



## Jose Maria Castaño Ortiz

Date of birth: 22/07/1993


Nationality: Spanish

Gender: Male

### CONTACT

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### ABOUT ME

Biologist with MSc in Environmental Toxicology

### WORK EXPERIENCE

**04/2019 – CURRENT** – Girona, Spain

#### • Predoctoral Researcher

Catalan Institute for Water Research (ICRA)

Doctoral Programme in Water Science and Technology. FI-AGAUR scholarship awarded by Generalitat de Catalunya within the PLAS-MED project: Microplastics and microcontaminants in the Mediterranean coast. Toxicity and environmental and human health impacts. Among performed tasks at the Water Quality Area:

- Collection and processing of environmental samples, using adapted methodologies for extraction of water, sediments, and biota. Determination of pharmaceutical residues, bactericides, plastic additives, and transformation products (LC-MS/MS, GC-MS/MS), and microplastics (Fluorescence Microscopy).
- Toxicity assays of emerging pollutants in river and marine mesocosms, with periphyton and mussels as study models. Endpoints comprised chemical analyses, ecotoxicological parameters, metabolomics (LC-HRMS), antibiotic resistance genes (qPCR), or community structure (16S rRNA sequencing).
- Data treatment and interpretation. Assessment of anthropogenic pressures in rivers and vulnerable coastal areas. Participation in international conferences and outreach activities.
- Co-supervision of internship projects: coordination and supervision of work developed by students, and review of associated reports

Girona, Spain

**09/2018 – 03/2019** – Girona, Spain

#### • Research Technician

Catalan Institute for Water Research (ICRA)

In the framework of the PLAS-MED project "Microplastics and microcontaminants in the Mediterranean coast. Toxicity and environmental and human health impacts":

- Planification and participation in sampling campaigns in the Ebro Delta area (water, sediments, biota, plastic pollution) to study the environmental occurrence and fate of emerging pollutant in continental and coastal water systems. Contribution to the prioritization of contaminants based on their use, expected occurrence, or potential for bioaccumulation and toxicity.

**08/2017**

#### • Teaching assistant

Norwegian University of Science and Technology

Collaboration in the introductory course *How to Do Science?* for new master students at the Department of Biology.

Trondheim, Norway

**05/2017**

**Field assistant**

Aarhus University (Department of Bioscience)

In the framework of an international project about chemical and microbiological pollution in inland and marine aquatic environments, I participated in the sampling of pink-footed geese (*Anser brachyrhynchus*), as bioindicators of pollution and seroprevalence of influenza virus in wild birds. Collection of birds and blood sample processing in Nord-Trøndelag (Norway).

Rønne, Denmark

**02/2016 – 08/2016**

**Research Assistant (collaboration grant)**

Universitat de Barcelona (Animal Biology Department)

Collaboration grant issued by the Spanish Ministry of Education (MECD) to work on the use of stable isotope analysis to address kleptoparasitism as a foraging strategy in common terns (*Sterna hirundo*). Contribution to the assessment of mercury pollution in the Ebro Delta and its accumulation in the aquatic food web.

Barcelona, Spain

## EDUCATION AND TRAINING

**CURRENT**

**Doctoral Programme in Water Science and Technology**

University of Girona

Research in the framework of the PLAS-MED project "Microplastics and microcontaminants in the Mediterranean coast. Toxicity and environmental and human health impacts".

Courses:

- Writing and publishing a paper in Science
- Tools and resources for science communication and dissemination
- Adverse Outcome Pathways (AOPs) in Environmental Toxicology (Norwegian University of Science and Technology).

**08/2016 – 06/2018 – Trondheim, Norway**

**Master's degree in Environmental Toxicology**

Norwegian University of Science and Technology (NTNU)

International MSc programme in Environmental Toxicology (120 ECTS). The following courses were taken: Environmental Toxicology, Advanced Ecotoxicology, Genetic Toxicology, Experimental Ecotoxicology, Study Design, Experts in Teamwork, Special Syllabus and Laboratory Animal Science for Researchers.

MSc project (60 ECTS): "Levels of per- and polyfluoroalkyl substances (PFASs) in northern goshawks (*Accipiter gentilis*) and potential effect on innate immune system signalling pathways". Tasks that I carried out included fieldwork with raptors, molecular sexing, analysis of PFASs in collected samples, and *in vitro* exposure and infection experiments to evaluate changes in immune gene expression (qPCR) and viral replication (plaque assays).

**09/2011 – 02/2016 – Barcelona, Spain**

## ● Bachelor's degree in Biology (240 ECTS)

University of Barcelona

08/2015 – 01/2016 – Trondheim, Norway

## ● Undergraduate Research Assistant (practical training)

Norwegian University of Science and Technology (NTNU)

Bachelor's thesis: "Levels of Persistent Organic Pollutants (POPs) and Metals in Breeding Kittiwakes *Rissa tridactyla* from Svalbard) as a part of my Erasmus internship at NTNU. I gained practical training in metal analysis (acid digestion and ICP-MS), pollutant extraction (SPE), molecular sexing through PCR and electrophoresis, or stable isotope analyses.

07/2014 – 08/2014 – Tortosa, Spain

## ● Undergraduate Research Assistant (internship)

Parc Natural dels Ports

Collaboration in various research initiatives led by Parc Natural dels Ports: monitoring of vulnerable fauna (fish, crabs, dragonflies, bats) in local streams and rivers, assessment of electrocution impacts in birds (osteological identification of carcasses near power lines). Data interpretation and writing of technical reports.

