

## 1. PERSONAL DATA

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**Name and Surname:** Patrícia Alexandra Cavaleiro Diogo

**Birth date:** 7 of July 1983

**Nationality:** Portuguese

**B.I:** Nr. 12349050, of 25/06/2007 (Faro)

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## 2. ACADEMIC BACKGROUND

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2008 - 2011 Master in Aquaculture and Fisheries, University of Algarve (UALG) with final classification of 16/20 and thesis classification of 19/20, entitiled “Sperm motility in *Solea senegalensis*: effect of temperature, salinity, pH and ovarian fluid”, supervised by Maria Teresa Dinis, Elsa Cabrita and Florbela Soares.

2004 - 2007 High graduation in Marine Biology on the University of Algarve (UALG) with final classification of 13/20.

## 3. RESEARCH BACKGROUND

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Presently Research fellow on ZEBRAFEEDS Project - Dietas para peixe-zebra: aplicações no sector farmacêutico e da biomedicina (QREN 23000), financiado pelo Programa QREN -Sistema de Incentivos I&DT/Medida Co-Promoted (QREN 2011), University of Algarve.

2011 - 2012 Research fellow on ULTRAFISH Project- Utilização de ultrasons na optimização da nutrição embrionária de peixes: programação nutricional do potencial de crescimento e capacidades metabólicas em juvenis. PTDC/CVT/102481/2008, Ministério Português da Ciência Tecnologia e Educação, CCMAR.

2008 - 2011 Research fellow on CRYOSPERM Project - Development of tools to analyse sperm quality in fish: implications for cryobanking PTDC\MAR\64533\2006, Ministério Português da Ciência Tecnologia e Educação, CCMAR .

2007 - 2008 Research fellow on FISHWELL Project - Marine Fish Broodstock Welfare 2006.71.001443.9, Ministério Português da Agricultura e Pescas, University of Algarve.

## 4. LIST OF PUBLICATIONS

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2015 Beirão J., Soares F., Pousão-Ferreira P., **Diogo P.**, Dias J. Dinis MT., Herráez MP., Cabrita E. The effect of enriched diets on *Solea senegalensis* sperm quality. *Aquaculture* 435, 187-194.

2015 **Diogo, P.**, Dinis, M. T., Soares, F., Sarasquete, C., Cabrita, E. Assessment of nutritional supplementation in phospholipids on the reproductive performance of zebrafish, *Danio rerio* (Hamilton, 1822). *Journal of Applied Ichthyology* 31, 1, 3–9.

- 2013 Martínez-Páramo, S., **Diogo, P.**, Dinis, M. T., Soares, F., Sarasquete, C., Cabrita, E. Effect of two sulfurcontaining amino acids, taurine and hypotaurine in European sea bass (*Dicentrarchus labrax*) sperm cryopreservation. *Cryobiology* 66, 3, 333–338.
- 2012 E Martínez-Páramo, S., **Diogo, P.**, Beirão, J., Dinis, M.T., Cabrita, E. Sperm lipid peroxidation is correlated with differences in sperm quality during the reproductive season in precocious European sea bass (*Dicentrarchus labrax*) males. *Animal Reproduction Science. Aquaculture* 358-359, 246-252.
- 2012 Martínez-Páramo, S., **Diogo, P.**, Dinis, M.T., Herráez, M.P., Sarasquete, C., Cabrita, E. Sea bass sperm freezability is influenced by motility variables and membrane lipid composition but not by membrane integrity and lipid peroxidation. *Animal Reproduction Science* 131, 211-218.
- 2012 Martínez-Páramo S, **Diogo, P.**, Dinis MT, Herráez MP, Sarasquete C, Cabrita E. Incorporation of ascorbic acid and  $\alpha$ -tocopherol to the extender media to enhance antioxidant system of cryopreserved seabass sperm. *Theriogenology* 77, 1129-1136.
- 2010 **P. Diogo**, F. Soares, M. T. Dinis, E. Cabrita. The influence of ovarian fluid on *Solea senegalensis* sperm motility. *J. Appl. Ichthyol.* 26, 690–695.
- 2010 E. Cabrita, S. Ma, **P. Diogo**, S. Martínez-Páramo, C. Sarasquete, M.T. Dinis. The influence of certain aminoacids and vitamins on post-thaw fish sperm motility, viability and DNA fragmentation. *Animal Reproduction Science.* 125, 189-195.

