

# António Vilhena Sykes

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António V. Sykes



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🌐 <https://www.cienciavitae.pt/pt/7510-6641-5A42>

🌐 <http://www.linkedin.com/in/antsykes>

🌐 <https://scholar.google.pt/citations?user=c-Jc2K8AAAAJ&hl=pt-PT>

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## EDUCATION

**PhD in Aquaculture, specialty of Nutrition**

University of Algarve, Portugal. 2007

**MSc in Marine Science – Marine Resources, specialty of Aquaculture**

University of Oporto, Portugal. 2003

**BSc in Marine Biology and Fisheries, specialty of Aquaculture**

University of Algarve, Portugal. 1999

## ADDITIONAL TRAINING

**From research to patent**

Instituto Nacional da Propriedade Industrial and European Patent Office, Universidade do Algarve, Portugal. 2018

**Workshop on the Severity Classification and Reporting under EU Directive 2010/63/EU for Animal Welfare Bodies**

Federation of European Laboratory Animal Science Associations and Sociedade Portuguesa de Ciências em Animais de Laboratório, Fundação Champalimaud, Portugal. 2018

**Accreditation Level C (Senior Researcher) for performing Animal Experimentation**

Direcção-Geral de Alimentação e Veterinária, Portugal. 2015

**Laboratory Animal Sciences – Aquatic Organisms Practical Approach by Aquatic Organisms Bioterium (BOGA – CIIMAR).**

Algarve Centre of Marine Sciences, Portugal. 2015

**Ciências de Animais de Laboratório – Curso Teórico Online by Sociedade Portuguesa de Ciências em Animais de Laboratório**

Algarve Centre of Marine Sciences, Portugal. 2012

**Communicate Science with the Media by António Granado**

Algarve Centre of Marine Sciences, Portugal. 2013

**Scientific Writing by Shirley Ellis**

Algarve Centre of Marine Sciences, Portugal. 2013

**Ethics in Lecture and Veterinary Research**

Ordem dos Médicos Veterinários, Portugal. 2011

**Radiation Safety Course**

Algarve Centre of Marine Sciences, Portugal. 2010

**The Art of Networking by Filipe Carrera**

University of Algarve, Portugal. 2009

**Formation in Protection and Radiological Safety**

Ministry of Ambient, Territorial Management and Rural Development, Portugal. 1998

**Histophysiology, histopathology and biotoxicology**

University of Cadiz, Spain. 1997

**Pathology Diagnostic in Aquaculture**

University of Algarve, Portugal. 1997

**PROFESSIONAL EXPERIENCE**

**Research Appointments**

**Researcher IF FCT | Algarve Centre of Marine Sciences**

April 2015 – Ongoing

**Invited Researcher | Algarve Centre of Marine Sciences**

July 2014 – March 2015

**Post-Doctoral Researcher | University of Algarve**

April 2014 – June 2014

**Post-Doctoral Researcher | Algarve Centre of Marine Sciences**

January 2008 – December 2013

**PhD student | University of Algarve**

January 2004 – November 2007

Thesis title - Hatchery technologies and nutritional contents of cuttlefish (*Sepia officinalis*) spawners, eggs, hatchlings and live prey associated.

Approved with the final classification of Very Good by all members of Jury.

**MSc Research Assistant | University of Algarve**

March 2003 – December 2003

Researcher in the AQUASEPIA Project - Development of aquaculture techniques for the cuttlefish, *Sepia officinalis*.

**MSc student | University of Oporto**

October 1999 – April 2003

Thesis title - On the use of live grass shrimp (*Palaemonetes varians*) as the only prey for cuttlefish (*Sepia officinalis*) culture throughout the life cycle.

Approved with the final classification of Very Good by all members of Jury.

**BSc Research Assistant | University of Algarve**

May 1999 – April 2002

Researcher in the CORRAM Project - Cephalopoda: Octopodidae - relationship of the resource with the marine environment.

**Teaching Appointments by Academic Year**

**2009-2010 - Invited Assistant Professor | University of Algarve**

Fisheries Biology – Age and Growth module

Topics in Marine Biology

Topics in Applied Biology

**2010-2011 - Invited Assistant Professor | University of Algarve**

Fisheries Biology – Age and Growth module

Topics in Marine Biology

Topics in Applied Biology

**2011-2012 – Adjunct Faculty | University of Algarve**

Topics in Marine Biology

Topics in Applied Biology

**2012-2013 – Adjunct Faculty | University of Algarve**

Topics in Marine Biology

Topics in Applied Biology

**2013-2014 - Adjunct Faculty | University of Algarve**

Topics in Applied Biology

**2014-2015 - Adjunct Faculty | University of Algarve**

Topics in Aquaculture Fisheries and Conservation

**2015-2016 - Adjunct Faculty | University Aberta**

Sustainable Aquaculture

**2016-2017 - Adjunct Faculty | University of Algarve**

Topics in Applied Biology

Topics in Aquaculture Fisheries and Conservation

**2017-2018 - Adjunct Faculty | University of Algarve**

Topics in Applied Biology

Topics in Aquaculture Fisheries and Conservation

## 2018-2019 - Adjunct Faculty | University of Algarve

Topics in Applied Biology  
Topics in Aquaculture Fisheries and Conservation

## Entrepreneurship

### Managing Partner | Molushore, Lda.

January 2009 – March 2013 – A SME dedicated to offshore mussel culture in the Algarve.

## INSTITUTIONAL ACTIVITIES

### Extramural

#### Societies

Member of Sociedade Portuguesa de Ciências em Animais de Laboratório (SPCAL)

Convenor and member (PT delegate) of the Working Group on Capture and Transport of Cephalopods for FELASA.

#### Editorial Board

Editorial Advisory Board of Aquaculture Reports.

Associate Editor of Frontiers in Marine Science - Marine Fisheries, Aquaculture and Living Resources.

#### Lecturer

CAL-AQUA Lecturer for Handling and Basic Techniques in Aquatic Organisms (Cephalopods), Animal Experimentation Legislation, Bioterium Routines and ARRIVE guidelines;

CephsInAction Training School – Ceph Biology and Care (CBC-ASP2016)

#### Evaluations as Expert

2018-2019 - AQUAEXCEL<sup>2020</sup> TNA proposals;

2017-2019 - EU COST Action proposals;

2013 - Projects of Bilateral Cooperation in Aquaculture for the Research Promotion Foundation of Cyprus.

#### Reviewer

<https://publons.com/author/1225773/antonio-v-sykes#profile>

Over 100 reviews performed since 2008.

#### Examination Committee's

1. Tania Rodríguez González. Desarrollo de dietas semihúmedas formuladas para cefalópodos (*Octopus vulgaris* y *Enteroctopus megalocyathus*): Alteraciones lipídicas en materias primas deshidratadas y suplementación con lípidos polares. 2019. PhD in Marine Sciences and Applied Biology – University of Alicante (Spain).
2. Leonildo dos Anjos Viagem. Microbioma bacteriano asociado ao sistema digestivo e circulatório do choco (*Sepia officinalis*, L.). 2019. MSc in Molecular and Microbial Biology - University of Algarve (Portugal).
3. Maya Millicent Grace Logose. Evaluating the effect of temperature stress on *Octopus vulgaris* paralarvae. 2017. MSc in Marine Biology- University of Algarve (Portugal).
4. Raquel Fernández Gago. Desarrollo histológico y ontogénico del aparato digestivo de *Octopus vulgaris* Cuvier, 1797 (Mollusca: Cephalopoda). 2017. PhD in Biodiversity and Ecosystems – University of Vigo (Spain).

