

Alicia L. Bruzos, Dr.

Group Leader (*Minerva Fast Track fellow*)
Marine Transmissible Cancers Research Group
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RESEARCH

- Cancer genomics
- Marine ecology
- Evolutionary biology

As a molecular biologist, I am intrigued by the evolutionary convergence of cancers across different species, how malignant cells evolve to metastasize or 'travel to' distant tissues, organisms and, in some cases, even other species. My research focuses on multi-omic approaches in marine bivalves to uncover conserved mechanisms that underlie cancer transmissibility. Working with bivalves is not without challenges because they are not typically used in cancer genomics. The innovative approaches I have developed have generated breakthroughs that have advanced our understanding of transmissible cancers. These experiences converge in my current research line.

EDUCATION

Building on a foundation in biology and bioinformatics, my education culminated in a PhD in molecular medicine focused on cancer genetics and evolution, later complemented by a master's degree in university teaching.

- 08/09/2022 **PhD in Molecular Medicine**, Universidade de Santiago de Compostela, SPAIN.
Title of Doctoral Thesis: "*Evolution of bivalve transmissible cancers*" ([official open access here](#))
Supervisor: Dr Seila Díaz Costas
Grade: Excellence Cum laude¹
Remarks: International mention
- 18/02/2025 **Master of Science in University Teaching**, Universidad Europea de Madrid (*online*), SPAIN.
Theoretical and practical training in pedagogy and teaching innovation in high education.
Grade: 9,94/10 · ECTS: 60
Title of Master's Thesis: "*Educational innovation in marine biology: impact of a gamified teaching approach on the perception and learning of medical research.*" (6ECTS)
Supervisor: Alejandro Sal-de-Rellán Guerra
- 29/07/2016 **Master of Science in Bioinformatics**, Universitat Autònoma de Barcelona, SPAIN.
Theoretical and practical training in bioinformatics.
Grade: 8.48/10 · ECTS: 60
Title of Master's Thesis: "*The Full Catalogue of L1 Active Loci in the Cancer Genome*" (15ECTS)
Supervisor: Dr Jose M C Tubío
- 31/07/2015 **Bachelor of Science in Biology**, Universidade de Santiago de Compostela, SPAIN.
1-year Erasmus fellow at Université Libre de Bruxelles, BELGIUM.
Grade: 7.55/10 · ECTS: 243.5
Title of Degree Thesis: "*Interpopulation variability in the level of photosynthesis inactivation by heat stress in *Arbutus unedo**" (With Honours, 6 ECTS)
Supervisor: Dr Rubén Retuerto
- 30/06/2011 **Science and Technology Baccalaureate**, IES Vilar Ponte, SPAIN.
Average mark in high school: 9,0/10
University Access Test: 11,39/14
- 30/06/2008 **Musical Elementary Degree**. Professional Conservatory of Music in Viveiro, SPAIN.
Two specializations: Traverse Flute (2002-2006) and Piano (2005-2008).

¹In Spain, doctoral theses graded as excellent may also be awarded a '*cum laude*' mark which requires unanimous agreement among the members of the evaluation board (secret ballot).

Certified language levels according to *The Common European Framework of Reference for Languages*:

- **English** C1 (CAE in December 2014, IELTS in July 2021)
- **Spanish** C2 (native)
- **Galician** C1 (CELGA4 in July 2011)
- **French** B2 (DELFI in May 2020)
- **German** A2 (currently learning it)

ACADEMIC POSITIONS

Over the last decade, I have built an international research career through positions in Spain, the United Kingdom, France, and Germany, and expanded my collaboration network through visiting stays in Portugal, South Korea, Ireland, and the United States.

Sep 2025 – ongoing **Independent Junior Group Leader** (*Minerva Fast Track fellowship*).
Max Planck Institute for Marine Microbiology, GERMANY.
Marine Transmissible Cancers Research Group.
Remarks: This fellowship covers my salary, three positions (1 Postdoc, 1 PhD student, 1 Technical Assistant), annual budget of 50.000 €/year for consumables and eventual MSc/BSc students. It is three years with an additional year after a favorable evaluation.