## 5. POSTER PRESENTATIONS IN CONGRESS AND WORKSHOPS

- 2016 **Diogo, P.**, Eufrásio, A., Martins, G., Carneira, J., L. Cancela, Cabrita, E., Gavaia, P. Analysis of sperm quality in type I diabetes zebrafish model. ESDAR conference, 27-29 of October, Lisbon Portugal. (Poster)
- 2013 **Diogo, P.**, Martins, G., Gavaia, P., Pinto, W., Dias, J., Conceição, L., Martínez-Páramo, S. Zebrafish (*Danio rerio*) fed a purified diet is an informative model to assess the role of specific nutrients on sperm motility. 4<sup>th</sup> Workshop Biology of Fish Gametes, 17-20 of September, Albufeira, Portugal (poster).
- 2013 P. Gavaia, I. Fernandez, **P. Diogo**, L. Cancela, J. Dias. Effects of the vitamin k antagonist warfarin on zebrafish skeletal development. 8<sup>th</sup> European Zebrafish Meeting, 9-13 of July, Barcelona, Spain (poster).
- 2013 Pinto, W., **Diogo, P.**, Martínez-Páramo, S., Gavaia, P., Conceição, L., Dias, J. Dietary phospholipids and trace minerals levels affect reproductive performance in zebrafish (*Danio rerio*). Larvi 6<sup>th</sup> fish & Shellfish Larviculture Symposium, 2-5 of September, Guent, Belgium (poster).
- 2011 S. Martínez-Páramo, M. Cerqueira, **P. Diogo**, MT Dinis, C. Sarasquete, E. Cabrita. European seabass (*Dicentrarchus labrax*) sperm modulation to improve antioxidant system for cryopreservation. 7-9 of September, The 3<sup>rd</sup> International Workshop on Biology of Fish Gametes, September, Budapest, Hungria (poster).
- 2011 E. Cabrita, S. Martínez-Páramo, **P. Diogo**, T. Pacchiarini, J. Dias, MT. Dinis, C. Sarasquete. Antioxidant and PUFA supplemented diet improves fertilization success of cryopreserved sperm. World Aquaculture Society Meeting, 6-10 June, Natal, Brasil (poster)

- 2011 J. Beirão, F. Soares, P. Pousão-Ferreira, **P. Diogo**, J. Dias, M. T. Dinis, M.P. Herráez, E. Cabrita. Dietary DHA and antioxidants supplementation improves soles sperm quality. 5-7 April 2011, V The cultivation of Soles, Faro, Portugal. (Oral Presentation).
- 2010 S. Ma, **P. Diogo**, S. Martínez-Páramo, M. T. Dinis, C. Sarrasquete, E. Cabrita. Effect of antioxidant supplementation in fish sperm extenders on post-thaw sperm quality and DNA fragmentation. 5-8 October 2010, Aquaculture Europe. Porto, Portugal. (Poster).
- 2010 S. Martínez-Páramo, **P. Diogo**, M.T. Dinis, P. Pousão-Ferreira, M.P. Herráez and E. Cabrita. Seasonal determination of european seabass (*Dicentrarchus labrax*) sperm quality: Is there any correlation with sperm resistance to cryopreservation? 5-8 October 2010, Aquaculture Europe. Porto, Portugal. (Poster).
- 2010 **P. Diogo**, F. Soares, M. T. Dinis, E. Cabrita. Parameters Affecting Sperm Motility Activation in *Solea senegalensis*: Multivariate Cluster Analysis vs Mena Values Analysis. 5-8 October 2010, Aquaculture Europe. Porto, Portugal. (Poster).
- 2010 S. Martínez-Páramo, **P. Diogo**, M. T. Dinis, M.P. Herraez, E. Cabrita. Does antioxidant addition to the extender produce any effect on European seabass sperm cryoresistence? (Poster) *Cryobiology* 61, 362–408. doi:10.1016/j.cryobiol.2010.10.143.URL: <http://www.cryo-2010.org/abstracts/pdf/SFC001P053.pdf>
- 2009 **P. Diogo**, F. Soares, M. T. Dinis, E. Cabrita. Ovarian fluid influence on *Solea senegalensis* sperm motility. 9-11 September 2009, Second International workshop on the Biology of fish gametes. Valência, Spain. (Poster – **Best poster award**).
- 2008 **P. Diogo**, F. Soares, M. T. Dinis, E. Cabrita. Sperm motility activation in *Solea senegalensis*: relationship with water temperature, salinity and pH. 2-7 November 2008. 7<sup>th</sup> International Flatfish Symposium. Sesimbra, Portugal. (Poster).
- 2008 E. Cabrita; F. Soares; J. Beirão; C. Aragão; **P. Diogo**; C. Madeira; S. Mira; M.T. Dinis. Male Reproductive Performance in *Solea senegalensis*. 11-14 November 2008, IV The cultivation of Soles, Faro, Portugal. (Oral Presentation).

## 6. PARTICIPATION IN CONGRESS AND MEETINGS

- 2012 II SPCAL Meeting, Lisboa, Portugal. 24-25 May 2012.
- 2011 V The cultivation of Soles, Faro, Portugal. 5-7 April 2011 (Participation on the organization team).
- 2010 Aquaculture Europe 2010 – “Sea farming tomorrow”. 5-8 October. Porto, Portugal (Participation on the organization team).
- 2010 International Workshop on Sustainable Extensive and Semi-Intensive Aquaculture Production in Southern Europe. 20-21 January. Tavira, Portugal (Participation on the organization team).
- 2008 IV The cultivation of Soles, Faro, Portugal. 11-14 November 2008 (Participation on the organization team).

