

## PERSONAL INFORMATION



## Cristóbal Espinosa Ruiz

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Sex Male | Date of birth 03/06/1985 | Nationality Spanish

## WORK EXPERIENCE

From October 2017 to present

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**Hired associated with a project as a higher degree**

Post-Doc researcher on "DiSTeM" group

- Development of the project " Effetto di xenobiotici in vitro, sulla modellazione di marcatori coinvolti nella biotrasformazione, nel metabolismo, nella risposta allo stress, nella modulazione dell'espressione genica, per la definizione di sensori di early warning da esposizione ambientale in organismi marini e terrestri", Progetto "Centro Internazionale di Studi Avanzati su Ambiente, ecosistema e Salute umana - Cisas" Work Package 5 "Molecular Epidemiology". Design and development on selected fish of different *in vitro* and *in vivo* experiments. Take and processing of biological samples. Analysis of immune system (cellular response and humoral response) at different levels (biological activities, enzymatic activity, gene expression, morphology, and others immune parameters). Study of cancer markers in human and fish.

[Department of earth and marine science \(DiSTeM\). University of Palermo. Italy](#)

From May 2017 to October 2017

**Hired associated with a project as a higher degree**

Post-Doc researcher on “Nonspecific immune system of teleost fish” group

- Development of the project “ Nutritional strategies for the improvement of productive yield: use of functional feed and health diets in aquaculture”. Design and development on selected fish of different *in vitro* and *in vivo* experiments. Take and processing of biological samples. Analysis of immune system (cellular response and humoral response) at different levels (biological activities, enzymatic activity, gene expression, morphology, and others immune parameters). Study of fatty acids profile.

[Cell Biology. Faculty of Biology. University of Murcia. Spain](#)

From June 2016 to May 2017

**Hired associated with a project as a higher degree**

Post-Doc researcher on “Nonspecific immune system of teleost fish” group

- Development of the project “Ecotoxicity effects of microplastics on marine ecosystems: Studies on sea bass (*Dicentrarchus labrax*)”. Design and development on selected fish of different *in vitro* and *in vivo* experiments. Take and processing of biological samples. Analysis of immune system (cellular response and humoral response) at different levels (biological activities, enzymatic activity, gene expression, morphology, and others immune parameters). Study of marker related to oxidative stress both enzymatic and genetic level (NRF2, CAT, SOD, GR, GST, HO1, NQO1...)

[Cell Biology. Faculty of Biology. University of Murcia. Spain](#)

From 2015 to 2016

**Hired associated with a project as a higher degree**

Post-Doc researcher on “Nonspecific immune system of teleost fish” group

- Development of the project “Development of marine fish feed through byproducts of the brewing company”. Design and development on selected fish of different *in vitro* and *in vivo* experiments. Take and processing of biological samples. Analysis of immune system (cellular response, humoral response) at different levels (biological activities, enzymatic activity, gene expression, morphology, and others immune parameters). Design and testing of different fish diets. Evaluation and procurement of healthy and sustainable diets.

[Cell Biology. Faculty of Biology. University of Murcia. Spain](#)

2010

**Hired associated with a project as a higher degree**

Post-Doc researcher on “Nutrition Lab” group

- Development of the project “ Nutritional and structural design of natural foods for health and vitality ”. Design and development on human, rats and different cells lines *in vivo* and *in vitro* experiments. Take and processing of biological samples. Study of marker related to oxidative stress both enzymatic and genetic level.

[Animal Physiology. Faculty of Biology. University of Murcia. Spain](#)

From 2015 to present

**Hired as a higher degree**

Technician

- Traceability of sanitary material.

[Hedist. Sanitary Matherial. Guadalajara. Spain](#)
**EDUCATION AND TRAINING**


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From 2011 to 2015

**PhD by University of Murcia.**

RQF level 8.

Department of Animal Physiology. University of Murcia. Murcia. Spain.

- Title: “Protective effect of white tea against oxidative stress in rats. Molecular and genetics mechanisms”

From 2010 to 2011

**Mater on Technology and Research in Biomedical Sciences**

RQF level 7.

Faculty of Medicine. University of Murcia. Murcia. Spain.

