator Dr. Mar Huertas. Amount requested $150,000.

2020 ***Pollaris Microscope***, Leica Microsystems.

2020 ***USDA-NIFA-EGP- 10.519.*** Acquisition of a beta-counter and luminometer MicroBeta2 LumiJET for the efficient establishment of advanced physiological studies in animals and plants., Principal Investigator Dr. Mar Huertas, Asiabanpour, Bahram (Co-Principal), Carlos-Shanley, Camila (Co-Principal), Fritts, Sarah R. (Co-Principal), Dutton, Jessica (Co-Principal), Gabor, Caitlin (Co-Principal), Garcia, Dana M. (Co-Principal), Kang, Hong Gu (Co-Principal), Lewis, Karen A. (Co-Principal), McLean, Robert J. C. (Co-Principal), Nowlin, Weston H. (Co-Principal). Amount requested: $125,910.00.

2020 ***U.S. Department of Agriculture***. Corredores: a national thesis competition leading towards career opportunities in the USDA. Co-Principal Investigator Dr. Mar Huertas, Principal investigator Dr. Dana Garcia. Amount requested $275,000.

2019 ***Texas Parks and Wildlife Department.*** Impact of environmental contaminants on unionid mussels in the Rio Grande. Principal Investigator: Dutton, J. Co-Principal Investigators: Conkle, J., Huertas, M., Schwalb, A.N. Amount requested: $147,344.

2023 ***Kavli Institute.*** *Neurobiology and Changing Ecosystems.* Effect of environmental nitrite in the sense of smell. Principal Investigator Dr. Mar Huertas. *Letter of intent. Amount requested* $1,200,000.

2019 ***USDA NIFA Program***. Development of nasal probiotic to protect catfish against *Edwarsiella ictaluri* infections. Principal Investigator: Carlos-Shanley, C. Co-Principal Investigator: Huertas, M. Amount requested: $175,615.00.

2019 ***Spencer Foundation Grants.*** Student hormonal stress responses in two learning environments. Principal Investigator: Daniel, K. L. (Principal), Co-Principal Investigator: Huertas, M. Amount requested: $49,809.

2017 ***Strategic Environmental Research and Development***. limited scope proposal: monitoring and remediating contaminated sediments using recyclable magnetic-supported cucurbiturils**.** Program. Principal Investigator Dr. Mar Huertas. Co-Principal Investigator: Dr. Jessica Dutton, Dr. Weston Nowlin, Dr. Lyle d. Isaacs. Amount requested $199,800.

2017 ***PIRE-National Science Foundation:*** Multifaceted approach to understanding the effects of landscape conversion on fish communities with focus on live-bearing fish in Mexico and the USA. Co-Principal Investigator Dr. Andrea Aspbury, Dr. Mar Huertas, Dr. Tim Bonner, Dr. Jeremy Conkle, Dr. Principal Investigator Dr. Caitlin Gabor. Amount requested $4,000,000.

2016 ***MIR-NSF***: Letter of intent. Major Research Instrumentation Program: Acquisition of multiphoton imaging capability at Texas State University San Marcos. Principal Investigator Dr. Mar Huertas. Amount requested $864,810.

2016 ***National Science Foundation***. Full proposal. Neuroimmune responses triggered by olfactory detection of pathogens in vertebrates. Co-Principal Investigator Dr. Mar Huertas, Principal Investigator Dr. Irene Salinas Amount requested $772,035.

3. Funded Internal Grants and Contracts

2023 ***Texas State University***, Run to R1 postdoctoral program. Principal investigator: Dr. Mar Huertas. Amount funded $100,000.

2022 ***Texas State University***, FY22 Research Enhancement Program Awards. Project: Spatial imaging of the olfactory-immune axis in vertebrates. Principal investigator: Dr. Mar Huertas. Amount funded $8,000

2022 ***Texas State University***, MARK: Acquisition of tissue processing and embedding machines to produce fixed-paraffin-embedded blocks of biological tissues. Principal investigator: Dr. Mar Huertas, co-PIs: Dr. Yuan Lu, Dr Lauren Fuess, Dr. Ryan Peterson, Dr. Gar Yee Koh, Dr Dana Garcia. Amount funded $52500.