Jul 2023 – Aug 2025 **Postdoctoral researcher** (*Marie Skłodowska-Curie Cofund fellowship*).
Université de Caen Normandie, FRANCE.
Laboratory of Biology of Aquatic Organisms and Ecosystems (BOREA)
Supervisors: Dr Camille Détrée and Dr Pascal Claquin. BOREA lab.

Sep 2021 – Apr 2023 **Postdoctoral researcher**.
The Francis Crick Institute, University College London, UNITED KINGDOM.
Laboratory of Mosaicism and Precision Medicine.
Supervisor: Prof Veronica Kinsler.
Remarks: Starting date (Sep 2021), a year earlier of doctoral defense (Sep 2022) due to my PhD fellowship ending; this postdoc contract had a salary reduction until being a doctor.

Sep 2016 – Sep 2021 **Predocctoral student** (*Spanish national predocctoral fellowship*).
Universidade de Vigo and Universidade de Santiago de Compostela, SPAIN.
Mobile Genomes Laboratory.
PhD advisor: Dr Seila Díaz Costas.

Short-term research stays as a visiting scientist (*totaling 11 months*)

- **Centro de Ciências do Mar (CCMAR)**, Algarve, PORTUGAL. Jul-Aug 2024.
- **Korea Advanced Institute of Science and Technology (KAIST)**, Daejeon, KOREA REP. Jan-Apr 2021.
- **Universidade de Vigo**, Vigo, SPAIN. Sep-Dec 2020.
- **University of Galway**, Galway, IRELAND. Mar-Apr 2019.
- **Pacific Northwest Research Institute (PNRI)**, Seattle, USA. Sep-Dec 2018.
- **Université Libre de Bruxelles**, Brussels, BELGIUM. Jun-Jul 2014. Summer internship.

AWARDS AND HONORS

I have been recognized with several distinctions for both research excellence and outreach. I was awarded the prestigious **L'Oréal-UNESCO 'For Women in Science' Young Talents Award** (20.000€) and was a finalist for the **W.D. Hamilton Award** of the Society for the Study of Evolution (500\$). My work in public engagement has also been acknowledged with the **Outreach Award in Medicine and Health** (The Conversation) and the **3MT Video Award**, and I received 6 prizes for oral and poster presentations at national and international meetings (850€ in total). Overall, I have been a finalist or awardee in 14 competitions since 2013, spanning scientific innovation, communication, and creative initiatives. Below you can find the list:

- **2025: Young Scientific Talent Prize**. Campus France and the Cité internationale universitaire de Paris, France. *Finalist*. [Read here](#)



- 2024: **For Women In Science: Young Talents**. Fondation L'Oréal and UNESCO, France. 20.000€.
- 2023: **Hamilton Award**. Society for the Study of Evolution, US. *Finalist*, 500 USD.
- 2023: **Best Talk Prize**. XIV edition of young researchers abroad, Santiago de Compostela, Spain. *Second prize, people's vote*
- 2023: **Outreach Award in Medicine and Health**. Fundación Lilly and The Conversation, Spain. *Finalist*. Publication of the article "*El viaje de una célula submarina*". [Read here](#)
- 2022: **Best Talk Prize**. XIII reunión de jóvenes investigador@s en el extranjero, Vigo, Spain. *Second prize, people's vote*
- 2022: **3MT Video Award: Cuentame11F**. Citizen initiative 11 febrero, Spain. More than 3k views/likes. *First place*. [3MT video](#), [Interview for the show Voces11F](#)
- 2022: **Women's Name Award: promotion of scientific vocations**. Fundación Merck Salud, Spain. [Video](#)
- 2020: **Award IDEAX21 - International Creative Jam**. Xunta de Galicia, Spain.
- 2019: **Best Scientific Panel Prize**. XXII Foro dos Recursos Mariños e da Acuicultura das Rías Galegas (ForoACUI), Spain. *First and second place with two posters*. 450 EUR [Tweet of IPac. Acuicultura](#)
- 2017: **Best Scientific Panel Prize**. XX Foro dos Recursos Mariños e da Acuicultura das Rías Galegas (ForoACUI), Spain. *First place*. 400 EUR
- 2015: **National Speech Competition**: "Transmito, luego existo". Club de Debate Compostela, Spain. *Finalist*.
- 2015: **Best Poster Prize**. Department of Genetics of Univ. de Santiago de Compostela, Spain. *First place*.
- 2013: **Open Software Translation Award**. Engineering Technical Superior School of Universidade de Santiago de Compostela, Spain. *First place, 600 EUR*.
- 2013: **Botany II Contest of Plant Identification**. Department of Botany of Universidade de Santiago de Compostela, Spain. *First place*.