- Master Thesis: “Protective effect of white tea extract against acute oxidative damage produced by adriamycin in liver and brain microsomes”

From 2003 to 2010

**Degree in Biology**

RQF level 7.

Faculty of Biology. University of Murcia. Murcia. Spain.

- Degree Thesis: Protective effect of white tea extract against acute oxidative damage produced by adriamycin in different tissues.

PERSONAL SKILLS

Mother tongue(s) Spanish

Other language(s)

|               | UNDERSTANDING |         | SPEAKING           |                   | WRITING |
|---------------|---------------|---------|--------------------|-------------------|---------|
|               | Listening     | Reading | Spoken interaction | Spoken production |         |
| English       | C1            | C1      | B2                 | B2                | B2      |
| B1- CERTACLES |               |         |                    |                   |         |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user  
[Common European Framework of Reference for Languages](#)

Communication skills

- Good communication skills gained through my experience as PhD student and Post-Doc position.
- Teaching. Acquired along the PhD, Post-Doc position and teaching at an academy.

Organisational / managerial skills

- Leadership (currently responsible for a team of 7 people). Acquired on Post-Doc position.
- Organization of laboratory and theirs resources.

Job-related skills

- Maintenance of marine aquariums and sweets.
- Maintenance of rodents (rats, mice...).
- Handling of fish and rodents for experimentation (Accreditation C). Extraction and further processing of samples.
- Experimental design. Manufacture of diets.
- Spectrophotometric techniques.
- RNA isolation, quantification and processing. Determination of gene expression by RT-PCR.
- Primers design. BLAST.
- Flow cytometry. Viability. Phagocytic capacity.
- Processing and staining of samples for optical microscopy. Immune-assays.
- Techniques of cell biology.
- Techniques of cell culture. Different fish cell lines maintenance (SAF1, DLB1, PHCL1...).
- Establishment of primary culture. Explants.
- Techniques of immunology. ELISA. Western blot.
- Techniques for macro- and micronutrients analyses.
- Techniques for antioxidants and oxidative stress analyses.
- Techniques for fatty acids profile analyses by gas chromatography.
- Techniques for polyphenols quantification.
- Microsomes isolation. Membrane fluidity.
- Security in Labs.

Digital competence

| SELF-ASSESSMENT        |                  |                  |                  |                  |
|------------------------|------------------|------------------|------------------|------------------|
| Information processing | Communication    | Content creation | Safety           | Problem solving  |
| Proficient user        | Independent user | Independent user | Independent user | Independent user |

Levels: Basic user - Independent user - Proficient user  
[Digital competences - Self-assessment grid](#)

- Good command of office suite: Office (Microsoft Word, Excel y Power Point ).
- Good command of photo editing software gained as an amateur photographer. (Gimp2, Photoshop)
- Good command of statistics software: (SPSS, Graph Pad, Sigma Plot).
- Good command of real-time PCR software: QuantStudio and 7500 Software
- Good command of bibliography manager: Mendeley
- Good command of diet design: Nutrition Lab
- Good command of flow cytometer: FAScalibur

- Other skills
- Carpentry, mechanics and electronics (3 years of aquaria maintenance)
  - Musical studies: piano and trombone (12 years of conservatory)