5. João Paulo Nunes Batista. Avaliação sensorial da frescura de produtos da pesca através do método QIM (Quality Index Method). 2012. MSc in Food Technology - University of Algarve (Portugal).
6. Daniel Quintana Cobo. Valoración de los requerimientos nutricionales de reproductores de pulpo común (*Octopus vulgaris*). 2009. PhD in Marine Sciences – University of La Laguna (Spain).
7. Ana Luísa Maulvault. Valor nutricional de algumas espécies consumidas em Portugal. 2009. MSc in Marine Biology and Fisheries, speciality in Fisheries and Aquaculture - University of Algarve (Portugal).
8. Miguel José Teodoro Correia. Efeito da densidade de cultivo no crescimento e reprodução de *Sepia officinalis* Linnaeus, 1758. 2003. BSc in Marine Biology and Fisheries - University of Algarve (Portugal).

### Meeting and Event Organization

1. IV SPCAL Congress 2018: Quality and Transparency in Science involving Laboratory Animals. Member of the Scientific Committee. Braga, Portugal 21-23/06/2018.
2. Workshop SEPIA BREEDING: IMPROVING REPRODUCTION PERFORMANCE BASED ON BIOLOGICAL KNOWLEDGE” 14th May 2012.
3. William Driedzic (Professor, Faculty of Science and Ocean Sciences Centre, Memorial University, Canada. Research Chair in Marine Bioscience). Presentation title: Control of protein turnover in *Sepia*. 7<sup>th</sup> CCMar Seminars 04-06-2012 - 14:00h - Anf. 3.24 (Edf. 8).
4. Elena Baeza (PhD Student, Laboratorio de Biología Marina, Universidad de Sevilla, Espanha). Presentation title: Ecology and life cycles of the Crustacean amphipods. Possible aquaculture applications. 7<sup>th</sup> CCMar Seminars 06-06-2012 (13:30) - Anf. A.
5. Felix Mark (Zoophysiologicalist, Alfred Wegener Institute for Polar and Marine Research, Germany). Presentation title: Ecophysiology and energy metabolism of *Sepia officinalis* in a changing ocean. 7<sup>th</sup> CCMar Seminars 20-07-2012 (14:30) – Anf. B.
6. Eduardo Almansa (Researcher, Instituto Oceanográfico de Canárias, Spain). Presentation title: Effects of different tank volumes and feeding regimes on growth, survival and lipid composition of *Octopus vulgaris* paralarvae. 8<sup>th</sup> CCMar Seminars 28-09-2012 (15:00) – Anf. A.
7. Covadonga Rodríguez (Professor, Universidad de La Laguna, Spain). Presentation title: Preliminary studies on lipid metabolism of *Octopus vulgaris*. 8<sup>th</sup> CCMar Seminars 28-09-2012 (15:40) – Anf. A.

### Intramural Service

1. Member of CCMar-CBMR ORBEA Animal Welfare Committee since 2016;
2. Organizer of CCMAR Seminars 2013 Series;
3. Organizer of CAL-AQUA Algarve 1<sup>st</sup> Edition, 13<sup>th</sup> to 15<sup>th</sup> April 2015. Theoretical and Practical course to obtain accreditation for experimentation with live animals;
4. Organizer of CAL-AQUA Algarve 2<sup>nd</sup> Edition, 26<sup>th</sup> to 28<sup>th</sup> October 2015. Theoretical and Practical course to obtain accreditation for experimentation with live animals;
5. CCMAR Advanced Technologies and Training course on Portuguese Welfare Legislation (4h), 27<sup>th</sup> April 2016. doi: [10.13140/RG.2.1.1159.7202](https://doi.org/10.13140/RG.2.1.1159.7202);
6. Organizer of CAL-AQUA Algarve 3<sup>rd</sup> Edition, 2-6<sup>th</sup> July 2018. Theoretical and Practical course to obtain accreditation for experimentation with live animals.

## Consultancy

1. Max Planck Institute for Brain Research, on maintenance and rearing of cephalopods: animals, systems and welfare (2016-2018).
2. IPMA (Instituto Português do Mar e da Atmosfera) for the project TRANSPOLVO, funded by Grupo de Ação Costeira (GAC) Sotavento do Algarve (2015);
3. Portuguese Aquaculture Association – *Pro bono*, since September 2010 until 2013;
4. Calouste Gulbenkian Foundation – February 2011 - on the use of the European cuttlefish as a working model in neuroscience and eventual onsite infrastructure implementation;
5. Sparos, Lda. – December 2011 - testing different diets on the larvae stage of the gilthead sea bream (*Sparus aurata*) – experiment held at CCMar facilities;
6. Lusoreef, Lda. – March 2012 - cephalopod transportation;
7. Lusoreef, Lda. – April 2012 - EU animal welfare legislation – implications for companies who culture marine animals;
8. Sousa & Sousa, Lda. – October 2012 - evaluation of technical viability of onsite octopus culture, required to obtain PROMAR funding;
9. Lusoreef, Lda. – November 2012 - technology required to keep cuttlefish in aquaria.

## Outreach

2006 – 2013 – Presentations and educational videos on cuttlefish research and production at CCMar for the local nautical fair held at Olhão - Expomar.

2006 – 2013 – Presentations and educational videos on cuttlefish research and production at CCMar for EU Researchers Night.

2008 – 2012 – Cuttlefish supplier and pro bono consultancy for the Algarve Living Science Centre.

2010 – Ongoing - Cuttlefish juvenile and egg supplier for the Lisbon Aquaria.

2012 – Seminar “Cuttlefish culture at CCMar” invited by the Biology Students Association of University of Algarve.

2012 – Ongoing – Cuttlefish juvenile and egg supplier for researchers and aquaria worldwide.

2012-2014 – Television news coverage on the research of cuttlefish culture:

1. Production of cuttlefish in captivity. <http://videos.sapo.pt/3rZebBZVZP7dntsAzAOL>
2. Reproduction of cuttlefish in captivity. <http://www.youtube.com/watch?v=PxZLwwBUHPg>
3. University of Algarve invests in cuttlefish production. <http://www.youtube.com/watch?v=kq9YCr5eoAA>
4. UAlg invests in cuttlefish production. <http://www.youtube.com/watch?v=HHjddkSoej0>
5. CCMar studies reproduction and develops first extruded diet for cuttlefish. <http://vimeo.com/103729091>
6. Green Economy 313 - Produção de choco em aquacultura. <http://sicnoticias.sapo.pt/programas/economiaverde/2014-09-12-producao-de-choco-em-aquacultura;> <http://videos.sapo.pt/FtUvww1TGBRoePAcS4zf;> <http://greensavers.sapo.pt/2014/10/02/choco-devera-chegar-a-aquacultura-dentro-de-cinco-anos-com-video/>

## Mentoring at the PhD level

1. Diana Filipa Botelho Reis. Thesis Title: Fatty acid and lipid class metabolism of common octopus (*Octopus vulgaris*) paralarvae and of European cuttlefish (*Sepia officinalis*) hatchlings. PhD in Aquaculture, specialty in Nutrition - University of Algarve, FCT grantee SFRH/BD/76863/2011. Finished in July 2016.
2. Filipa Duarte Baptista. Thesis Title: On the existence, extent and the effects of systematic line crossing in the inbreeding of the European cuttlefish (*Sepia officinalis*, Linnaeus 1755), 2011.

