

TEXAS STATE VITA

I. ACADEMIC/PROFESSIONAL BACKGROUND

A. Name: **MAR HUERTAS**

Title: **ASSISTANT PROFESSOR**

B. Educational Background

<i>Degree</i>	<i>Year</i>	<i>University</i>	<i>Major</i>	<i>Thesis/Dissertation</i>
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 an acute exposure to environmental nitrite
M.S.	2000	University of Barcelona	Animal Biology	Nitrite toxicity in Siberian sturgeon (<i>Acipenser baeri</i> , 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

<i>Position</i>	<i>Entity</i>	<i>Date</i>
Assistant Professor	Texas State University	8/2016 - present
Adjunct Assistant Professor	University of New Mexico	12/2015 - present
Senior Research Assistant	Michigan State University	2013 - 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

<i>Position</i>	<i>Entity</i>	<i>Date</i>
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

Certificate of training in hazardous waste and Hazard Communication. 2016 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 (Direcção-Geral de Veterinária) 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

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

Advisees Bachelor Thesis (University of Algarve Portugal)

<i>Student</i>	<i>Date</i>	<i>Internship Topic</i>
Catia Santos	2009	Histological changes in gill and kidney in toadfish " <i>Halobatrachus didactylus</i> " (Bloch and Schneider, 1801), exposed to high ammonia concentrations.
Soraia Santos	2010	Non-invasive assesment of sexual maturation stage in European eel (<i>Anguilla anguilla</i>): Analysis of sex steroids in water.
Cláudia Guerreiro	2011	Charazterization of endocrine control in sexual maturation of European eel (<i>Anguilla anguilla</i>).

Intern undergraduate students

Student	Date Internship	Topic
Soraia Santos	2010-2013	Chemical communication in European eel
Samantha Pace	2013-2014	Sea lamprey chemical communication
Michael Connolly	2014-2015	Sea lamprey endocrinology

Advisees to MS degree (University of Algarve)

Student	Date MS	Thesis Title
Diana Brito Costa Pereira	2008	Endocrine and reproductive effect of anosmia in male tilapia <i>Oreochromis mossambicus</i> (Peters, 1852).
Sara Silva	2010	Role of olfaction in the reproductive endocrine control in tilapia <i>Oreochromis mossambicus</i> (Peters, 1852).

D. Courses Prepared and Curriculum Development:

Fish Physiology (BIO 4350V/5424C). Spring 2017. Texas State University, San Marcos.

Applications of Environment and Organismal Biology (ISB 202). Fall 2015. Integrative Studies in General Science program. Michigan State University. Lansing.

E. Other:

Guest Lecturer

Fish Physiology. 2010-2011. University of Algarve.

Endocrinology of Reproduction. 2010-2011. University of Algarve

Teaching Development

Attending program for Excellence in Teaching and Learning, Texas State University 2016-2017
Attended workshop "Do your students get it? Find out with student response systems". Texas State University 2016

Attended "Certification in College Teaching" at Michigan State University Graduate School 2015.

Certificate of Pedagogic Aptitude. 2000. University Polytechnic of Catalunya (UPC), Barcelona, Spain.

III. SCHOLARLY/CREATIVE

Works in Print

Book chapters

1. Power, D.M., P.M.G. Guerreiro, P.C. Hubbard, M. Huertas, I.M. Morgado and J. Fuentes. (2010). Endocrinology applied to aquaculture finfish. In: *Recent advances in*

- aquaculture research* (Koumondouros, G., ed.), pp. 1-54, Transworld Research Network, Kerala.
2. Chung-Davidson, Y.-W., M. Huertas and W. Li. (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.