Driving licence B

## ADDITIONAL INFORMATION

## Publications

- **Cristóbal Espinosa Ruiz**; Francisca Pérez Llamas; Francisco A. Guardiola; María Ángeles Esteban Abad; Marino Bañón Arnao; Salvador Zamora Navarro, 2014. Molecular mechanisms by which white tea prevents oxidative stress. *Journal of Physiology and Biochemistry*, 70, 891-900.
- Domingo Ruiz Cano; Francisca Pérez Llamas; María José Frutos; Marino Bañón Arnao; **Cristóbal Espinosa Ruiz**; José Ángel López Jiménez; Julián Castillo; Salvador Zamora Navarro, 2014. Chemical and functional properties of the different by-products of artichoke (*Cynara scolymus* L.) from industrial canning processing. *Food Chemistry*, 160, 134-140.
- **Cristóbal Espinosa Ruiz**; José Ángel López Jiménez; Lorena Cabrera Villa; Elvira Larqué Daza; María Pilar Almajano Pablos; Marino Bañón Arnao; Salvador Zamora Navarro; Francisca Pérez Llamas, 2012. Protective effect of white tea extract against acute oxidative injury caused by adriamycin in different tissues. *Food Chemistry*, 134, 1780-1785.
- Francisca Pérez Llamas; Daniel González Silvera; Lorena Cabrera; **Cristóbal Espinosa Ruiz**; José Ángel López Jiménez; Elvira Larqué Daza; María Pilar Almajano; Salvador Zamora Navarro, 2011. White tea consumption slightly reduces iron absorption but not growth, food efficiency, protein utilization, or calcium, phosphorus, magnesium, and zinc absorption in rats. *Journal of Physiology and Biochemistry*. 67, 331 - 337
- **Cristóbal Espinosa Ruiz**; Daniel González Silvera; Francisca Pérez Llamas; José Ángel López Jiménez; Salvador Zamora Navarro. Effect of long term intake of white tea on acute oxidative stress in rats. *Nutrición Hospitalaria* (DOI:10.3305/nh.2015.32.2.9270).
- **Cristóbal Espinosa Ruiz**, José Ángel López-Jiménez., Francisca Pérez-Llamas, Francisco A. Guardiola, María A. Esteban, Marino Bañón Arnao, Salvador Zamora, 2015. Long-term intake of white tea prevents oxidative damage caused by adriamycin in kidney of rats. *Journal of science and food agriculture*. (DOI: 10.1002/jsfa.7483)
- Francisco A. Guardiola, Elena Chaves-Pozo, **Cristóbal Espinosa Ruiz**, Diego Romero, José Meseguer, Alberto Cuesta, María A. Esteban, 2015. Methylmercury is accumulated, produces structural damage and changes antioxidant and immune status in the gilthead seabream (*Sparus aurata* L.). (DOI 10.1007/s00244-016-0268-6).
- José M. Garcia-Beltrán, **Cristóbal Espinosa Ruiz**, Francisco A. Guardiola, María A. Esteban, 2017. Dietary dehydrated lemon peel improves the immune status but not the antioxidant status of gilthead seabream (*Sparus aurata* L.). *Fish and Shellfish Immunology*. 64, 426–436.
- Mar Marcos-López, **Cristóbal Espinosa Ruiz**, Hamish D. Rodger, Ian O'Connor, Eugene MacCarthy, María A. Esteban, 2017. Local and systemic humoral immune response in farmed Atlantic salmon (*Salmo salar* L.) under a natural amoebic gill disease outbreak. *Fish & Shellfish Immunology* 66 (2017) 207-21

- **Cristóbal Espinosa Ruiz**, Alberto Cuesta, María A. Esteban 2017. Effects of dietary polyvinylchloride microparticles on general health, immune status and expression of several genes related to stress in gilthead seabream (*Sparus aurata* L.). *Fish & Shellfish Immunology*. DOI: 10.1016/j.fsi.2017.07.006
  - Mar Marcos-López, **Cristóbal Espinosa Ruiz**, Hamish D. Rodger, Ian O'Connor, Eugene MacCarthy, María A. Esteban 2017. Oxidative stress is associated with late stage amoebic gill disease in farmed Atlantic salmon (*Salmo salar* L.). *Journal of Fish Diseases*. DOI:10.1111/jfd.12699
  - **Cristóbal Espinosa Ruiz**, Lorena Cabrera, José Ángel López-Jiménez, Salvador Zamora Navarro, Francisca Pérez-Llamas 2017. Effects of long-term ingestion of white tea on oxidation produced by aging and acute oxidative damage in rats. *Journal of Physiology and Biochemistry*. DOI: 10.1007/s13105-017-0591-z
  - Adriana Cortés-Gomez, Patricia Morcillo, Francisco A. Guardiola, **Cristóbal Espinosa**, Maria Angeles Esteban, Alberto Cuesta, Marc Girondot, Diego Romero, 2018. Molecular oxidative stress markers in olive ridley turtles (*Lepidochelys olivacea*) and their relation to metal concentrations in wild populations. *Environmental Pollution*. 233: 156-167.
  - Gurjaspreet Singh, Akshpreet Singh, Jasbinder Singh, Darpandeep Aulakh, Mario Wriedt, **Cristóbal Espinosa**, M Angeles Esteban, Rakesh Sehgal, Kapil Goyal, Shweta Sinha, 2017. First synthesis of pyrene functionalized silatranes for mechanistic insight into their potential anti-parasitic and anti-oxidation activities. *New Journal of Chemistry*. DOI: 10.1039/C7NJ03338A.
  - **Cristobal Espinosa Ruiz**, Jose M Garcia-Beltran, Maria Angeles Esteban, Alberto Cuesta, 2018. In vitro effects of virgin microplastics on fish head-kidney leucocyte activities. *Environmental Pollution* 235: 30-38.
- Book chapter
- **Cristóbal Espinosa Ruiz**, María A. Esteban, Alberto Cuesta. Microplastics in aquatic environments and their toxicological implications for fish. In Tech ed. *Toxicology* (2016). (ISBN 978-953-51-4878-4). DOI: 10.5772/64815.