PhD in Aquaculture, specialty in Genetics – University of Algarve, FCT grantee SFRH/BD/70647/2010. The candidate quit.

### Mentoring at the MSc level

1. Christian Drerup. Thesis Title: Habitat Preference and Behavioural Ecology of Bobtail Squids (Sepiolidae). MSc in Marine Biology – University of Algarve. Finished in December 2019.
2. Nuno Dias Pinheiro Valadas Coriel. Thesis Title: Effects of different protein to carbohydrate ratio in pellets for rearing European cuttlefish (*Sepia officinalis*, Linnaeus 1758) juveniles. MSc in Aquaculture and Fisheries – University of Algarve. Ongoing.
3. Angelica Amaduzzi. Thesis Title: Effects of high CO<sub>2</sub> and hypoxia to the embryonic development of European cuttlefish (*Sepia officinalis*). MSc in Aquaculture and Fisheries – University of Algarve. Ongoing.
4. Lauren Martin. Thesis Title: Parenthood in captive populations of European cuttlefish (*Sepia officinalis*). International MSc in Marine Biodiversity and Conservation (EMBC+) - University of Algarve. The candidate quit.
5. Ana Daniela Ornelas Sancho Fernandes. Thesis Title: Characterization of embryonic development of European cuttlefish (*Sepia officinalis*). Masters in Aquaculture and Fisheries – University of Algarve. Finished in July 2014.
6. João Tiago Rodrigues Gomes. Thesis title: Parental contribution in consecutive cultured generations of cuttlefish, *Sepia officinalis*. Masters in Aquaculture and Fisheries – University of Algarve. Finished in April 2014.
7. Tiago Esteves Jorge Veríssimo. Thesis title: Effect of type of food and culture density on the rearing of *Seriola dumerili*. Masters in Aquaculture and Fisheries – University of Algarve. Finished in January 2014.
8. Tania Rodríguez González. Thesis Title: Enhancing formulation and shape of prepared pellets for the common octopus, *Octopus vulgaris*. Masters in Aquaculture and Fisheries – University of Algarve. Finished in November 2013.
9. Anastasia Shcherbakova. Thesis title: The effect of tank types and rearing density on the growth and survival of *Octopus vulgaris* paralarvae fed the crab *Grapsus adscensionis* zoeae. Masters in Aquaculture and Fisheries – University of Algarve. Finished in September 2012.
10. Diana Filipa Botelho Reis. Improvement of common octopus (*Octopus vulgaris*) paralarval culture, based on studies of feeding and nutrition with alternative preys. Masters in Aquaculture and Fisheries – University of Algarve. Finished in September 2011.

### Mentoring at the BSc level

1. Daniel Hernández Brooke. Project Title: Effects of light on cuttlefish, *Sepia officinalis*, early weaning with frozen grass shrimp. BSc in Biology - Universidad Rey Juan Carlos (Madrid, Spain). Ongoing.
2. Joana Diogo Ferreira Gomes. Project Title: European cuttlefish (*Sepia officinalis*) reproduction in captivity. BSc in Marine Biology – University of Algarve. Finished in September 2014.
3. Bárbara Costa Camarão. Project Title: European cuttlefish (*Sepia officinalis*) reproduction in captivity. BSc in Marine Biology – University of Algarve. Finished in September 2013.
4. Ailish Eleanor Mc Garry. Thesis Title: A study of juvenile cuttlefish (*Sepia officinalis* Linnaeus, 1758) in the first stage of culture: exploring the possible relationship between tank colour and growth. BSc in Zoology - University College Cork. Finished in 2006.
5. Rebecca Martin. Thesis Title: Aspects of reproduction in the cuttlefish *Sepia officinalis* L. (Cephalopoda, Mollusca). BSc in Zoology - University College Cork. Finished in 2006.

### Mentoring undergraduates with a scientific initiation grant

1. Ana Catarina Matos Passareiro. 2009. AQUASEPIA – Desenvolvimento da Tecnologia do Cultivo do Choco, *Sepia officinalis*. CCMar grantee CCMAR/BII/0019/2009. Finished.
2. Frederico da Bandeira Fernandes Pessanha. 2008. AQUASEPIA - Desenvolvimento da Tecnologia do Cultivo do Choco, *Sepia officinalis*. CCMar grantee CCMAR/BII/0021/2008. Finished.

### Other type of mentoring of students/human resources

1. Andreia Sofia Sardinha Silva. Microplastics in cuttlefish, *Sepia officinalis*. Volunteer work under project SEPIACUL.
2. Nuno Dias Pinheiro Valadas Coriel. Experimental Work in Aquaculture 2018. MSc in Aquaculture and Fisheries – University of Algarve.
3. Christian Drerup. Experimental Work in Marine Biology 2018. MSc in Marine Biology, University of Algarve.
4. Eva Linehan. Trainingship from University of Cork. Six week stay at CCMAR (09/06/2017 to 14/07/2017).
5. Juan Carlos Real Capaz. MSc researcher technician grantee. January 2016 – November 2016.
6. Richard Reddington, ERASMUS+ Trainingship. Eight week stay at CCMAR (24/03 to 27/05/2016).
7. Hugo Jorge Rodrigues Eliseu Ventura. Experimental Work in Aquaculture 2015. MSc in Aquaculture and Fisheries – University of Algarve.
8. Mariana Cabral Monteiro Matos dos Santos. Experimental Work in Marine Biology 2015. Masters in Marine Biology, University of Algarve.
9. Juan Carlos Real Capaz. MSc researcher technician grantee in Project SEPIATECH. June 2015 – December 2015.
10. João Pedro Dias Dinis. Youth Science Occupation Program 2015 - AQUASEPIA – Desenvolvimento da Tecnologia de Aquacultura do Choco, *Sepia officinalis*. Two week stay at CCMar.
11. Lauren Martin, Internship of International MSc in Marine Biodiversity and Conservation. 4<sup>th</sup> May to 15<sup>th</sup> July 2015.
12. Safia Balvet, ERASMUS CCMAR 2015. Four month stay at CCMar. April to July 2015.
13. Daniel Hernández Brooke, ERASMUS CCMAR 2015. Three month stay at CCMar. February to April 2015.
14. Lauren Martin, Laboratory and Field Methods in Marine Biology 2014. University of Algarve. September 2014 to March 2015.
15. Inma Ferrer Mateu, Laboratory and Field Methods in Marine Biology 2014. University of Algarve. September 2014 to March 2015.
16. Rubén Muñoz Lechuga, ERASMUS CCMAR 2014. Three month stay at CCMar. July to September 2014.
17. Piedad Morillo-Velarde. PhD researcher grantee in Project SEPIATECH. July to September 2014.
18. Tania Rodríguez González. MSc researcher technician grantee in Project SEPIATECH. April 2014 – January 2015.
19. Isabel Cristina Sousa Correia. Volunteer in projects SEPIATECH, SEPIABREED, and SEPIAWELL. July to September 2014.
20. Ana Teixeira Couto. CCMar technician grantee CCMAR/BTI/0017/2013 in Project SEPIAWELL. July 2013 to September 2015.