SCIENTIFIC PRODUCTION

ORCID: [0000-0003-4362-545X](https://orcid.org/0000-0003-4362-545X)

Researcher ID: [D-7235-2018](https://orcid.org/D-7235-2018)

I began my research career in **human cancer genomics** within the *International Cancer Genome Consortium*, where I analyzed retrotransposon insertions and viral integrations that destabilize chromosomes and contribute to tumorigenesis [9, 12, 13]. This foundation shaped my perspective on genome instability and cancer evolution. During my doctoral work, I turned to **transmissible cancers in marine bivalves**, integrating large-scale field sampling with histopathology, molecular assays, and genomics. I co-discovered horizontal mitochondrial transfer, an early whole genome duplication, co-infection by multiple cancer lineages, amplification of well-known oncogenes revealing the evolutionary parallels between marine cancers and metastasis [4]. Furthermore, I co-discovered a cross-species transmission of cancer between two clam species, broadening our understanding of metastatic barriers [5]. In my first postdoctoral work in the UK, I returned to **human precision medicine**, co-discovering mosaic *BRAF* and *RAF1* fusions as recurrent drivers of congenital naevi that sometimes progress to cancer [3]; this work laid the foundation to MEK inhibitors treatments that have been tested on patients showing promising results. For my second postdoctoral work in France, I then designed a project on the **environmental dynamics of transmissible cancers**, designing a PCR-based assay for routine monitoring [3] and characterizing their spatio-temporal spread in cockles and co-habiting species [1]. These experiences now converge in my independent research group in Germany, which integrates cancer genomics and marine biology to explore **microbiome-cancer interactions** and to identify **conserved mechanisms of metastasis across species**.

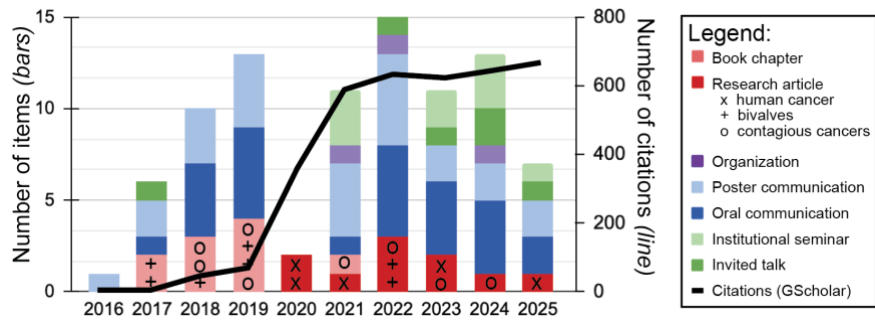
Over the ten years since the start of my scientific career (2016–present), I have authored **13 peer-reviewed international Q1 articles** (11 of which are D1), and **10 book chapters** with ISBN (6 of which as first author). Notably, I am **first author on 5 articles**, the **corresponding author on 2**, and **7 are not co-authored by my thesis advisor**, reflecting my capacity for autonomous research and to establish collaborations. My work has garnered over **2,500 accumulated citations** and I have an **h-index of 7-20** (Table 1).

All the publications that I led are available fully open access or stored in public repositories such as *bioRxiv*.

Table 1. Compilation of my scientific impact from different sources (access date: 06/07/2026).

Source	H-index	Citations no.
WOS	7	2,544
Gscholar	10	4,205
ResearchGate	15	3,633
Scopus	20	5,962

Figure 1. Overview of my annual scientific production. Staked bars (left y-axis) represent publications (symbols state research areas and conferences, categorized by type (see legend), while the continuous line (right y-axis) tracks citations (Gscholar).