## 7. COLABORATIONS IN PROJECTS AND OTHER ACTIVITIES

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- 2012 Colaboration on nutritional experiments with zebrafish larvae diets with K vitamin. Samplings for tissue collection for RNA analysis, histologic colorations and HPLC. Dry weight analysis, calcium and phosphate contents, histologic colorations and its microscopical analysis. Squeletal malformation analysis associated with bone development on fish larvae through histologic coloration.
- 2010 Colaboration on F1 *Argyrosomus Regius* samplings with hormonal induction on IPIMAR sperm collection, sperm quality analysis and female gonadossomatic evaluation.
- 2010 Colaboration os IPIMAR samplings on *Solea senegalensis* sperm and blood collection and analysis.
- 2010 Colaboration on *Salmo salar* sperm collection, sperm quality analysis and sperm cryopreservation on Galicia (Spain).
- 2009 Research on Cádiz (Spain) on *Solea senegalensis* larvae histology and immunohistoquemesy to detect testicle and its spermatogonia (Larvanet).
- 2009 Colaboration on Samplings on EPPO/IPIMAR on *Solea senegalensis* juvenite testicle dissection and stamina cells cryopreservation.
- 2008 Colaboration on Samplings on EPPO/IPIMAR on *Solea senegalensis* egg collection, estadio identification and selection.
- 2007 Colaboration on periodoc samplings to collect *Solea senegalensis* blood and sperm, performing sperm quality evaluation.
- 2006 Colaboration on maintenance of *Sepia officinalis* and shrimp on Ramalhete aquaculture station, Faro, Portugal.
- 2003 Colaboration on aquariofily maintenance on Aquário Vasco da Gama (Lisboa, Portugal) with freshwater tropical fish breeding and marine species.

## 8. PERSONAL SKILLS

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### I. EXPERIENCE IN RESEARCH

- ✓ Experience on maintenance of fish Broodstocks, larviculture and live feed on experimental aquaculture facilities.
- ✓ Sexual hormones analysis of *Solea senegalensis* through ELISA.
- ✓ Hormonal induction (LH-RH) on *Solea senegalensis* broodstock.
- ✓ Application of “single-cell gel electrophoresis” on fish sperm DNA fragmentation detection.
- ✓ Experience on egg handling and different stadiums determination.

- ✓ Laboratory experience on the following techniques: Lipidic peroxidation (MDA), proteic oxidation, cellular viability (IP/sybergreen e Hoesht), DNA extration, ROS (Reactive Oxygen Species), total lipid axtration.
- ✓ Sperm motility analysis trough CASA software in *Solea senegalensis*, *Dicentrarchus labrax*, *Sparus aurata*, *Psetta maxima*, *Argyrosomus regius*, *Salmo salar*.
- ✓ Sperm quality analysis by microscopic epifluorescence.
- ✓ Sperm cryopreservation experience.

## II. LANGUAGES KNOWLEDGE (1: basic; 5: proficient)

*Portuguese*: Understanding: 5; Fluency: 5; Writing: 5; Reading: 5

*English*: Understanding o: 5; Fluency: 5; Writing: 5; Reading: 5

*French*: Understanding: 4 Fluency: 2; Writing: 2; Reading a: 3

*Spanish*: Understanding: 4; Fluency o: 2; Writing: 1; Reading: 3

## III. PERSONAL AND SOCIAL SKILLS

- ✓ Good ability to work in tem and individually
- ✓ Ability to design and conduct controled Desenvolvimento de relatórios e artigos científicos
- ✓ Fast and efficient learning skills
- ✓ Adaptation ability to new species and research techniques Determinação no trabalho
- ✓ Good communication skills in Portuguese and English
- ✓ Available to conduct work during weekends
- ✓ Adaptation ability to new work environments
- ✓ Lidearship and organization skills
- ✓ Project management (accounting and reports) ability

## 9. WORKSHOPS AND TRAINING

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2015	Animal Experimentation course.
2010	5 <sup>th</sup> CCMAR Radiation Safety Course
2010	2 <sup>nd</sup> UTN International Workshop, Research Collaboration & Network Building for Commercialization Marine and Bio-Sciences

## 10. RESEARCH AREA AND INTERESTS

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- ✓ Cryobiology
- ✓ Aquaculture
- ✓ Zebrafish husbandry
- ✓ Marine Biology
- ✓ Larviculture
- ✓ Molecular Biology
- ✓ Biochemical analysis

## 11. AFILIATIONS

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- ✓ CCMAR, Centro de Ciências Marinhas do Algarve
- ✓ Universidade do Algarve, Faculdade de Ciências e Tecnologia