21. Cátia Isabel Moura da Silva. CCMar technician grantee CCMAR/BTI/0018/2013 in Project SEPIAWELL. July 2013 to September 2015.
22. Juan Carlos Real Capaz. CCMar technician grantee CCMAR/BTI/0003/2014 in project SEPIABREED. April 2014 to May 2015.
23. Ana Rita Marques Pais de Oliveira. CCMar technician grantee BTI/0059/2011 in project SEPIABREED. March 2013 to June 2015.
24. Ana Filipa de Vasconcelos Nogueira, Experimental Work in Marine Biology 2013. Masters in Marine Biology, University of Algarve.
25. Kristina Steinmetz. Laboratory and Field Methods in Marine Biology 2013. University of Algarve.
26. Pedro Luís Shaw Evangelista. Experimental Work in Marine Biology 2013. Masters in Marine Biology, University of Algarve.
27. Raquel Fonseca da Silva Marques. Experimental Work in Marine Biology 2013. Masters in Marine Biology, University of Algarve.
28. Juan Carlos Jiménez Cabrera, ERASMUS University of Algarve - Universidade de La Laguna, 2013. Three month stay at CCMar (July 2013 – September 2013).
29. João Francisco Pita Dias Mourato Zêzere, Youth Science Occupation Program 2013. Two week stay at CCMar.
30. Alexandra Carvalho Alves. CCMar technician grantee BTI/0007/2012 in project SEPIABREED. April 2012 to January 2014.
31. Elena Baeza-Rojano Pageo, ESTANCIA BECA FPI AÑO 2012 - Cultivo de *Caprella scaura* (Crustacea, Amphipoda) con diferentes dietas, 2012. Three month stay at CCMar. PhD student grantee of Ministerio de Ciencia y Inovacion (Spain).
32. Érica Raquel Ferreira e Moura. Youth Science Occupation Program 2012 - AQUASEPIA – Desenvolvimento da Tecnologia de Aquacultura do Choco, *Sepia officinalis*. Two week stay at CCMar.
33. Irene Leal Segovia. CCMar technician grantee CCMAR/BTI/047/2011 in project ASSEMBLE – 12<sup>th</sup> December 2011 to 28<sup>th</sup> February 2013.
34. Guilherme Silva. Volunteer in projects SEPIAMETA, ASSEMBLE, SEPIATECH and SEPIABREED. January to September 2012.
35. Mariana Vaz. Volunteer in projects SEPIAMETA, ASSEMBLE, SEPIATECH and SEPIABREED. January to December 2012.
36. Filipe Santos. Volunteer in projects SEPIAMETA, ASSEMBLE, SEPIATECH and SEPIABREED. January to September 2012.
37. Tiago Miguel Catita de Freitas Rocha. University of Algarve technician grantee in project PROMAR (31.03.05.FEP.002) – SEPIATECH. June 2011 to November 2011.
38. Tiago Miguel Catita de Freitas Rocha. Practical Work in Aquaculture 2011. MSc in Aquaculture and Fisheries, University of Algarve.
39. Ana Catarina de Almeida Costa. Youth Science Occupation Program 2011. AQUASEPIA – Desenvolvimento da Tecnologia do Cultivo do Choco, *Sepia officinalis*. Two week stay at CCMar.
40. Jonás Ramirez Bordón. ERASMUS student from University of La Laguna (Spain). Three month stay at CCMar (September to December 2011).
41. Marc Sans Bassa. ERASMUS student from University of La Laguna (Spain). Three month stay at CCMar (September to December 2011).
42. Juan Carlos Real Capaz. Practical Work in Aquaculture 2011. MSc in Aquaculture and Fisheries – University of Algarve.

43. Paulo Alexandre Frias Fernandes. CCMar technician grantee CCMAR/BTI/018/2009 in project ASSEMBLE (2010-2011) and CCMAR/BTI/0032/2011 in project SEPIAMETA (2011-March 2013).
44. Cátia Isabel Moura da Silva. CCMar technician grantee CCMAR/BTI/0018/2010 in Project SEPIAMETA (2010- March 2013).
45. Rui Alexandre Mendes Gonçalves. University of Algarve technician grantee in project PROMAR (31.03.05.FEP.002) – SEPIATECH (July 2011 - August 2013).
46. Rui Alexandre Mendes Gonçalves. CCMar technician grantee CCMAR/BTI/018/2009 in project ASSEMBLE (2009-2010) and CCMAR/BTI/0036/2009 in project SEPIAMETA (March 2010 - June 2011).
47. Rui Alexandre Mendes Gonçalves. Practical Work in in Aquaculture 2009. MSc in Aquaculture and Fisheries – University of Algarve.
48. Pedro Gomes. Practical Work in Marine Biology 2008. BSc in Marine Biology – University of Algarve.
49. Débora Marujo. Practical Work in Marine Biology 2008. BSc in Marine Biology – University of Algarve.
50. Eloise de Sá. Practical Work in Marine Biology 2008. BSc in Marine Biology – University of Algarve.
51. Rui Santos. Practical Work in Marine Biology 2008. BSc in Marine Biology – University of Algarve.
52. Catarina Alexandra Vieira Gonçalves Coelho. Youth Science Occupation Program 2008. AQUASEPIA - Desenvolvimento do Cultivo do Choco, 2008. Two week stay at CCMar.
53. Teresa Gomes. Youth Science Occupation Program 2008. AQUASEPIA - Desenvolvimento do Cultivo do Choco, 2008. Two week stay at CCMar.
54. Sónia Domingas da Silva Fava. CCMar technician grantee on the maintenance and sampling of marine specimens in the CCMar’s Ramalhete Aquaculture Station. September to December 2008.

### Extramural Research Funding Participation as Coordinator and Researcher SEPIACUL | University of Algarve

November 2017 – October 2020

SEPIACUL – Optimizing cuttlefish, *Sepia officinalis*, culture – maximizing reproduction performance and development of commercial pellets.

Project reference: 16-02-01-FMP-53

Funding Entity: National Fisheries Fund with EU FEP funding, Program MAR2020.

Funded Amount – 491,224.98€

### SEPIAWELL | Algarve Centre of Marine Sciences

April 2013 – September 2015

SEPIAWELL – Determining stress-responsiveness of anaesthesia and euthanasia agents through refined animal welfare methodologies in European cuttlefish, *Sepia officinalis* (Linnaeus, 1758)

Project reference: PTDC/CVT-WEL/2476/2012

Funding Entity: Portuguese Science and Technology Foundation (FCT)

Funded Amount – 199,999€ (Maximum Funding for the call 200,000€)

Webpage – <http://fbh.ccmar.ualg.pt/sepiawell/>

### SEPIATRANS | Algarve Centre of Marine Sciences

January 2013 – May 2015

SEPIATRANS - Refinement of cuttlefish long course transportation.

Bilateral Cooperation of Portugal with Germany (Alfred Wegener Institute for Polar and Marine Research).