Refereed Journal Articles

1. Buchinger, T. J., K. Li, **M. Huertas**, C. F. Baker, J. Liang, M. C. Hayes, W. Li, and N. S. Johnson (2016). Evidence for partial overlap of male olfactory cues in lampreys. *Journal of Experimental Biology*. *In press*.
2. Brant, C., **M. Huertas**, K. Li, and W. Li (2016). Mixtures of two bile alcohol sulfates function as a proximity pheromone in sea lamprey. *PLOS one*, **11** (2), e0149508.
3. Sara E. Smith, S. P. Sitar, F. W. Goetz, **M. Huertas**, C. Simchik, B. M. Armstrong, A. Bartholomew, K. Chopra and C. A. Murphy (2016). Differential physiological response to sea lamprey parasitism between lake trout morphotypes (*Salvelinus namaycush*) from Lake Superior. *Canadian Journal of Fisheries and Aquatic sciences*, **73**: 1-15.
4. Bussy, U., **M. Huertas**, Y.-W. Chung-Davidson, K. Li and W. Li (2016). Chemical derivatization of neurosteroids for trace determination in sea lamprey by LC-MS/MS. *Talanta*, **149**: 326-334.
5. Churcher, A.M., J. M. Pujolar, M. Milan, **M. Huertas**, P. C. Hubbard, L. Bargelloni, T. Patarnello, I. AM. Marino, L. Zane and A.V.M. Canário (2015). Transcriptomic profiling of male European eel (*Anguilla anguilla*) livers at sexual maturity. *Comparative Biochemistry and Physiology Part D: Genomics and Proteomics*, **16**: 28-35.
6. Churcher, A.M., P.C. Hubbard, J. Marques, A.V.M. Canário, and **M. Huertas**. (2015). Deep sequencing of the olfactory epithelium reveals specific chemosensory receptors are expressed at sexual maturity in the European eel (*Anguilla anguilla*). *Molecular Ecology*, **24**(4): 822-834
7. Li, K., **M. Huertas**, C.O. Brant, Y.-W. Chung-Davidson, U. Bussy, T.R. Hoye and W. Li. (2015). (+)- and (-)-Petromyroxols: Antipodal tetrahydrofuranediols from larval sea lamprey (*Petromyzon marinus*) that elicit enantioselective olfactory responses. *Chemical letters*, **17**: 286-289
8. Bryan, M.B., Y.-W. Chung-Davidson, J. Ren, S. Bowman, A.P. Scott, **M. Huertas**, M.P. Connolly and W. Li. (2015). Evidence that progesterone plays an important role in spermiation and pheromone production in male sea lamprey (*Petromyzon marinus*). *General and Comparative Endocrinology*, **212**: 17-27.
9. Churcher, A.M., J. M. Pujolar, M. Milan, P. C. Hubbard, R. ST. Martins, J. L. Saraiva, **M. Huertas**, L. Bargelloni, T. Patarnello, I. AM. Marino, L. Zane and A.V.M. Canário. (2014). Changes in the gene expression profiles of the brains of male European eels (*Anguilla anguilla*) during sexual maturation. *BMC Genomics*, **15**:799
10. **Huertas**, M., O.G. Almeida, A.V.M. Canario and P. C. Hubbard. (2014). Tilapia male urinary pheromone stimulates female reproductive axis. *General and Comparative Endocrinology* **196**(15): 106-111.