2021 ***Texas State University***, FY21 ORSP Research Accelerator Awards. Project: Effects of aquatic nitrite on maternal immune transfer and offspring development in a live-bearing species. Principal investigator: Dr. Mar Huertas, co-PI: Dr. Lauren Fuess and Dr. Caitlin Gabor. Amount funded $16,487.

2017 ***Texas State University***, FY17 Research Enhancement Program Awards. Project: Characterization of sex pheromone response in sailfin mollies. Principal

investigator: Dr. Mar Huertas, co-PI: Dr. Caitlin Gabor. Amount funded: $16,000

4. Not funded Internal Grants and Contracts

2026 ***Texas State University***, FY26 ORSP Research Accelerator Awards. Project: Research Enhancement Program Awards. Project: The role of bee pollen supplementation in goat lactation and offspring viability. Principal investigator: Rosales-Nieto co-PI: Dr. Huertas Pau, Maria del Mar. Amount requested: $20,000.

2025 ***Texas State University***, FY25 Research Enhancement Program Awards. Project: The role of bee pollen supplementation in goat lactation and offspring viability. Principal investigator: Rosales-Nieto co-PI: Dr. Huertas Pau, Maria del Mar. Amount requested: $20,000.

2023 ***Texas State University***, FY23 Research Enhancement Program Awards. Project: the role of bee pollen supplementation in goat lactation and offspring viability. Principal investigator: Rosales-Nieto co-PI: Dr. Huertas Pau, Maria del Mar. Amount requested: $16,000.

2019 ***International Research Accelerator.*** Huertas Pau, Maria del Mar (Principal), Hubbard, Peter C. (Co-Principal), Texas State University - San Marcos, Texas State University. Amount requested $15,000

2019 ***Multidisciplinary internal research grant.*** Huertas Pau, Maria del Mar (Principal), William (Co-Principal). Texas State University - San Marcos, Texas State University. Amount requested $22,700

2018 ***Texas State University***, FY19 Research Enhancement Program Awards. Project: Student Hormonal Stress Responses in Two Learning Environments. Principal investigator: Daniel, Kristy L., co-PI: Dr. Huertas Pau, Maria del Mar. Amount requested: $16,000.

D. Fellowships, Awards, Honors

2025 ***TXST COSE Research Grant Millionaire Awards.***
2025 ***Sponsored guest at the Allen Foundation and Kavli Institute.***
2024 ***TXST COSE Research Grant Millionaire awards.***
2024 ***Gordon Conference speaker grant.*** ($1100)
2023 ***International Mobility Fellowship***. University of Insubria, Italy ($1700).
2023 ***TXST supplemental funding for developmental leave*** ($20000).
2022 ***Excellence in Scholarly/Creative activities. College of Science and Engineering TXST.***
2021-22 ***NMRN writing NIH projects fellowship.*** NMRN, US.

2020 ***Teaching Award Honor***, Texas State University, US.
2018-21 ***SURE mentor***. June to August. TXST, US.
2018 ***E. Kika de la Garza fellowship***. June 2018 (16 June to July 6). USDA, US.
2014 ***Post-doctoral travelling fellowship*** from the Post-Doctoral Association (PDA) at Michigan State University, US.
2007 ***Journal of Experimental Biology travelling fellowship***, Awards 2007, UK.
2006-12 ***Post-doctoral fellowship*** from Fundaçao para a Ciência e a Tecnologia, Portugal.
2001-05 ***Pre-doctoral fellowship*** from the Instituto Nacional de Investigaciones Agrarias, Spain.
2002 ***Best student poster award*** of European Aquaculture Society, Italy
2000-01 ***Research in practice fellowship*** of the Centre of Reference in Aquaculture contract (Generalitat of Catalunya), Spain

IV. SERVICE

A. Institutional

1. University

- ***SACNAS mentor*** at Texas State University from 2018 to date.
- ***IDEA CENTER mentor*** *and host lab 2024 to date*
- ***Member of TXST IACUC committee 2026.***
- ***2025 LEADING Spanics mentor*** (USDA).
- **2023 TXST STEM conference judge** and **organizer**.
- ***STEM MUSE mentor***. Women undergrad and grad mentorship (UT program 2020 and 2023)
- ***Steminitas mentor.*** K-12 program at TXST 2022 to date.
- ***U-Rise Preceptor.*** NIH undergraduate program at TXST 2021 to 2025.
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- ***Justice, Equity, Diversity and Inclusion committee*** at the Biology Department, Texas State University from 2020 to 2023 (chair in 2021-2022).
- ***Secretary of MSU Postdoctoral association*** from April 2015 to 2016. Michigan State University.