Project reference: FCT/4192/19/4/2013/S

Funding Entity: Portuguese Science and Technology Foundation (FCT)

Funded Amount – 6,000€ (Maximum Funding for the call 10,000€)

### SEPIABREED | Algarve Centre of Marine Sciences

January 2012 – June 2015

SEPIABREED - Improving the reproduction of the European cuttlefish, *Sepia officinalis* (Linnaeus, 1758) in captivity: a multidisciplinary approach

Project reference: PTDC/MAR/120876/2010

Funding Entity: Portuguese Science and Technology Foundation (FCT)

Funded Amount – 176,268€ (Maximum Funding for the call 200,000€)

Webpage - <http://fbh.ccmarmar.ualg.pt/sepiabreed/>

### SEPIAMETA | Algarve Centre of Marine Sciences

January 2010 – Finished March 2013

SEPIAMETA – On the metabolism of the European cuttlefish, *Sepia officinalis* (Linnaeus, 1758)

Project reference: PTDC/MAR/102348/2008

Funding Entity: Portuguese Science and Technology Foundation (FCT)

Funded Amount – 189,702€ (Maximum Funding for the call 200,000€)

Webpage - <http://www.ccmarmar.ualg.pt/fbh/sepiameta/sepiameta.html>

### Participation as Researcher

#### CephslnAction | Algarve Centre of Marine Sciences

October 2013 – October 2017

CephslnAction - A network for improvement of cephalopod welfare and husbandry in research, aquaculture and fisheries

Project reference: Food and Agriculture COST Action FA1301

Funding Entity: EC FP7 COST – European Cooperation in Science and Technology

Funded Amount – 446,311.67

Partners: France, Germany, Greece, Ireland, Israel, Italy, Netherlands, Norway, Portugal, Spain, United Kingdom.

Webpage - <http://www.cephslnaction.org/>

#### SEPIATECH | University of Algarve

April 2011 – December 2015

SEPIATECH - Development of cuttlefish, *Sepia officinalis*, aquaculture production technology - feed and husbandry refinements

Project reference: 31-03-05-FEP-2

Funding Entity: National Fisheries Fund with EU FEP funding, Program PROMAR, section of Pilot Studies

Funded Amount – 389,625€

#### ppEMBRC | Algarve Centre of Marine Sciences

February 2011 – January 2014

EMBRC - European Marine Biological Resource Centre

Project reference: 262280 FP7

Funding Entity: EC FP7 Capacities

Partners: Algarve Centre of Marine Sciences; Sven Lovén Centre for Marine Sciences; Scottish Association for Marine Science; Scottish Oceans Institute; Observatoire Océanologique de Banyuls sur Mer; Observatoire Océanologique de Villefranche sur Mer; Stazione Zoologica Anton Dohrn; Sven Lovén Centre for Marine Sciences; Station Biologique de Roscoff, The Marine Biological Association; Alfred Wegener Institute for Polar and Marine Research; Institute of Marine Biology and Genetics, Hellenic Centre for Marine Research; Sars International Centre for Marine Molecular Biology; European Molecular Biology Laboratory. Webpage - <http://www.embrc.eu/centre-marine-sciences-cmar>

### ASSEMBLE | Algarve Centre of Marine Sciences

March 2009 – February 2013

ASSEMBLE: Association of European Marine Biological Laboratories

Project reference: 227799 FP7

Funding Entity: EC FP7 Infrastructure

Funded Amount for cuttlefish studies – 41,760€

Partners: Centro de Ciências do Mar do Algarve; Sven Lovén Centre for Marine Sciences; Scottish Association for Marine Science ; Centre National de la Recherche Scientifique; Stazione Zoologica Anton Dohrn; Interuniversity Institute for Marine Sciences.

Webpage - <http://www.assemblemarine.org/>

### CEPHSTOCK | University of Algarve

January 2002 – December 2005

CEPHSTOCK - Cephalopod stocks in European waters: review, analysis, assessment and sustainable management

Project reference: QOL-2001-5.1.2-FP5

Funding Entity: EC-DGXII - Quality of Life and Management of Living Resources

Partners: University of Aberdeen; Centro de Ciências do Mar do Algarve; Hellenic Centre for Marine Research; Consejo Superior de Investigaciones Científicas; Imperial College of Science, Technology and Medicine; Université de Caen; University of Wales; AZTI Foundation ; Istituto Centrale per la Ricerca scientifica e tecnologica Applicata Mare; The Centre for Environment, Fisheries and Aquaculture Science; University of the Aegean ; University of London; Instituto Espanol de Oceanografia; Universitat Kiel (Christian-Albrechts); Instituto Nacional de Investigação Agrária e das Pescas; Queens's University; Universidade Aberta; Università di Genova; Università degli Studi - Pisa; Université de La Rochelle.

### AQUASEPIA | University of Algarve

January 2002 – December 2004

AQUASEPIA: Development of aquaculture techniques for the cuttlefish, *Sepia officinalis*

Project reference: P0009/POCTI 2.3/OUT.01

Funding Entity: Portuguese Innovation Agency

Partners: Necton, S.A.

### CORRAM | University of Algarve

January 1999 – December 2002

CORRAM - Cephalopoda: Octopodidae - relationship of the resource with the marine environment

Project reference: 2/2.1/MAR/1707/95

Funding Entity: Portuguese Science and Technology Foundation (FCT)

Partners: University of Lisbon; University of Açores; University of Algarve; Secretaria Regional do Ambiente e dos Recursos Naturais da Madeira; Portuguese Open University.