SCIENTIFIC PUBLICATIONS²

1. Bruzos, AL^{1/7}*‡ et al. (2025) *Prevalence of hemic neoplasia in cockles and co-habiting bivalve species in the western coast of France and the southern coast of Portugal*. In: **Philosophical Transactions of the Royal Society B**, 381(1945):20250211. doi.org/10.1098/rstb.2025.0211 IF(2024) = 4.7, JCR rank (2024) 13/107 (Q1).
2. Riachi, M et al. (includes Bruzos, AL^{7/26}). (2025) *Keratinocyte cholesterol deficiency is a druggable final common pathway in hyperproliferative inflammatory skin disease*. In: **Journal of Investigative Dermatology**, 145(11):2745-2752.e.7. doi.org/10.1016/j.jid.2025.02.157 IF(2023) = 6.7, JCR rank (2022) 6/70 (D1).
3. Santamarina, M*; Bruzos, AL^{2/5}*‡; Pequeño, A; Rodríguez, J; Díaz, S. (2024) *Novel PCR molecular assay for the identification of marine transmissible cancers from *C. edule**. In: **Journal of Invertebrate Pathology**, 207: 108232. doi.org/10.1016/j.jip.2024.108232 (OA). IF(2022) = 3.60, JCR rank (2023) 7/181 (Q1).
4. Martín, SB*; Polubothu, S*; Bruzos AL^{3/18}*‡; ... Kinsler, VK. (2023) *Mosaic BRAF fusions are a recurrent cause of congenital melanocytic naevi targetable by MEK inhibition*. In: **Journal of Investigative Dermatology**, 144(3):593-600. [10.1016/j.jid.2023.06.213](https://doi.org/10.1016/j.jid.2023.06.213) (OA). IF(2022) = 6.5, JCR rank (2022) 6/70 (D1).
5. Bruzos, AL^{1/45}*‡; Santamarina, M*; ... Tubío, JMC. (2023) *Somatic evolution of marine transmissible leukemias in the common cockle, *Cerastoderma edule**. In: **Nature Cancer**, 4:1575-1591. doi.org/10.1038/s43018-023-00641-9 (download here). Issue cover. IF(2022) = 22.7, JCR rank (2022) 12/241 (D1).
6. Garcia-Souto, D*; Bruzos, AL^{2/20}*‡; ... Tubío, JMC. (2022) *Mitochondrial genome sequencing of marine leukemias reveals cancer contagion between clam species in the Seas of Southern Europe*. In: **eLife**, 11:e66946. doi.org/10.7554/eLife.66946 (OA). IF(2022) = 7.7, JCR rank (2022) 7/92 (D1).
7. Hermida, M et al. (includes Bruzos, AL^{5/8}). (2022) *The first high-density genetic map of common cockle (*Cerastoderma edule*) reveals a major QTL controlling shell color variation*. In: **Scientific Reports**, 12:16971. doi.org/10.1038/s41598-022-21214-3 (OA). IF(2022) = 4.6, JCR rank (2022) 22/73 (Q2).
8. Ricardo, F et al. (includes Bruzos, AL^{3/8}). (2021) *Assessing the elemental fingerprints of cockle shells to confirm their geographic origin from regional to international spatial scales*. In: **Science of the Total Environment**, 814:152304. [10.1016/j.scitotenv.2021.152304](https://doi.org/10.1016/j.scitotenv.2021.152304) (download here). IF(2021) = 10.753, JCR rank (2021) 26/279 (D1).
9. Álvarez, EG et al. (includes Bruzos, AL^{13/43}). (2021) *Aberrant integration of Hepatitis B virus DNA promotes major restructuring of human hepatocellular carcinoma genome architecture*. In: **Nature Communications**, 12:6910. doi.org/10.1038/s41467-021-26805-8 (OA). IF(2021) = 17.694, JCR rank (2021) 6/73 (D1).
10. Bailey, MH et al. (includes Bruzos AL in the PCAWG). (2020). *Retrospective evaluation of whole exome and genome mutation calls in 746 cancer samples*. In: **Nature Communications**, 11:4748. doi.org/10.1038/s41467-020-18151-y (OA). IF(2021) = 17.694, JCR rank (2021) 6/73 (D1).