## Communications to congress

- Title: Molecular mechanisms by which white tea intake prevents oxidative-induced stress in vivo.  
Congress name: 20º IUNS International Congress of Nutrition  
Location: Granada, Andalucía, España  
Date of start: 15/09/2013  
Date of end: 20/05/2015  
Entity: Sociedad Española de Nutrición  
Cristóbal Espinosa Ruiz; Francisca Pérez Llamas; Francisco A. Guardiola Abellán; María Ángeles Esteban; Marino Bañón Arnao; Salvador Zamora Navarro; José Ángel López Jiménez. "Molecular mechanisms by which white tea intake prevents oxidative-induced stress in vivo".
- Title: Caracterización de la composición de diferentes subproductos de la producción industrial de la alcachofa (*Cynara scolymus* L.)  
Congress name: XIV Congreso de la Sociedad Española de Nutrición, Congreso SEN 2012  
Location: Zaragoza, Aragón, España  
Date of start: 27/09/2012  
Date of end: 29/09/2012  
Entity: Sociedad Española de Nutrición  
Domingo Ruiz Cano; Cristóbal Espinosa Ruiz; MI Alegría; José Ángel López Jiménez; Marino Bañón Arnao; María José Frutos; Francisca Pérez Llamas; Salvador Zamora Navarro. "Characterization of the composition of different products of industrial production of the artichoke (*Cynara scolymus* L.)".
- Title: Efecto protector del extracto de té blanco frente al daño oxidativo agudo provocado por adriamicina en microsomas de cerebro  
Congress name: XV Jornadas Nacionales de Nutrición Práctica y VII Congreso Internacional de Nutrición, Alimentación y Dietética  
City: Madrid, Comunidad de Madrid, España  
Date: 30/03/2011  
Entity: Sociedad española de dietética y ciencias de la alimentación  
Cristóbal Espinosa Ruiz; Lorena Cabrera; José Ángel López Jiménez; Elvira Larqué Daza; María Pilar Almajano; Francisca Pérez Llamas; Salvador Zamora Navarro. "Protective effect of white tea extract against acute oxidative damage caused by adriamycin in brain microsomes".
- Title: Protective effect of long term intake of white tea against acute oxidative stress in kidney  
Congress name: XVII Congreso de la Sociedad Latinoamericana de Nutrición  
City: Punta Cana, Dominican Republic  
Date: Nov, 2015  
Entity: Latin American Society of Nutrition  
Cristóbal Espinosa, Francisca Pérez-Llamas, José Ángel López-Jiménez, Francisco A. Guardiola, M<sup>a</sup> Ángeles Esteban, Marino B. Arnao, Salvador Zamora. "Protective effect of long term intake of white tea against acute oxidative stress in kidney".