2009 – 2011 – Calafell, Spain

## ● Graduated in high school with Honours

IES Camí de Mar

## LANGUAGE SKILLS

**MOTHER TONGUE(S):** Spanish | Catalan

**OTHER LANGUAGE(S):**

English

Listening	Reading	Spoken production	Spoken interaction	Writing
C1	C1	C1	C1	C1

## PUBLICATIONS

### ● Publications

- Lam, SS; Tjørnløv, RS; Therkildsen, OR; Christensen, TK; Madsen, J; Daugaard-Petersen, T; [Castaño-Ortiz, JM](#); Peng, W; Charbonneau, M; Iglesias-Rivas, E; Garbus, SE; Lyngs, P; Siebert, U; Dietz, R; Maier-Sam, K; Lierz, M; Tombre, IM; Andersen-Ranberg, EU; Sonne, CSeroprevalence of avian influenza in Baltic common eiders (*Somateria mollissima*) and pink-footed geese (*Anser brachyrhynchus*). *Environmental Research* 142 (2020).
- [Castaño-Ortiz, JM](#); Jaspers, VLB; Waugh, CA. PFOS mediates immunomodulation in an avian cell line that can be mitigated via a virus infection. *BMC Veterinary Research* 15 (2019)
- Briels, N; Torgersen, LN; [Castaño-Ortiz, JM](#); Covaci, A; Løseth, ME; Herzke, D; Nygård, T; Bustnes, JO; Ciesielski, TM; Pomae, G; Malarvannane, G; Covaci, A; Jaspers, VLB. Integrated exposure assessment of northern goshawk (*Accipiter gentilis*) nestlings to legacy and emerging organic pollutants using non-destructive samples. *Environmental Research* 178 (2019).

## CONFERENCES AND SEMINARS

### Conferences

- Castaño-Ortiz, JM; Santos, L; Romero, F; Cojoc, L; Barceló, D; Rodríguez-Mozaz, S Investigating the interactive effects of microplastics and the antimicrobial triclosan on river biofilms. Presentació oral a la Society of Environmental Toxicology and Chemistry (SETAC Europe 2021).
- Castaño-Ortiz, JM; Gil-Solsona, R; Barceló, D; Rodríguez-Mozaz, S. Biomonitoring of pharmaceutical pollution in the Ebro river: comparing their prevalence and levels in different fish tissues. Pòster a la 16th annual workshop on emerging high-resolutions mass spectrometry (HRMS) and LS-MS/MS applications in environmental analysis and food safety (2020).
- Castaño-Ortiz, JM; Gil-Solsona, R; Santos, LHMLM, Barceló, D; Rodríguez-Mozaz, S. Is the Mar Menor lagoon (SE Spain) taking a break from pharmaceutical pollution? A decade of pharmaceutical monitoring in a threatened Mediterranean coastal ecosystem. Pòster a la 2nd International conference on risk assessment of pharmaceuticals in the environment (ICRAPHE 2019).
- Castaño-Ortiz, JM; Briels, N; Nygård, T; Bustnes, JO; Gómez-Ramírez, P; García-Fernández, AJ; Herzke, D; Jaspers, VLB. Per- and polyfluoroalkyl substances (PFASs) in plasma and feathers of Northern Goshawks (*Accipiter gentilis*) nestlings from Norway and Spain. Pòster a la Norwegian Environmental Toxicology Symposium (NETS 2018).

## HONOURS AND AWARDS

### Honours and awards

- Best poster presentation at the 7th Norwegian Environmental Toxicology Symposium.
- Courses completed with Honours: Microbiology and Marine Ecology.

## WORKSHOPS

### Workshops

- IX Workshop d'avaluació del risc a la cadena alimentària: Riscos emergents en productes del mar (Barcelona, Spain)
- Jornada Oceans i Salut Humana: explorant les relacions entre els ecosistemes marins i la salut i el benestar de les persones (Roses, Spain)
- Jornada TecnoAqua: Los microplásticos: preocupación emergente en las aguas (Valencia, Spain)

## COURSES

### Courses

Advanced Outcome Pathways (AOPs) in Environmental Toxicology (Norwegian University of Science and Technology, 2018)

## CERTIFICATIONS

### ● Certifications

- Felasa C certificate, in compliance with the Education and Training Framework by the European Commission to fulfill the requirements for functions (a) (persons who carry out procedures on animals) and (b) (persons who design procedures and projects) (2017).
- Assistant bird-ringing permit (2014).
- Wildlife tracking course (International University Study Center, 2013).
- Environmental volunteering and management course (Xarxa de Voluntariat Ambiental de Catalunya, 2012).

## VOLUNTEERING

### ● Volunteering

- Collaboration with the Department of Animal Biology (University of Barcelona) in field sampling campaigns.
- Monitoring and scientific ringing of birds (ICO, Grup d'anellament Pit-roig).
- Contribution to the Catalan Breeding Bird Atlas 2015-2018 (ICO)
- Collaboration in sustainable forest management (Projecte Bosc de Muntanya), bird reserve in the Ebro Delta (SEO Birdlife), and reintroduction of local fauna (Associació Mediambiental la Sínia)

## DRIVING LICENCE

### ● Driving Licence: B