

## Part A. PERSONAL INFORMATION

CV date 24-10-2023

First and Family name	EIDER BILBAO CASTELLANOS		
Social Security, Passport, ID number		Age	
Researcher numbers	Researcher ID	Y-6831-2018	
	Author ID		
	ORCID code	0000-0001-6361-9343	

### A.1. Current position

Name of University/Institution	University of the Basque Country		
Department	Zoology and Animal Cell Biology		
Address and Country	Faculty of Science and Technology, Leioa // Plentzia Marine Station (PiE), Plentzia. (UPV-EHU)		
Phone number	946013549 946017669	E-mail	<a href="mailto:eider.bilbao@ehu.eus">eider.bilbao@ehu.eus</a>
Current position	Lecturer	From	2007
UNESCO code	2407, 2499 (Environmental Toxicology)		
Key words	Biomarkers, toxicogenomics, transcriptomics		

### A.2. Education

Degree/PhD	University	Year
Degree on Biochemistry	University of the Basque Country	2001
European PhD	University of the Basque Country	2007

### A.3. JCR articles, h Index, thesis supervised...

-Number of supervised International PhDs: 3 (Excellent Cum laude).  
Total references: 776 (sin autocitas). Most of them in Q1. H-index: 16

## Part B. CV SUMMARY (max. 3500 characters, including spaces)

Lecturer in Cell Biology at UPV/EHU, Coord of the LLL and Outreach Progr, as well as Scientific Manager for Research Labs. She has long lasting experience as coordinator of the Prest-Gara Progr (Basque Gov.) for LLL of Secondary Education Teachers. European PhD Thesis (UPV/EHU; 2007), she conducted pre-doctoral studies at U Leuven and a post-doctoral internship in U Stirling. She has been recognized with best oral presentation award (Fish Biology Congress, St John's, Canada; 2006) and 3rd CAF-Elhuyar science divulgation award. Supervisor of BSc research projects, 10 MSc projects, 3 disserted PhD Thesis. More than 30 ISI articles and 4 book chapters, 1 research book and 6 dissemination articles >80 international conferences, and more than 150 gene sequences (mussels, hake, mullet or cod) in the Genbank. Researcher in many National or/and European/International projects. 1 international research agreement as PI and an annual contract (since 2011) as co-PI. Acad Coordinator of the course "Tissue Engineering" (Biotech BSc and Biochem & Mol Biol BSc; UPV/EHU) and "Environmental (toxi)cogenomics (MER EMMC, IMBRsea EMJMD and MER+ EMJMD, ECT+ EMJMD, CTA) and Acad Coordinator of the first course on the Biotechnology degree, UPV/EHU.

## Part C. RELEVANT MERITS

### C.1. Publications (last 10)

1.- Gonzalez-Soto, Blasco N, Irazola M, **Bilbao E**, Guilhermino L, Cajarville MP. Fate and effects of Graphene oxide alone and with sorbed benzo(a)pyrene in mussels *Mytilus galloprovincialis*. Journal of Hazardous Materials 452: 131280. (2023). **Índice de calidad: 13.6 (Q1, SCIE-Environmental Sciences)**.

2.- Gonzalez-Soto N, Campos L, Navarro E, **Bilbao E**, Guilhermino L, Cajarville MP. Effects of microplastics alone or with sorbed oil compounds from the water accomodated fraction of a North Sea crude oil on marine mussels (*Mytilus*

*galloprovincialis*). Science of the Total Environment 85(Pt 2):157999 (2022). **Índice de calidad: 9.8 (Q1, SCIE-Environmental Sciences)**.

3.- Duroudier N, Katsumiti A, Mikolaczyk M, Schafer J, **Bilbao E**, Cajaraville MP. Cell and tissue level responses in mussels *Mytilus galloprovincialis* exposed to PVP/PEI coated silver nanoparticles through the diet at different seasons. Science of the Total Environment 750, 141303 (2021). **Índice de calidad 10.754 (Q1, SCIE-Environmental Sciences)**.

4.- Lacave JM, **Bilbao E**, Gilliland D, Mura F, Dini L, Cajaraville MP, Orbea A. Bioaccumulation, cellular and molecular effects in adult zebrafish under exposure to cadmium sulphide nanoparticles and to ionic cadmium. **Chemosphere** (2020). 238:124588. doi: 10.1016/j.chemosphere.2019.124588. Impact: 5.108 (Q1).

5.- González-Soto N, Hatfield J, Katsumiti A, Duroudier N; Lacave JM; **Bilbao E**; Orbea A, Navarro E; Cajaraville MP. Impacts of dietary exposure to different sized polystyrene microplastics alone and with sorbed benzo[a]pyrene on biomarkers and whole organism responses in mussels *Mytilus galloprovincialis*. **Science of the Total Environment** (2019). 684:548-566. doi: 10.1016/j.scitotenv.2019.05.161. Impact: 4.610 (Q1).