²Only a peer-reviewed publications are listed, [check here book chapters list](#). The * denotes first authorship; ‡ denotes corresponding author; ^{0/0} denotes (my position / total number of authors); OA=open access.

11. Li, CH et al. (includes [Bruzos AL](#) in the PCAWG). (2020). Sex differences in oncogenic mutational processes. In: **Nature Communications**, 11:4330. doi.org/10.1038/s41467-020-17359-2 (OA). IF(2021) = 17.694, JCR rank (2021) 6/73 (D1).
12. Rodriguez-Martin, B et al. (includes [Bruzos, AL](#)^{15/53}). (2020) *Pan-Cancer analysis of whole genomes identifies driver rearrangements promoted by LINE-1 retrotransposition*. In: **Nature Genetics**, 52:306-319. doi.org/10.1038/s41588-019-0562-0 (OA). IF(2020) = 38.333, JCR rank (2020) 2/175 (D1).
13. The ICGC/TCGA Pan-Cancer Analysis of Whole Genomes Consortium (includes [Bruzos AL](#), position 60 of 1340 authors). (2020) *Pan-Cancer analysis of whole genomes*. In: **Nature**, 578:82-93. doi.org/10.1038/s41586-020-1969-6 (OA). Issue cover. IF(2020) = 49.962, JCR rank (2020) 1/73 (D1).



Under review: publications available as preprints or request

14. Polubothu, S et al. (includes [Bruzos AL](#)^{4/9}). *Mosaic PRKCA fusions cause a novel congenital melanocytoma syndrome associated with uveal melanoma*. Under review at **Journal of Investigative Dermatology**.
15. [Bruzos, AL](#)^{1/4} *[‡] et al. *Enhancing interdisciplinary medical knowledge, research-related competences and motivation through gamification in marine biology*. Submitted to **Advances in Health Sciences Education**.

CONFERENCES

I have presented my research at **53 national and international conferences** across **twelve countries**. This includes:

- **8 invited talks in conferences**
- **9 core seminars at scientific institutions**
- **22 oral presentations** delivered by myself,
- **25 poster presentations** (15 of which I personally presented)
- **6 award-winning contributions** (3 for best talk and 3 for best poster).

A full detailed list of all the conferences given can be found [here](#). Below I included a selection:

Invited speaker

- [8] **It Ma(t)Ters: joint conference for terrestrial and marine microbiology**. Bremen, Germany (26-05-2026-28-05-2026).
- [7] **3rd Annual Meeting of the Young Belgian Immunology Society (yBIS)**. Ghent, Belgium (22-04-2026).
- [6] **The European Meeting for PhD students in Evolutionary Biology (EMPSEB30)**. Milovy, Czech Republic (02/06/2025 - 06/06/2025).
- [5] **International Symposium on Coastal Ecological Health (Instituto de Ciencias Agroalimentarias, Animales y Ambientales (ICA3))**. San Fernando, Chile (25/11/2024).
- [4] **Bivalve Transmissible Neoplasia Workshop (Littoral ENvironnement et Sociétés)**. La Rochelle, France (14/11/2024 - 15/11/2024).
- [3] **Jornada Usuarios CESGA 2023 (Galicia Supercomputing Center (CESGA))**. Santiago de Compostela, Spain (14/12/2023).
- [2] **2nd International Ocean Health Symposium (GEOMAR Helmholtz Centre for Ocean Research Kiel & Kiel University)**. Kiel, Germany (29/08/2022 - 31/08/2022).
- [1] **Assemblée Générale EMBRC-France (European Marine Biological Resource Centre (EMBRC-France))**. Banyuls-sur-mer, France (16/05/2017 - 18/05/2017).

Selected recent oral/poster communications

- **EACR 2025 Congress: Innovative Cancer Science (Symposium: Molecular Mechanisms of Metastasis)**. Lisbon, PORTUGAL (16/06/2025 - 19/06/2025). Oral communication/Proffered Papers: *Cockle transmissible cancers characterized by horizontal transfers and instability of mitogenomes*. Molecular Oncology 19 (Suppl. 1) (2025) 1–895, doi.org/10.1002/1878-0261.70070
- **International Symposium on Coastal Ecological Health**. San Fernando, CHILE (25/11/2024). *Evolutionary history of contagious cancers in cockles and clams*.