- Title: Effect of dietary supplementation with yeast *Sacharomyces cerevisiae* on skin regeneration of gilthead seabream (*Sparus aurata*).  
Congress name: VI Congreso Ibérico de Ictiología  
City: Murcia Spain  
Date: July, 2016  
Entity: Sociedad Ibérica de Ictiología  
Cristóbal Espinosa, Héctor Cordero, Alberto Cuesta & María Ángeles Esteban. Effect of dietary supplementation with yeast *Sacharomyces cerevisiae* on skin regeneration of gilthead seabream (*Sparus aurata*)
- Title: Effect of *Tetraselmis chuii* microalgae on *Sparus aurata* L. immune system.  
Congress name: VI Congreso Ibérico de Ictiología  
City: Murcia Spain  
Date: July, 2016  
Entity: Sociedad Ibérica de Ictiología  
Rebeca Cerezuela, Cristóbal Espinosa, M<sup>a</sup> Dolores Hernández, M<sup>a</sup> Ángeles Esteban. Effect of *Tetraselmis chuii* microalgae on *Sparus aurata* L. immune system.
- Title: Effect of dietary supplementation with *Tetraselmis chuii* microalga on *Sparus aurata*: oxidative status and morphology of liver and intestine.  
Congress name: VI Congreso Ibérico de Ictiología  
City: Murcia Spain  
Date: July, 2016  
Entity: Sociedad Ibérica de Ictiología  
Cristóbal Espinosa, Rebeca Cerezuela, M<sup>a</sup> Dolores Hernández, M<sup>a</sup> Ángeles Esteban. Effect of dietary supplementation with *Tetraselmis chuii* microalga on *Sparus aurata*: oxidative status and morphology of liver and intestine.
- Title: Dehydrated lemon bark as dietary additive for gilthead seabream (*Sparus aurata*).  
Congress name: VI Congreso Ibérico de Ictiología  
City: Murcia Spain  
Date: July, 2016  
Entity: Sociedad Ibérica de Ictiología  
José María García Beltrán, Cristóbal Espinosa, Héctor Cordero, María Ángeles Esteban. Dehydrated lemon bark as dietary additive for gilthead seabream (*Sparus aurata*).
- Title: Polyvinylchloride microparticles administered in diet to *Sparus aurata* specimens affect the expression of stress markers.  
Congress name: I Congreso de Biodiversidad y Conservación de la Naturaleza, UAL.  
City: Almería, Spain  
Date: September, 2016  
Entity: University of Almería, Spain  
Cristóbal Espinosa, Alberto Cuesta, María Ángeles Esteban. Polyvinylchloride microparticles administered in diet to *Sparus aurata* specimens affect the expression of stress markers.
- Title: Effect of polyvinylchloride micro-particles administered in diet on the immune system of *Sparus aurata*.  
Congress name: I Congreso de Biodiversidad y Conservación de la Naturaleza, UAL.  
City: Almería, Spain  
Date: September, 2016  
Entity: University of Almería, Spain  
Cristóbal Espinosa, Alberto Cuesta, María Á. Esteban. Effect of polyvinylchloride micro-particles administered in diet on the immune system of *Sparus aurata*.