6.- Duroudier N, Markaide P, Cajaraville MP, **Bilbao E**. Season influences the transcriptomic effects of dietary exposure to PVP/PEI coated Ag nanoparticles on mussels *Mytilus galloprovincialis*. **Comparative Biochemistry and Physiology, Part C** (2019). 222:19-30. doi: 10.1016/j.cbpc.2019.03.010. Impact: 2.697(Q2).

7.- Duroudier N, Cardoso C, Mehennaoui K, Mikolaczyk M, Schäfer J, Gutleb AC, Giamberini L, Bebianno MJ, **Bilbao E**, Cajaraville MP. Changes in protein expression in mussels *Mytilus galloprovincialis* dietarily exposed to PVP/PEI coated silver nanoparticles at different seasons. **Aquatic Toxicology** (2019) 210:56-68. doi: 10.1016/j.aquatox.2019.02.010. Impact: 3.884 (Q1).

8.- Duroudier N, Katsumiti A, Mikolaczyk M, Schäfer J, **Bilbao E**, Cajaraville MP. Dietary exposure of mussels to PVP/PEI coated Ag nanoparticles causes Ag accumulation in adults and abnormal embryo development in their offspring. **Science of the Total Environment** (2019) 655:48-60. doi: 10.1016/j.scitotenv.2018.11.181. Impact: 4.610 (Q1).

9.- Jimeno-Romero A, **Bilbao E**, Valsami-Jones E, Cajaraville MP, Soto M, Marigómez I. Bioaccumulation, tissue and cell distribution, biomarkers and toxicopathic effects of CdS quantum dots in mussels, *Mytilus galloprovincialis*. **Ecotoxicology and Environmental Safety**. (2019) 167:288-300. doi: 10.1016/j.ecoenv.2018.10.035. Impact: 3.974 (Q1).

10.- Lacave JM, Vicario-Parés U, **Bilbao E**, Gilliland D, Mura F, Dini L, Cajaraville MP, Orbea A. Waterborne exposure of adult zebrafish to silver nanoparticles and to ionic silver results in differential silver accumulation and effects at cellular and molecular levels. **Science of the Total Environment** (2018) 642:1209-1120. doi: 10.1016/j.scitotenv. Impact: 4.317 (Q1).

## C.2. Research projects and grants

1.- Reference: PID2021-128600OB-I00

Title: Fate and Impact of Environmentally ReAlistic nanoplastics and of novel bioplastics in the aquatic environment. FIERA.

Main researchers: Miren P. Cajaraville and Amaia Orbea

Duration: 2021 to 2025

Funded by: Ministerio de Ciencia e Innovación.

Funding: 294.030 €

2.- Reference: TED2021-131147B-100

Title: Environmental Safety of polyUrethanes from Renewable sources and from REcycled plastics: hazard assessment based on a battery of alternative methods (ENSURE2).

Main researchers: Amaia Orbea y Arantxa Eceiza

Duration: desde 2021 hasta 2025

Funded by: Ministerio de Ciencia e Innovación.

Funding: 212.750 €

3.-Title: What role can play omics as a tool for risk assessment and environmental monitoring?

Main researcher: Frédérique Courant, Eider Bilbao (grupo CBET+)

Duration: desde 2021 hasta 2025

Funded by: ANSES (French Risk Assessment Agency)

Funding: 199.889 (32.032 euros CBET+)

4. CTM2016-81130-R

Title: "Nanomateriales como vehículos de contaminantes orgánicos persistentes en el medio acuático: desarrollo de herramientas para la evaluación del riesgo basadas en métodos alternativos y organismos modelo. NACE".

Main researcher: Amaia Orbea and Miren P. Cajaraville.

Funded by: Ministerio de Economía y Competitividad. Cofounded by the European Union (FEDER). Proyectos de I+D+i del Programa estatal de Investigación, desarrollo e innovación orientada a los Retos de la Sociedad 2016. Programa Ciencia y Tecnología Marina.

Duration: 2016-2020.

Funding: 196.000 € and indirect costs 41.000 €.

5. Reference: MAT2012-39372

Title: Mecanismos de acción y toxicidad de nanopartículas de plata en organismos modelo acuáticos y terrestres utilizando técnicas ómicas-NANOSILVEROMICS.

Main researcher: Miren P. Cajaraville.

Funded by: Ministerio de Economía y Empresa (MINECO).

Duration: 2013-2015.

Funding: 45.000 €.

6. Reference: Etortek IE14-393

Title: Consolidación de los grupos de nanobiomecánica, teoría, nanomateriales y nanoimagen del CIC Nanogune y desarrollo de actividades de investigación y desarrollo tecnológico en el ámbito de la corrosión y la incrustación (NANOGUNE 2014).