- **Bivalve Transmissible Neoplasia Workshop.** La Rochelle, FRANCE (14/11/2024 - 15/11/2024). *Evolution of bivalve transmissible cancers.*
- **48th FEBS congress.** Milan, ITALY (29/06/2024 - 3/07/2024). *Evolution of cockle contagious cancers characterized by genomic instability.* J. FEBS Open Bio 2024 14, doi.org/10.1002/2211-5463.13836
- **EMBO molluscs genomics.** Namur, BELGIUM (27/05/2024 - 31/05/2024). *Genomic insights into the evolutionary history of marine transmissible cancers.*
- **XIV reunión de jóvenes investigadores en el extranjero.** Santiago de Compostela, SPAIN (28/12/2023). *Somatic evolution of marine transmissible leukaemias.* Best Talk Prize (people's vote).
- **2nd International Ocean Health Symposium.** Kiel, GERMANY (29/08/2022 - 31/08/2022) *Clonal evolution of a marine transmissible cancer that colonizes the Atlantic coast of Europe.*

Invited seminars

- [9] Seminaires BOREA (Laboratoire de biologie des organismes et des écosystèmes aquatiques). Caen, France (06/02/2025).
- [8] Seminarios IFOP (Instituto de Fomento Pesquero (IFOP)). Puerto Montt, Chile (19/11/2024).
- [7] Seminaires BOREA. Caen, France (22/10/2024).
- [6] CCMAR seminar (Centro de Ciências do Mar do Algarve (CCMAR)). Faro, Portugal (17/07/2024).
- [5] TransEvo core seminar (University of Kiel). Kiel, Germany (13/12/2023).
- [4] Invitational seminar at MPI-MM (Max Planck Institute for Marine Microbiology). Bremen, Germany (12/12/2023).
- [3] CCMAR seminar (Centro de Ciências do Mar do Algarve (CCMAR)). Faro, Portugal (30/06/2021).
- [2] Schwarz Lab Seminars (Max Delbrück Center for Molecular Medicine). Berlin, Germany (31/05/2021).
- [1] CIBIO-InBIO Seminar Series (Universidade de Porto). Porto, Portugal (16/04/2021).

Conference organization

I have served on the scientific and organizing committees of **3 conferences** as follows:

- the **VIII Young Researchers Meeting** (2021), with 300 attendees, 135 oral presentations, and 67 posters (we edited an abstracts book with ISBN) hosted by USC (Spain).
- the **5th Crick Postdoc Symposium** (2022), which brought together 160 participants for 2 plenary talks, 11 short oral presentations, and 38 posters (we gave 4 prizes) hosted by The Crick (UK).
- the **Chilean Coastal Ecological Health Symposium** (2024), with 30 attendees, 4 plenary talks, and a panel discussion; hosted by UNICAEN (France).

FUNDING

I have consistently secured competitive fellowships and project funding throughout my career, including at the doctoral, postdoctoral, and independent junior group-leader stages. Beyond these, I obtained travel grants and contributed to international projects, reflecting my ability to build collaborations and pursue ambitious research. This sustained record of acquiring my own funding demonstrates my progression towards scientific independence and leadership.

Competitive fellowships and scholarships

- 2024 **Minerva Fast Track Fellowship (2025-2029).** Max Planck Society, GERMANY. Max Planck Institute for Marine Microbiology, Bremen, Germany. Budget: my salary, a PhD student, a postdoc, a technician, and research costs. *Lead applicant* (supported by N Dubilier). *ONGOING.*
- 2023 **EU MSCA Fellowship (2023-2025).** Marie Skłodowska-Curie Actions (MSCA-cofund) and Région Normandie (ref. 101034329), EU and FRANCE. Université de Caen Normandie, France. Budget: 174.000,00 €. *Lead applicant* (supervised by C Détrée). *CONCLUDED.*
- 2023 **National Postdoctoral ‘Juan de la Cierva’ Fellowship (2024-2026).** Spanish Ministry of Science (ref. JDC2022-048396-I), SPAIN. Consejo Superior de Investigaciones Científicas (CSIC) Instituto de Investigaciones Marinas, Spain. Budget: 50.700,00 €. *Lead applicant* (supervised by A Figueras). *DECLINED* to take the MSCA.
- 2017 **National Doctoral Fellowship (2017-2021).** Spanish Ministry of Economy, Industry and Competitiveness (ref. BES-2016-078166), SPAIN. Universidade de Vigo and Santiago de Compostela,

Spain. Budget: 98.500,00 €. *Lead applicant* (supervised by JMC Tubio). CONCLUDED. 6-month extension due to Covid pandemic.