- Title: Effects of long term ingestion of white tea on oxidation produced by aging and acute oxidative damage in rats.  
 Congress name: XVII Reunión de la Sociedad Española de Nutrición y el XXII Congreso de la Sociedad de Nutrición y Dietética de Galicia.  
 City: Santiago de Compostela, Spain  
 Entity: Sociedad Española de Nutrición  
 Cristóbal Espinosa, Lorena Cabrera, José Ángel López-Jiménez, Salvador Zamora, Francisca Pérez-Llamas. Effects of long term ingestion of white tea on oxidation produced by aging and acute oxidative damage in rats.
- Title: Efeitos da dieta de microplasticos na expressao genetica do fígado e intestino de robalo.  
 Congress name: 1º Qongresso Português sobre Microplásticos: Contaminação Ambiental por Microplásticos e suas Implicações para a Saúde dos Ecossistemas, Animal e Humana.  
 City: Porto, Portugal  
 Date: December, 2016  
 Entity: Insituto de Ciencias Biomedicas de Abel Salazar da Universidade de Porto.  
 Cristóbal Espinosa, Alberto Cuesta, Diego Romero, José Meseguer, María Ángeles Esteban. Effect of dietary microplastics on European sea bass liver and gut gene expression.
- Title: In vitro effects of polyethylene (PE) microparticles on teleost fish leucocytes.  
 Congress name: EMN Meeting on Nanoparticles.  
 City: San Sebastian, Spain  
 Date: May, 2017  
 Entity: VaHost  
 Cristóbal Espinosa, Diego Romero, Francisco A. Guardiola, María Ángeles Esteban, Alberto Cuesta. In vitro effects of polyethylene (PE) microparticles on teleost fish leucocytes.
- Title: The intestinal immune response (inflammation, tight junction protein and humoral immune genes expression) of gilthead seabream *Sparus aurata* fed moringa leaves supplemented diets.  
 Congress name: Asian-Pacific Aquaculture 2017  
 City: Kuala Lumpur, Malaysia.  
 Date: July, 2017.  
 Abdalah Mansour. Lee Miao, Cristóbal Espinosa, Jose M. Betran, Diana C. Ceballos, Maria A. Esteban.
- Title: Humoral immunity and antioxidant response in farmed Atlantic salmon during amoebic gill disease.  
 Congress name: 18th International Conference on Diseases of Fish and Shellfish  
 City: Belfast, Northern Ireland  
 Date: September, 2017  
 Mar Marcos-López, Cristobal Espinosa , H.D. Rodger,I. O'Connor E., MacCarthy, Maria A. Esteban.
- Title: Efecto de *Jasonia glutinosa* (té de roca) en el sistema inmune de *Sparus aurata* L.  
 Congress name: National Congress of Aquaculture (CNA)  
 City: San Sebastian, Spain  
 Date: October, 2017  
 Cristobal Espinosa , Luciano Vilchez, Concetta Messina, Maria A. Esteban.
- Title: Effects of perfluorooctane sulfonate and polyethylene microparticles on European sea bass (*Dicentrarchus labrax* L.) immune status.  
 Congress name: Aquaculture Europe 2017 (AE2017).  
 City: Croatia  
 Date: October 17  
 Cristobal Espinosa, Francisco A. Guardiola, B. Cormier, S. Keiter, Maria A. Esteban, Alberto Cuesta.
- Title: Perfluorooctane sulfonate (PFOs) and polyethylene (PE) microparticles administered in diet affect the immune system and stress markers of European sea bass (*Dicentrarchus labrax* L.)  
 Congress name: "Biologia sperimentale nella ricerca di base e applicata all'ambiente e all'uomo"  
 City: Trapani  
 Date October, 2017  
 Cristóbal Espinosa, Bettie Cormier, Steffen Keiter, María Angeles Esteban, Alberto Cuesta.

- Title: Effects of dietary *Weissella cibaria* isolated from Guppy *Poecilia reticulata* (Cyprinodontiformes: Poeciliidae) as probiotic on survival, growth performance and expression of gene IGF II  
Congress name: "Biologia sperimentale nella ricerca di base e applicata all'ambiente e all'uomo"  
City: Trapani  
Date October, 2017  
Ladan Jahangiri, Mohammad Sudagar, Cristóbal Espinosa, Maria Angeles Esteban, Hamed Kolangi Miandare, Omid Ashayerizadeh, Alijan Tabarraei
- Title: Effect of *Jasonia glutinosa* (rock tea) on *Sparus aurata* L. immune system  
Congress name: "Biologia sperimentale nella ricerca di base e applicata all'ambiente e all'uomo"  
City: Trapani  
Date October, 2017  
Cristóbal Espinosa, José María García Beltrán, Concetta Messina, María Ángeles Esteban
- Title: Biochemical markers involved in cellular response to sublethals concentrations of flame retardants: preliminary *in vitro* results  
Congress name: "Biologia sperimentale nella ricerca di base e applicata all'ambiente e all'uomo"  
City: Trapani  
Date October, 2017  
Simona Manuquera, Cristóbal Espinosa-Ruiz, Maria Morghese, Fabio Cibella, Paolo Colombo, Mirella Profita, Andrea Santulli, Mario Sprovieri, Concetta Maria Messina
- Title: La administración de una vacuna recombinante frente a nodavirus (NNV) por vía oral o inyección induce la producción de anticuerpos específicos en lubina  
Congress name: National Congress of Aquaculture (CNA)  
City: San Sebastian, Spain  
Date: October, 2017  
F.A Guardiola, C. Espinosa, M. Arizcun, E. Chaves-Pozo, J. Meseguer, M.A. Esteban, A. Cuesta  
**"Award winning poster"**
- Title: Oral or intraperitoneal administration of a recombinant nodavirus (NNV) vaccine elicits specific antibodies in European sea bass  
Congress name: Aquaculture Europe 2017 (AE2017).  
City: Croatia  
Date: October 17  
F.A Guardiola, C. Espinosa, E. Chaves-Pozo, J. Meseguer, M.A. Esteban and A. Cuesta