### Personal Research Awards

#### Graduate Research Grant – 1999-2001

FCT PRAXIS XXI/BIC/17321/99

**PhD Grant – 2004-2007**

FCT SFRH/BD/12409/2003

**Post-Doctoral Grant – 2008-2010**

FCT SFRH/BPD/36100/2007

**Post-Doctoral Grant – 2010-2013**

FCT SFRH/BPD/36100/2007

**Member of Management Committee – 2013-2017**

CephslnAction - Food and Agriculture COST Action FA1301

**Leader of WG1: Research needs in cephalopods welfare – 2013-2017**

CephslnAction - Food and Agriculture COST Action FA1301

**Invited Researcher Grant – 2014**

FCT Incentivo Program 2014

**Investigador FCT Research Contract – 2015**

FCT IF Program 2015

**Publications**

**Book chapters**

1. **Sykes, AV**; Domingues, PM; Andrade, JP. **2014**. Chapter 11 - European Cuttlefish, *Sepia officinalis*. In Cephalopod Culture, ed. José Iglesias, Lidia Fuentes & Roger Villanueva, 175 - 204. Netherlands: Springer. doi: [10.1007/978-94-017-8648-5\\_11](https://doi.org/10.1007/978-94-017-8648-5_11)
2. **Sykes, AV**; Gestal, C. **2014**. Chapter 6 - Welfare and Diseases under Culture Conditions. In Cephalopod Culture, ed. José Iglesias, Lidia Fuentes & Roger Villanueva, 97 - 112. Netherlands: Springer. doi: [10.1007/978-94-017-8648-5\\_6](https://doi.org/10.1007/978-94-017-8648-5_6)
3. **Sykes, AV**; Koueta, N; Rosas, C. **2014**. Chapter 4 - Historical Review of Cephalopods Culture. In Cephalopod Culture, ed. José Iglesias, Lidia Fuentes & Roger Villanueva, 59 - 75. Netherlands: Springer. doi: [10.1007/978-94-017-8648-5\\_4](https://doi.org/10.1007/978-94-017-8648-5_4)
4. Navarro, JC; Monroig, Ó; **Sykes, AV**. **2014**. Chapter 5 - Nutrition as a Key Factor for Cephalopod Aquaculture. In Cephalopod Culture, ed. José Iglesias, Lidia Fuentes & Roger Villanueva, 77 - 95. Netherlands: Springer. doi: [10.1007/978-94-017-8648-5\\_5](https://doi.org/10.1007/978-94-017-8648-5_5)
5. Villanueva, R; **Sykes, AV**; Vidal, E; Rosas, C; Nabhitabhata, J; Fuentes, I; Iglesias, J. **2014**. Chapter 26 – Current Status and Future Challenges in Cephalopod Culture. In: Cephalopod Culture. José Iglesias, Lidia Fuentes & Roger Villanueva (eds), 479 – 489. Netherlands: Springer. doi: [10.1007/978-94-017-8648-5\\_26](https://doi.org/10.1007/978-94-017-8648-5_26)
6. **Sykes, AV**; Perkins, K; Grigoriou, P; Almansa, E. **2019**. Chapter 13 – Aquarium Maintenance Related Diseases. In: Handbook of Pathogens and Diseases in European Cephalopods. Camino Gestal, Santiago Pascual, Ángel Guerra & Graziano Fiorito (eds), 181-191. Netherlands: Springer. doi: [10.1007/978-3-030-11330-8\\_13](https://doi.org/10.1007/978-3-030-11330-8_13)

## Papers in journals with peer reviewing

1. Reis, DB; Shcherbakova, A; Riera, R; Martín, MV; Felipe, B; Domingues, P; Andrade, JP; Rodríguez, C; **Sykes, AV**; Almansa, E. **In prep.** Growth, survival and lipid composition of *Octopus vulgaris* paralarvae reared under different crustacean dietary regimes: *Grapsus adscensionis* zoeae, and *Artemia* spp. nauplii and juveniles enriched with *Nannochloropsis* spp. Aquaculture Research.
2. Oliveira, AR; Sardinha-Silva, A; Andrews, PLR; Green, D; Cooke, G; Hall, S; Blackburn, K; **Sykes, AV. Submitted.** Microplastics presence in cultured and wild cuttlefish, *Sepia officinalis*. PLOS ONE.
3. Drerup, C; **Sykes, AV**; Cooke, G. **Submitted.** The burying behaviour of *Sepioloa* sp. (Sepiolidae: Cephalopoda) on different sediment types. Journal of Molluscan Studies.
4. Drerup, C; **Sykes, AV**; Cooke, G. **Submitted.** Behavioural aspects of the spotty bobtail squid *Sepioloa parva* (Cephalopoda: Sepiolidae). Journal of Experimental Marine Biology and Ecology.
5. **Sykes, AV**; Almansa, E; Ponte, G; Cooke, GM; Andrews, PLR. **Submitted.** Can cephalopods vomit? Hypothesis based on a review of circumstantial evidence and preliminary experimental observations. Frontiers in Physiology.
6. Callaghan, NI; Bennett, JC; Lamarre, SG; Bourloutski, É; Capaz, JC; **Sykes, AV**; Driedzic, WR; MacCormack, TJ. **Submitted.** Age-specific physiological organization underlies excitation-contraction coupling differences in the mantle of European cuttlefish (*Sepia officinalis* L.). Comparative Biochemistry and Physiology, Part A.
7. Capaz, JC; Hernández-Brooke, D; Balvet, S; Couto, AT; Alves, A; Gonçalves, RA; Frias, PA; Andrade, JP; **Sykes, AV. Submitted.** Control of zootechnology leads to improved cuttlefish (*Sepia officinalis*, L.) reproduction performance up to industrial levels. Frontiers in Marine Science - Marine Fisheries, Aquaculture and Living Resources.
8. Lamarre, SG; MacCormack, TJ; Bourloutski, E; Callaghan, NI; Pinto, VD; Andrade, JP; **Sykes, AV**; Driedzic, WR. **2019.** Interrelationship between contractility, protein synthesis and metabolism in mantle of cuttlefish (*Sepia officinalis*). Frontiers in Physiology 10, 1051. doi: [10.3389/fphys.2019.01051](https://doi.org/10.3389/fphys.2019.01051)
9. Callaghan, NI; Capaz, JC; Lamarre, SG; Bourloutski, É; Oliveira, AR; MacCormack, TJ; Driedzic, WR; **Sykes, AV. 2019.** Reversion to developmental pathways underlies rapid arm regeneration in juvenile European cuttlefish, *Sepia officinalis* (Linnaeus 1758). Journal of Experimental Zoology Part B: Molecular and Developmental Evolution 332(3-4), 113-120. doi: [10.1002/jez.b.22849](https://doi.org/10.1002/jez.b.22849)
10. Capaz, JC; Tunnah, L; MacCormack, TJ; Lamarre, SG; **Sykes, AV**; Driedzic, WR. **2019.** Corrigendum: Hypoxic induced decrease in oxygen consumption in cuttlefish (*Sepia officinalis*) is associated with minor increases in mantle octopine but no changes in markers of protein turnover. Frontiers in Physiology 10, 18. doi: [10.3389/fphys.2019.00018](https://doi.org/10.3389/fphys.2019.00018)
11. Reis, DB; Acosta, NG; Almansa, E; Garrido, D; Andrade, JP; **Sykes, AV**; Rodríguez, C. **2019.** Effect of *Artemia* inherent fatty acid metabolism on the bioavailability of essential fatty acids for *Octopus vulgaris* paralarvae development. Aquaculture 500, 264-271. doi: [10.1016/j.aquaculture.2018.10.021](https://doi.org/10.1016/j.aquaculture.2018.10.021)
12. Garrido, D; Martín, MV; Rodríguez, C; Iglesias, J; Navarro, JC; Estévez, A; Hontoria, F; Becerro, M; Otero, JJ; Pérez, J; Varó, I; Reis, DB; Riera, R; **Sykes, AV**; Almansa, E. **2018.** A meta-analysis approach to the effects of live prey on the growth of *Octopus vulgaris* paralarvae under culture conditions. Reviews in Aquaculture 10 (1), 3-14. doi: [10.1111/raq.12142](https://doi.org/10.1111/raq.12142)