2. Department

- ***2025 Search committee member*** for lab technician at Dr. Peggy Biga's lab.
- ***TXST Biology Department representative*** at SACNAS conference 2025.
- ***Tenure track committee*** for Dr Leila Siciliano-Martina, 2023 to date.
- ***Outstanding AI award.*** *2021 to date*. Texas State University.
- ***Member, Grant committee Schulze Prize***. 2017 to 2024. Texas State University.
- ***Member, Grant Committee Chuck Nash Aquatic Studies*** Prize. 2017 to 2024. Texas State University.

- ***Member, Grant Committee Irene Rogers*** Prize. 2017 to 2024. Texas State University.
- ***Coordinator / Organizer of a speaker for Seminars at the*** Department of Biology at Texas State University (Fall 2016, Spring 2017, Fall 2018, Spring 2023). San Marcos, TX, United States.
- ***Committee evaluation for SURE 2018-21.*** Texas State University
- ***Committee evaluation for WISE posters 2018-20.*** Texas State University
- ***Spanish translator and member committee for SWAN conference*** 2018. Texas State University
- ***Member, Committee 4 PhD Thesis***. (2018-2023). Biology Department. Texas State University.
- ***Member, Committee 17 Master Thesis***. (2017 - 2023). Biology Department. Texas State University.

3. National and International

- **Tenure promotion letter of recommendation** for Dr. Erika Calvo-Ochoa at Hope College.
- American Society of Physiology. ***Comparative and Evolutionary Physiology Section programming committee, 2022 to date.***
- **2025-2026** ***Workshop organizer*** at International Symposium of Biology of fish (Canada 2026)
- **ISFE** ***poster Judge*** **2024**
- **STEM** ***sister's speaker*** (Middle School, San Antonio) 2022-2023
- ***World Aquaculture Society poster judge 2023 and 2024***
- ***American Society of Physiology poster judge 2022-2023***

B. Professional

Reviewer / Referee

Reviewer for NSF GRFP panel (December 2024).

Reviewer for the USDA Agriculture Research Panel (2024 and 2026).

Current reviewer for Journals Fishes, Animals, Comparative Endocrinology, Experimental Biology, Aquaculture, Journal of Fish Biology, American Journal of Aquaculture, Journal of Experimental Biology, Behavioral Ecology and Sociobiology.

Reviewer / Referee for Great Lakes Fisheries Commission, US (2023).

Reviewer / Referee for Natural Sciences and Engineering Research Council of Canada. Canada (years 2019, 2020 and 2023).

Reviewer / Referee for a European PhD Panel, Polytechnic University of Valencia. Valencia, Spain. (November 2016 - January 2017).

Reviewer / Referee for National Grant Proposal, National Argentinian Foundation for Scientific Research and Technology. Argentina. (October 2016 - January 2017).

Organizations of which I am a member

Member of the Histochemical Society since 2022.
Member of the American Aquaculture Society since 2021.
Member of the Aquaponics Association since 2021.
Member of the Society of Environmental Toxicology and Chemistry, 2020-2021.
Member of the American Society of Physiology since 2016.
Member of the Society for Experimental Biology since 2008.

Professional Development

Teaching Development and Training Activities Attended

Continuing Education Program

- E-STOP: research ethics and authorship guidelines. Standford University (2025-2026).
- Program for Excellence in Teaching and Learning, Texas State University (September 1, 2016 - April 27, 2017).
- Certification in College Teaching at Michigan State University Graduate School (2015).
- Certificate of Pedagogic Aptitude. University Polytechnic of Catalunya (UPC), Barcelona, Spain (2000).

- Advanced TRACS for new faculty orientation, Texas State University, San Marcos, TX, United States (January 13, 2017). Workshop.
- "Do your students get it? Find out with student response systems". Texas State University (2016). Workshop

- **Scholarly / Creative Development and Training Activities Attended**

- The Histochemical Society IHC and IF training workshop. Montgomery College. Germantown, Washington, United States (June 8-12, 2022).

- Competing for Funding at the National Science Foundation, Texas State University, San Marcos, TX, United States (January 12, 2017).