Participation in national & international research projects

- **Project:** Evaluación de la capacidad antioxidante y antimicrobiana in vivo e in vitro de té blanco y del té negro y su repercusión sobre el envejecimiento AGL2005-08088-C02-01.  
 “Evaluation of the antioxidant and antimicrobial activity in vivo and in vitro of white tea and black tea and its impact on aging”.  
 Entity: Ministerio de Educación, Política Social y Deporte  
 Kind of entity: Organismo Público de Investigación  
 Location: Spain.  
 Principal researchers (IP, Co-IP,...): Maria Pilar Almajano Pablos; Rosa Carbo Molines; Salvador Zamora Navarro  
 Number of researchers: 3  
 Date of period: 01/01/2006 - 31/12/2008  
 Quantity: 71,400 euros
- **Project:** HEALTHY STRUCTURING - Nutritional and Structural Design of Natural Foods for Health and Vitality.  
 Contribution grade: Researcher hired as a higher degree.  
 Principal researchers (IP, Co-IP,...): Maud Langton; Keith Waldron; Robert Kabbert; Marie Alming; Ingrid Appelqvist; Francisca Pérez Llamas; Andrea Grundelius; Marc Hendrixs.  
 Entity/s, participant/s: Chalmers University of Technology (Sweden); Institute of Food Research (UK); Katholieke Universiteit Leuven (Belgium); Swedish Institute for Food and Biotechnology; Tetra Pak Processing Systems (Sweden); Unilever (The Netherlands); University of Murcia (Spain); Verein zur Förderung agrar - und stadtökologischer Projekte, ASP (Germany).  
 Date of beginning: 01/11/2006 Duration: 4 years  
 Quantity: 5,081,858 euros.
- **Project:** EPHEMARE - Ecotoxicological effects of microplastics in marine ecosystems.  
 Contribution grade: Researcher hired as a higher degree.  
 Principal researchers (IP, Co-IP, ...): Magnus Engwall, Leader: Ronny Blust, Xavier Coussin, Marina Albertosa, Thomas Braunbeck, Francesco Regoli, Kathrin Kopke.  
 Entity/s, participant/s: University of Örebro, University of Antwerp, IFREMER, IEO, University of Heidelberg, Marche Polytechnic University, University College Cork.  
 Coordinator: Ricardo Beiras, University of Vigo.  
 Date of beginning: 01-01-2016 Duration: 3 years  
 Quantity: 7,700,000 euros.
- **Project:** DIETplus- “Nutritional strategies for the improvement of productive yield: use of functional feed and health diets in aquaculture”  
 Contribution grade: Researcher hired as a higher degree.  
 Entity/s, participant/s: Institut de Recerca i Tecnologia Agroalimentàries (IRTA), Centro de Sant Carles de la Ràpita. Universitat Autònoma de Barcelona (UAB), Departament de Biologia Celular, de Fisiologia i d'Immunologia. Instituto de Investigación y Formación Agraria y Pesquera (IFAPA), Centro de Aguas del Pino. Universidad de Murcia (UM), Facultad de Biología, Departamento de Biología Celular e Histología. Universidad de Cádiz (UCA), Facultad de Ciencias del Mar y Ambientales. Instituto de Ciencias Marinas de Andalucía (ICMAN) – CSIC. Universitat de Barcelona (UB), Facultad de Biología, Departamento de Fisiología e Inmunología.  
 Date of beginning: December 2016 Duration: 2,5 years.

**Project:** Cellular immune defences and design of oral vaccines to nodavirus  
 Contribution grade: Collaborator  
 Entity/s, participant/s: University of Murcia Facultad de Biología, Departamento de Biología Celular e Histología.  
 Date of collaboration: 2017 Duration: 6 months

**Project:** "Centro Internazionale di Studi Avanzati su Ambiente, ecosistema e Salute umana - CISAS"  
 Contribution grade: Researcher hired as a Post Doc degree  
 Entity/s, participant/s: DTA-CNR, IAMC-CNR, IASI-CNR, IBIM-CNR, IFC-CNR. Collaborators: UniPA-DiSTeM, ENEA, IIA-CNR, ISAC-CNR, ISS, IZS, UNICT, UNIME, UNIRC, UNIPI, Regione Siciliana, Regione Calabria, ASP Crotone, ASP Siracusa, ASP Messina,  
 Date of collaboration: 2017 to present.