13. Rodríguez-González, T; Cerezo-Valverde, J; **Sykes, AV**; García-García, B. **2018**. Common octopus (*Octopus vulgaris*) performance when including fasting on feeding schemes: preliminary data regarding a formulated feed. *Advances in Research* 13 (4). doi: [10.9734/AIR/2018/39175](https://doi.org/10.9734/AIR/2018/39175).
14. Campinho, MA; Oliveira, A; **Sykes, AV**. **2018**. Olfactory-like neurons are present in the forehead of cuttlefish (*Sepia officinalis*). *Zoological Journal of the Linnean Society* 183, 338-346. doi: [10.1093/zoolinnean/zlx083](https://doi.org/10.1093/zoolinnean/zlx083)
15. Garrido, D; Reis, DB; Orol, D; Gonçalves, RA; Martín, MV; **Sykes, AV**; Rodríguez, C; Felipe, BC; Zheng, X; Lagos, L; Almansa, E. **2017**. Preliminary results on light conditions manipulation in *Octopus vulgaris* (Cuvier, 1797) paralarval rearing. *Fishes* 2, 21. doi: [10.3390/fishes2040021](https://doi.org/10.3390/fishes2040021).
16. Oliveira, CCV; Grano-Maldonado, MI; Gonçalves, RA; Frias, P; **Sykes, AV**. **2017**. Preliminary results on the daily and seasonal rhythms of cuttlefish *Sepia officinalis* (Linnaeus, 1758) locomotor activity in captivity. *Fishes* 2, 9. doi: [10.3390/fishes2030009](https://doi.org/10.3390/fishes2030009).
17. Ponte, G; **Sykes, AV**; Cooke, GM; Almansa, E; Andrews, PLR. **2017**. The digestive tract of cephalopods: towards non-invasive in vivo monitoring of its physiology. *Frontiers in Physiology* 8, 403. doi: [10.3389/fphys.2017.00403](https://doi.org/10.3389/fphys.2017.00403)
18. **Sykes, AV**; Almansa, E; Cooke, GM; Ponte, G; Andrews, PLR. **2017**. The digestive tract of cephalopods: a neglected topic of relevance to animal welfare in the laboratory and aquaculture. *Frontiers in Physiology* 8, 492. doi: [10.3389/fphys.2017.00492](https://doi.org/10.3389/fphys.2017.00492)
19. Capaz, JC; Tunnah, L; MacCormack, TJ; Lamarre, SG; **Sykes, AV**; Driedzic, WR. **2017**. Hypoxic induced decrease in oxygen consumption in cuttlefish (*Sepia officinalis*) is associated with minor increases in mantle octopine but no changes in markers of protein turnover. *Frontiers in Physiology* 8, 344. doi: [10.3389/fphys.2017.00344](https://doi.org/10.3389/fphys.2017.00344)
20. **Sykes, AV**; Alves, A; Capaz, JC; Madeira, C; Gonçalves, RA; Frias, PA; Leal, I; Couto, AT; Andrade, JP. **2017**. Refining tools for studying cuttlefish (*Sepia officinalis*) reproduction in captivity: in vivo sexual determination, tagging and DNA collection. *Aquaculture* 479, 13-16. doi: [10.1016/j.aquaculture.2017.05.021](https://doi.org/10.1016/j.aquaculture.2017.05.021)
21. Reis, DB; Acosta, NG; Almansa, E; Navarro, JC; Tocher, DR; Andrade, JP; **Sykes, AV**; Rodríguez, C. **2017**. Comparative study on fatty acid metabolism of early stages of two crustacean species: *Artemia* sp. metanauplii and *Grapsus adscensionis* zoeae, as live preys for marine organisms. *Comparative Biochemistry and Physiology – B* 204, 53-60. doi: [10.1016/j.cbpb.2016.11.002](https://doi.org/10.1016/j.cbpb.2016.11.002)
22. Reis, DB; Acosta, NG; Almansa, E; Tocher, DR; Andrade, JP; **Sykes, AV**; Rodríguez, C. **2016**. Composition and metabolism of phospholipids in *Octopus vulgaris* and *Sepia officinalis* hatchlings. *Comparative Biochemistry and Physiology - B* 200, 62-68. doi: [10.1016/j.cbpb.2016.06.001](https://doi.org/10.1016/j.cbpb.2016.06.001)
23. Speers-Roesch, B; Callaghan, NI; MacCormack, TJ; Lamarre, SG; **Sykes, AV**; Driedzic, WR. **2016**. Enzymatic capacities of metabolic fuel use in cuttlefish (*Sepia officinalis*) and responses to food deprivation: insight into the metabolic organization and starvation survival strategies of cephalopods. *Journal of Comparative Physiology – B* 186, 711-725. doi: [10.1007/s00360-016-0991-3](https://doi.org/10.1007/s00360-016-0991-3)
24. Lamarre, SG; MacCormack, TJ; **Sykes, AV**; Hall, JR; Speers-Roesch, B; Callaghan, NI; Driedzic, WR. **2016**. Metabolic rate and rates of protein turnover in food deprived cuttlefish, *Sepia officinalis* (Linnaeus 1758). *American Journal of Physiology - Regulatory, Integrative and Comparative Physiology* 310(11), R1160-R1168. doi: [10.1152/ajpregu.00459.2015](https://doi.org/10.1152/ajpregu.00459.2015)
25. MacCormack, TJ; Callaghan, NI; **Sykes, AV**; Driedzic, WR. **2016**. Taurine depresses cardiac contractility and enhances systemic heart glucose utilization in the cuttlefish, *Sepia officinalis*. *Journal of Comparative Physiology – B* 186, 215-227. doi: [10.1007/s00360-015-0946-0](https://doi.org/10.1007/s00360-015-0946-0)