11. Li K., C.O. Brant, **M. Huertas**, S.K. Hur and W. Li (2013). Petromyzonin, a hexahydrophenanthrene sulfate isolated from the larval sea lamprey (*Petromyzon marinus* L.). *Organic Letters* **15**(23): 5924-5927.
12. Hubbard, P.C., **M. Huertas** and A.V.M. Canario. (2012). The third Faro Workshop Bioactive water borne chemicals. *Behaviour* **149**, 897.
13. **Huertas, M.**, A.V.M. Canário and P.C. Hubbard. (2011). Olfactory sensitivity to Ca²⁺ and Na⁺ in the European eel (*Anguilla anguilla*). *Chemical. Senses* **36** (1), E67-E68.
14. **Huertas, M.**, L. Hagey, A.F. Hofmann, J. Cerdà, A.V.M. Canário and P.C. Hubbard. (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 con-specifics alone. *Journal of Experimental Biology* **213**: 308-317.
15. **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. *Comparative Biochemistry and Physiology A-Molecular and Integrative Physiology* **153A** (2): S90-S90.
16. **Huertas, M.**, A.V.M. Canário and P.C. Hubbard. (2008). Changes in olfactory sensitivity during the European eel (*Anguilla Anguilla*) Life Cycle. *Chemical. Senses* **33**, S150-S150.
17. **Huertas, M.**, A.V.M. Canário and P.C. Hubbard. (2008). Chemical communication in the Genus *Anguilla*: a minireview. *Behaviour* **145** (10): 1389-1407.
18. Scott, A.P., K. Hirschenhauser, N. Bender, R. Oliveira, R.L. Earley, M. Sebire, T. Ellis, M. Pavlidis, P.C. Hubbard, **M. Huertas** and A.V.M. Canario. (2008). Non-invasive measurement of steroids in fish-holding water: important considerations when applying the procedure to behaviour studies. *Behaviour* **145** (10): 1307-1328.
19. **Huertas, M.**, P.C. Hubbard, A.V.M. Canário and J. Cerdà. (2007). Olfactory sensitivity to conspecific bile fluid and skin mucus in the European eel (*Anguilla anguilla*, L.). *Journal of Fish Biology* **70** (6): 1907-1920.
20. **Huertas, M.**, and J. Cerdà. (2006). Stocking density at early developmental stages affects growth and sex ratio in European eel (*Anguilla anguilla*, L.). *Biological Bulletin* **211**: 286-296.
21. **Huertas, M.**, A.P. Scott, P.C. Hubbard, A.V.M. Canário and J. Cerdà. (2006). Sexually mature European eels (*Anguilla anguilla* L.) stimulate gonadal development of neighboring males: possible involvement of chemical communication. *General and Comparative Endocrinology* **147**: 304-313. [This research was highlighted in *Journal of Experimental Biology* by M. Danielle McDonald (2006). Is sexual maturation contagious? **209**, p. V].
22. **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*. *Comparative Biochemistry and Physiology a-Molecular & Integrative Physiology* **141**: S90.
23. Scott, A.P., M.L. Pinillos and **M. Huertas**. (2005). The rate of uptake of sex steroids from water by tench *Tinca tinca* L. is influenced by their affinity for sex steroid binding protein in plasma. *Journal of Fish Biology* **67**: 182-200.
24. Gisbert, E., A. Rodríguez, L. Cardona, **M. Huertas**, M.A. Gallardo, C. Sarasquete, M. Sala-Rabanal, A. Ibarz, J. Sánchez and F. Castelló-Orvay. (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.
25. **Huertas, M.**, E. Gisbert, L. Cardona, A. Rodriguez, P. Williot and F. Castelló-Orvay. (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. *Aquatic Toxicology*: **57** 4: 257-266.

Posters Presentations at International Meetings:

1. 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.
 2. 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.
 3. **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.
 4. 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.
 5. 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.
 6. 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.**
7. 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.
 8. 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.
 9. 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.
 10. **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.

11. **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.
 12. **Huertas, M.**, A.V.M. Canário and P.C. Hubbard (2010). Olfactory sensitivity to Ca²⁺ and Na⁺ in the European eel (*Anguilla anguilla*). *ECRO 2010* (European Chemoreception Research Organization). Avignon. France.
 13. **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.
 14. **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.
 15. **Huertas, M.**, A.V.M. Canário and P.C. Hubbard (2008). Changes in olfactory sensitivity during the European eel (*Anguilla anguilla*) life cycle. *XV International symposium on olfaction and taste*. San Francisco, USA.
 16. 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.**
17. **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.
 18. **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.
 19. **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.
 20. **Huertas, M.**, A.P. Scott and J. Cerdà (2004). Partial characterization of a plasma steroid binding protein in the European eel (*Anguilla anguilla*). *5th International Symposium on Fish Endocrinology*, Castellón, Spain.
 21. **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.
 22. 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. *IX^o Congreso Nacional de Acuicultura*, Cádiz, Spain.
 23. **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. *IX^o Congreso Nacional de Acuicultura*, Cádiz, Spain.
 24. **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.**