Main researcher: José María Pitarke (CIC-Nanogune). Cajaraville Bereciartua (UPV/EHU).

Funded by: Gobierno Vasco, Departamento de Industria.

Duration: 2014-2015.

Funding: 2.503,2 € (UPV/EHU).

7. Reference: Project number: 214184

Title: Polar cod, lipid metabolism and disruption by polycyclic aromatic hydrocarbons (Polarisation).

Main researcher: Jasmine Nahrang (University of Tromsø), Miren P. Cajaraville Bereciartua (UPV/EHU).

Funded by: Research Council of Norway.

Duration: 2012-2015.

Funding: 12.000.000 NOK (UPV/EHU).

8. Reference: CP-FP 214478-2 NanoReTox

Title: The reactivity and toxicity of engineered nanoparticles: risks to the environment and human health-NanoReTox.

Main researcher: Eva Valsami-Jones (Natural History Museum, UK), Miren P. Cajaraville Bereciartua (UPV/EHU).

Funded by: VII Framework Programme for Research, European Union, FP7-NMP-2007-SMALL- 1, NMP-Nanosciences, Nanotechnologies, Materials and new Production Technologies, Collaborative project.

Duration: 2008-2012.

Funding: 278.629 € (UPV/EHU).

9. Reference: BG-07-2015

Title: Integrated oil spill response actions and environmental effects" (GRACE).

Main researcher: Dr. Kirsten Jørgensen (Finnish Env. Inst. SYKE, Finland). Ionan Marigomez (UPV/EHU).

Funded by: Response capacities to oil spills and marine pollutions, H2020-BG-2015-2

Duration: 2015-2019.

### C.3. Contracts

1.- "Tissue Distribution and Biological effects of microplastics in marine mussels"

Main Reasercher: Ionan Marigómez.

Funded by: Swedish Museum of Natural History.

Duration: 01/01/2015-31/12/2015.

2.- "Estudio del estado Ecológico del Entorno de la Descarga en Punta Lucero. Petronor".

Main Researcher: Jose María Gorostiaga. Manu Soto and Eider Bilbao (CBET group).

Funded by: Petronor-Petróleos del Norte S.A.

Duration: yearly since 2001.

### C.4. Patents

1- Método para la identificación del sexo en peces. CANCIO, I; DIAZ DE CERIO, O; ROJO, I; BILBAO, E; IZAGUIRRE, U; ORBEA, A; SOTO, M; MARIGÓMEZ, JA; CAJARAVILLE, MP; ORTIZARRAGOITIA, M. Spanish patent ES 2 392 604 B1

2- Method for identifying the sex of fish. CANCIO, I; DIAZ DE CERIO, O; ROJO, I; BILBAO, E; IZAGUIRRE, U; ORBEA, A; SOTO, M; MARIGÓMEZ, JA; CAJARAVILLE, MP; ORTIZARRAGOITIA, M. Application for international patent WO2012156563 (A1)

3- Método para la identificación del sexo en peces II. CANCIO, I; DIAZ DE CERIO, O; ROJO, I; BILBAO, E; IZAGUIRRE, U; ORBEA, A; SOTO, M; MARIGÓMEZ, JA; CAJARAVILLE, MP; ORTIZARRAGOITIA, M. Spanish patent ES 2 398 811 B1

### C.5 Supervision of PhD Thesis

1. Author Josue Martos-Bernal

Ending date: 2015. Excellent Cum Laudem

Supervisors: Ibon Cancio, Eider Bilbao

2. Author Nerea Duroudier

Ending date: 2019. Excellent Cum Laudem

Supervisors: Miren P Cajaraville, Eider Bilbao

3. Author Nagore López

Ending date: 2022. Excellent Cum Laudem

Supervisors: Miren P Cajaraville, Eider Bilbao

### C6.- PhD Thesis, MSc and BSc Commissions

- Member of the International Commission for the PhD thesis dissertation of Oihane Diaz de Cerio (2012), Pamela Ruiz (2013), Unai Vicario-Parés (2016), Aitor Arrizabalaga (2016) and Nerea García-Velasco (2017).

-Member of the dissertation Commission in the Master on Contamination and Environmental Toxicology and in the Master Marine Environmental Resources since 2008/2009.

-Member of BSc commissions since 2013/2014.

### C7.-Responsabilities at University:

-Member of the University Cloister of the UPV / EHU. Date: 07/11/2013 04/04/2018

-Member of the Academic Committee of the Plentzia Marine Station from 2017 to the present.

-Scientific laboratory manager of the Plentzia Marine Station from 2017 to the present.

-Responsible for scientific dissemination of the Plentzia Marine Station from 2017 to the present.

-Member of the direction of the Plentzia Marine Station since November 2020.

-Academic coordinator of the Tissue Engineering subject.

-Academic coordinator of the first course of Biotechnology.