26. Reis, DB; Rodríguez, C; Acosta, NG; Almansa, E; Tocher, DR; Andrade, JP; **Sykes, AV**. 2016. *In vivo* metabolism of unsaturated fatty acids in *Sepia officinalis* hatchlings. *Aquaculture* 450, 67-73. doi: [10.1016/j.aquaculture.2015.07.012](https://doi.org/10.1016/j.aquaculture.2015.07.012)
27. Josef, N; Berenshtein, N; Fiorito, G; **Sykes, AV**; Shashar, N. 2015. Camouflage during movement in the European cuttlefish (*Sepia officinalis*). *Journal of Experimental Biology* 218, 3391-3398. doi: [10.1242/jeb.122481](https://doi.org/10.1242/jeb.122481)
28. Franco, S; Aldred, N; **Sykes, AV**; Cruz, T; Clare, S. 2015. Broodstock reproductive conditioning of stalked barnacles (*Pollicipes pollicipes*). *Aquaculture* 448, 410-417. doi: [10.1016/j.aquaculture.2015.06.015](https://doi.org/10.1016/j.aquaculture.2015.06.015)
29. Rodríguez-González, T; Cerezo-Valverde, J; **Sykes, AV**; García-García, B. 2015. Performance of raw material thermal treatment on formulated feeds for common octopus (*Octopus vulgaris*) on-growing. *Aquaculture* 442, 37-43. doi: [10.1016/j.aquaculture.2015.01.035](https://doi.org/10.1016/j.aquaculture.2015.01.035)
30. Oliveira, AR; **Sykes, AV**; Hachero-Cruzado, I; Azeiteiro, UM; Esteves, E. 2015. A sensory and nutritional comparison of mussels (*Mytilus* sp.) produced in NW Iberia and in the Armona offshore production area (Algarve, Portugal). *Food Chemistry* 168, 520-528. doi: [10.1016/j.foodchem.2014.07.082](https://doi.org/10.1016/j.foodchem.2014.07.082)
31. Reis, DB; García-Herrero, I; Riera, R; Felipe, BC; Rodríguez, C; **Sykes, AV**; Martín, MV; Andrade, JP; Almansa, E. 2015. An insight on *Octopus vulgaris* paralarvae lipid requirements, under rearing conditions. *Aquaculture Nutrition* 21, 797-806. doi: [10.1111/anu.12205](https://doi.org/10.1111/anu.12205)
32. Josef, N; Mann, O; **Sykes, AV**; Fiorito, G; Reis, J; Maccusker, S; Shashar, N. 2014. Depth perception: cuttlefish (*Sepia officinalis*) respond to visual texture density gradients. *Animal Cognition* 17: 1393-1400. doi: [10.1007/s10071-014-0774-8](https://doi.org/10.1007/s10071-014-0774-8)
33. Reis, DB; Acosta, NG; Almansa, E; Navarro, JC; Tocher, DR; Monroig, O; Andrade, JP; **Sykes, AV**; Rodríguez, C. 2014. *In vivo* metabolism of unsaturated fatty acids in *Octopus vulgaris* hatchlings determined by incubation with <sup>14</sup>C-labelled fatty acids added directly to seawater as protein complexes. *Aquaculture* 431, 28-33. doi: [10.1016/j.aquaculture.2014.05.016](https://doi.org/10.1016/j.aquaculture.2014.05.016)
34. **Sykes, AV**; Quintana, D; Andrade, JP. 2014. The effects of light intensity on growth and survival of cuttlefish (*Sepia officinalis*) hatchlings and juveniles. *Aquaculture Research* 45, 2032-2040. doi: [10.1111/are.12150](https://doi.org/10.1111/are.12150)
35. Fiorito, G; Affuso, A; Anderson, DB; Basil, J; Bonnaud, L; Botta, G; Cole, A; D'Angelo, L; De Girolamo, P; Dennison, N; Dickel, L; Di Cosmo, A; Di Cristo, C; Gestal, C; Fonseca, R; Grasso, F; Kristiansen, T; Kuba, M; Maffucci, F; Manciocco, A; Mark, FC; Melillo, D; Osorio, D; Palumbo, A; Perkins, K; Ponte, G; Raspa, M; Shashar, N; Smith, J; Smith, D; **Sykes, AV**; López, RV; Tublitz, N; Andrews, P. 2014. Cephalopods in neuroscience: Regulations, Research and the 3Rs. *Invertebrate Neuroscience* 14: 13-36. doi: [10.1007/s10158-013-0165-x](https://doi.org/10.1007/s10158-013-0165-x)
36. Jiménez-Prada, P; Scherbakova, A; Riera, R; Felipe, BC; **Sykes, AV**; Gonçalves, RA; Andrade, JP; Perales-Raya, C; Rodríguez, C; Almansa, E. 2014. Characterization of deformed hatchlings of *Octopus vulgaris* obtained under captivity from a small female. *Fisheries Research* 152: 62-65. doi: [10.1016/j.fishres.2013.08.017](https://doi.org/10.1016/j.fishres.2013.08.017)
37. **Sykes, AV**; Gonçalves, R; Andrade, JP. 2013. Early weaning of cuttlefish (*Sepia officinalis*, L.) with frozen grass shrimp (*Palaemonetes varians*) from the first day after hatching. *Aquaculture Research* 44, 1815-1823. doi: [10.1111/j.1365-2109.2012.03186.x](https://doi.org/10.1111/j.1365-2109.2012.03186.x)
38. **Sykes, AV**; Pereira, D; Rodríguez, C; Lorenzo, A; Andrade, JP. 2013. Effects of increased tank bottom areas on cuttlefish (*Sepia officinalis*, L.) reproduction performance. *Aquaculture Research* 44, 1017-1028. doi: [10.1111/j.1365-2109.2012.03106.x](https://doi.org/10.1111/j.1365-2109.2012.03106.x)
39. **Sykes, AV**; Baptista, F; Gonçalves, R; Andrade, JP. 2012. Directive 2010/63/EU on animal welfare: a review on the existing scientific knowledge and implications in cephalopod aquaculture research. *Reviews in Aquaculture* 4, 142-162. doi: [10.1111/j.1753-5131.2012.01070.x](https://doi.org/10.1111/j.1753-5131.2012.01070.x)



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41. **Sykes, AV**; Domingues, PM; Márquez, L; Andrade, JP. 2011. The effects of tank colours on the growth and survival of cuttlefish (*Sepia officinalis*, Linnaeus 1758) hatchlings and juveniles. *Aquaculture Research* 42, 441 - 449. doi: [10.1111/j.1365-2109.2010.02639.x](https://doi.org/10.1111/j.1365-2109.2010.02639.x)
42. Hormiga, JA; Almansa, E; **Sykes, AV**; Torres, NV. 2010. Model based optimization of feeding regimens in aquaculture: Application to the improvement of *Octopus vulgaris* viability in captivity. *Journal of Biotechnology* 149, 209 - 214. doi: [10.1016/j.jbiotec.2009.12.008](https://doi.org/10.1016/j.jbiotec.2009.12.008)
43. **Sykes, AV**; Oliveira, AR; Domingues, PM; Cardoso, CM; Andrade, JP; Nunes, ML. 2009. Assessment of European cuttlefish (*Sepia officinalis*, L.) nutritional value and freshness under ice storage using a developed Quality Index Method (QIM) and biochemical methods, *LWT - Food Science and Technology* 42, 1: 424-432. doi: [10.1016/j.lwt.2008.05.010](https://doi.org/10.1016/j.lwt.2008.05.010)
44. **Sykes, AV**; Almansa, E; Lorenzo, A; Andrade, JP. 2009. Lipid characterization of both wild and cultured eggs of cuttlefish (*Sepia officinalis* L.) throughout the embryonic development. *Aquaculture Nutrition* 15, 38-53. doi: [10.1111/j.1365-2095.2008.00566.x](https://doi.org/10.1111/j.1365-2095.2008.00566.x)
45. Nunes, MA; Santos, S; Cordeiro, JM; Neves, P; Silva, VS; **Sykes, AV**; Morgado, F; Dunant, Y; Gonçalves, PP. 2008. Acetylcholine release and choline uptake by cuttlefish (*Sepia officinalis*) optic lobe synaptosomes. *Biological Bulletin* 214, 1-5. doi: [10.2307/25066654](https://doi.org/10.2307/25066654)
46. Silva, VS; Nunes, MA; Cordeiro, JM; Calejo, Al; Santos, S; Neves, P; **Sykes, AV**; Morgado, F; Dunant, Y; Gonçalves, PP. 2007. Comparative effects of aluminum and ouabain on synaptosomal choline uptake, acetylcholine release and (Na<sup>+</sup>/K<sup>+</sup>)ATPase. *Toxicology* 236, 158-177. doi: [10.1016/j.tox.2007.04.017](https://doi.org/10.1016/j.tox.2007.04.017)
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48. **Sykes, AV**; Domingues, PM; Andrade, JP. 2006. Effects of using live grass shrimp (*Palaemonetes varians*) as the only source of food for the culture of cuttlefish, *Sepia officinalis* (Linnaeus, 1758). *Aquaculture International* 14, 551-568. doi: [10.1007/s10499-006-9054-1](https://doi.org/10.1007/s10499-006-9054-1)
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**PERSONAL INFORMATION AND ADDITIONAL SKILLS**

Date of Birth: 17/03/1974  
 Nationality: Portuguese  
 Marital status: Separated

**Spoken Languages**

**Mother tongue**

Portuguese

**Other Languages**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C2	C1
French	B2	C1	B1	B1	A2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
 Common European Framework of Reference for Languages

**Driving Licence**

EU Driving Licence Categories A1, A, B1 and B.