## Additional education

- Title: "Programa de formación teórico-práctica sobre gestión y normas de trabajo en laboratorios aplicables a laboratorios de nivel 1 y 2 de contención biológica (NCB1 y NCB2)" "Theoretical-practical training program on labor management and labor standards applicable to biological containment level 1 and 2 laboratories (NCB1 and NCB2)".  
Institution: University of Murcia  
Date of finish: 31-01-17 Duration: 22 hours
- Title: XXI Curso de cultivo celular. "XXI Course of Cell Culture"  
Institution: University of Murcia  
Date of finish: 26-02-16 Duration: 60 hours
- Title: Curso "I curso formación del personal responsable para dirigir o diseñar los procedimientos de experimentación con animales categoría C" "1st course training of personnel responsible for directing or designing procedures of animal testing category C"  
Institution: University of Murcia  
Date of finish: 29/09/15. Duration: 60 hours
- Title: Curso "Jornadas Identificación y Prevención de Riesgos en los laboratorios" "Course: "Workshops of Identification and Prevention of Risks in laboratories"  
Institution: University of Murcia  
Date of finish: 30/10/15. Duration: 22 hours
- Title: Circadian clocks: How rythms structure life  
Institution: Ludwig-Maximilians-Universität München (LMU)  
Type of entity: Universidad  
Date of finish: 10/04/2015
- Title: Curso: "PCR: Desde el funcionamiento a la PCR a tiempo real".  
"PCR: Since the operation to the real-time PCR".  
Institution: Ilustre colegio oficial de químicos de Murcia y el colegio oficial de biólogos de la región de Murcia  
Type of entity: Chemistry and Biology College  
Date of finish: 26/05/2011 Duration: 10 hours
- Title: Análisis informáticos realizados con la aplicación GRUNUMUR  
Institution: University of Murcia  
Date of finish: 01/10/2009 Duration: 150 hours
- Title: Actividades de colaboración en tareas de investigación, valoración de nutrientes y desarrollo de ensayos de palatabilidad y determinaciones de actividades enzimáticas relacionadas con procesos de oxidación y prevención del estrés oxidativo.  
Institution: University of Murcia  
Date of finish: 10/10/2008 Duration: 150 hours
- Title: Colaboración con la UMU: "Efecto de los polifenoles sobre el daño oxidativo en mitocondrias de diferentes tejidos"  
Institution: University of Murcia  
Date of finish: 03/09/2008 Duration: 150 hours
- Title: Trato y mantenimiento de animales de laboratorio, así como anestesia y extracción de órganos.  
"Treatment and maintenance of laboratory animals as well as anesthesia and organ extraction".  
Institution: University of Murcia  
Date of finish: 01/10/2008 Duration: 150 hours
- Title: Curso: "Acuariología y cultivo de peces: Inmunopatología" "Aquariology and fish farming: Immunopathology".  
Institution: Universidad Internacional del Mar Type of entity: Universidad  
Date of finish: 21/09/2007 Duration: 30 hours

- Title: Alumno Interno del Departamento de Fisiología Animal. "Internal student of the Department of Animal Physiology". (2005-2008)  
Institution: University of Murcia  
Date of finish: 11/07/2007 Duration: 400 hours
  
- Title: Curso: "Cronobiología del envejecimiento" "Chronobiology of aging"  
Institution: Official College of Medicine from Murcia  
Type of entity: Medicine College  
Date of finish: 05/03/2007 Duration: 21 hours
  
- Title: Curso "El reloj biológico del envejecimiento" "The biological clock of aging"  
Institution: Universidad internacional del mar  
Type of entity: Universidad  
Date of finish: 26/09/2006

## ANNEXES

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Documents annexed to CV:

- Copies of degrees and qualifications
- Copies of contracts
- Certificates of communications to congress
- Certificates of courses
- Copies of publications