25. **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.
26. Rodríguez, M. Huertas, E. Gisbert, Rodríguez, A. y F. Castelló-Orvay (2001). Efecto del ayuno sobre juveniles de esturión siberiano (*Acipenser baeri*). *VIIIº Congreso Nacional de Acuicultura*, Santander, Spain.
27. **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.
28. **Huertas, M.**, E. Gisbert, L. Cardona, A. Rodríguez y F. Castelló-Orvay (1999). Determinación de la LC₅₀ de nitritos en juveniles de esturión siberiano (*Acipenser baeri*): Evolución de parámetros sanguíneos. *VIIº Congreso Nacional de Acuicultura*, Canarias, Spain.
29. **Huertas, M.**, E. Gisbert, L. Cardona, A. Rodriguez and F. Castelló-Orvay. Acute toxicity of nitrite to Siberian sturgeon (*Acipenser baeri*) -preliminary results (1998). *Aquaculture Europe 1998*, Bordeaux, France.

B. Works Not in Print

Invited Lectures

- 2016 “Love at first sniff: Pheromones and other smelly stories”. Department of Biology. Texas State University, US.
- 2015 “Love at first sniff: the alluring world of lamprey pheromones”. Department of Biology. University New Mexico, US.
- 2013 “The amazing life cycle of the European eel”. Biological Sciences Department. University of Windsor, Canada.

Invited Oral Communications

1. **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.
2. **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.
3. 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.

4. 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.
5. **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.
6. **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.
7. **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.
8. 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.
9. 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.
10. **Huertas, M.**, A.V.M. Canário and P.C. Hubbard (2011). Sniffing the aquatic media: Is olfactory sensitivity to Ca²⁺ and Na⁺ related to osmoregulation in the eel? *Society of Experimental Biology 2011*. Glasgow. Scotland.
11. **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.
12. **Huertas, M.**, (2009) Reproduction in eel: The example of an amazing life cycle. *Seminarios do CCMAR*. Faro 2009. Portugal.
13. **Huertas, M.**, A.V.M. Canário and P.C. Hubbard (2008). Changes in olfactory sensitivity during the European eel (*Anguilla anguilla*) life cycle. *Aquaculture Europe 2008*. Krakow, Poland.
14. **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.
15. **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.
16. **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.
17. **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.

C. Grants and Contracts

Funded External Research Grants (\$697,111 total)

- 2014 ***Great Lakes Fisheries Commission Project***, program of research for 2015. Project “Structure and function of sea lamprey pheromone components (Phase II)” (from 2015 to 2018). Co-Principal Investigator Dr. Mar Huertas and Dr. Ke Li, Principal investigator Dr Weiming Li, Michigan State University. 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 (From April 2012 to march 2015). 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

Pending External Grants for Research

- 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. Amount requested: €199,800
- 2017 ***Preproposal National Science Foundation.*** A portal into the brain: olfactory crypt neurons modulate brain viral immunity in teleost. Co-Principal Investigator Dr. Mar Huertas, Principal Investigator Dr. Irene Salinas Amount requested: €2
- 2016 ***Preproposal PIRE-National Science Foundation:*** Multifaceted approach to understanding the effects of landscape conversion on fish communities with focus on livebearing fish in Mexico and the USA. National Science Foundation. Co-Principal Investigator Dr. Andrea Aspbury, Dr. Mar Huertas, Dr. Tim Bonner, Dr. Jeremy Conkle, Dr. Principal Investigator Dr. Caitlin Gabor. Amount requested: €2

Submitted but not Funded External Grants and Contracts

- 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
- 20016 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

Funded Internal Grants and Contracts (\$16,000 Total)

2017 **Texas State University**, FY17 Research Enhancement Program Awards. Project: Characterization of sex pheromone response in sailfin mollies. Principal investigator: Mar Huertas, co-PI: Dr. Caitlin Gabor. Amount founded: \$16,000

D. Fellowships, Awards, Honors

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 Fundação 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 practise fellowship** of Centre of Reference in Aquaculture contract (Generalitat of Catalunya), Spain

IV. SERVICE

A. Institutional

Secretary of MSU Postdoctoral association from April 2015 to 2016.

Organizations of Which I Am a Member

Member of the American Society of Physiology since 2016.

Member of the Society Experimental Biology since 2008.