2013 **Erasmus Scholarship (2013-2014)**. European Union. Université Libre de Bruxelles, BELGIUM. Budget: stipend from EU, national and regional councils. *Single applicant*. CONCLUDED.

2009 **Summer Exchange scholarship (1 month)**. Alliance Française and Xunta de Galicia, FRANCE and SPAIN. Internat Lycée Flora Tristan, Camblandes, France. *Single applicant*. CONCLUDED.

Research projects as a principal investigator

To date, I have successfully secured over 40.000€ of funding from **five international competitive grants**, which evidences my progression towards scientific autonomy. This included:

ONTÓGENIE: Cell-of-origin of cockle transmissible cancers (2024).

Funder: Unité Mixte de Recherche BOREA (UMR 8067, financement intra-unité).

Budget: 2.500,00 €.

PI: myself.

My role: Lead applicant.

Status: CONCLUDED

Exploration Fund Grant (2024).

Funder: The Explorers Club.

Budget: 5.000,00 USD.

PI: myself.

My role: Single applicant.

Status: CONCLUDED

AquaExcel3.0 Transnational Access grant (2024).

Funder: AquaExcel3.0 Horizon Europe, EU.

Budget: 3.942,48€ to cover stay and lab material.

PI: myself.

My role: Lead applicant (with support of AM Amaral).

Status: CONCLUDED

Boehringer Ingelheim Fonds grant (2021).

Funder: Boehringer Ingelheim Fonds, Germany.

Budget: 2.370,00 €.

PI: myself.

My role: Lead applicant (with support of YS Ju).

Status: CONCLUDED

Assemble Plus Transnational Access grant (2019).

Funder: Association of European Marine Biological Laboratories Expanded (grant agreement no. 730984).

Budget: 5.992,84 €.

My role: Co-applicant with support of S Díaz.

Status: CONCLUDED

Research projects as a team member

Proyecto de Vinculación de Instituciones Internacionales (2023-2024).

Funder: Gobierno de Chile (ref. FOVI230047).

Budget: 30.000.000,00 CLP (~30.000,00 €).

Institution: Universidad de O'Higgins, CHILE.

Principal Investigator: Morgane Derrien.

My role: Collaborator.

Status: CONCLUDED

Consolidación GRC GI-1736 Medicina Xenómica GMX 2021-PG048 (2021-2024).

Funder: Consellería de Cultura, Educación e Universidade, Xunta de Galicia, SPAIN (ref. ED431C 2021/28).

Budget: 400.000,00 €.

Institution: Universidade de Santiago de Compostela, SPAIN.

Principal Investigator: Angel M Carracedo.

My role: Research assistant (led by JMC Tubío).

Status: CONCLUDED

ERC Starting grant ID 716290 - SCUBA CANCERS: Finding the genetic causes of contagious metastases under the sea (2017-2021).

Funder: European Research Council.

Budget: 1.492.500,00 €.

Institutions: Universidade de Vigo and Santiago de Compostela, SPAIN.

Principal Investigator: Jose MC Tubío

My role: Researcher.

Status: CONCLUDED

Pan-Cancer Analysis of Whole Genomes (PCAWG): 2,658 WGS of 38 cancers (2016-2020).

Funder: multi-institution project supported by the U.S. National Cancer Institute (NCI) and National Human Genome Research Institute (NHGRI) over several years.

Budget: over 300 million \$

My role: Researcher, I was part of the consortiums International Cancer Genome Consortium (ICGC) and The Cancer Genome Atlas (TCGA).

Status: CONCLUDED

Conference grants

I have received seven conference grants from major international societies (including SMBE, EACR, FEBS, MCAA, ...), enabling my participation in global meetings or courses across Europe and Asia:

- **MCAA micro grant** (2026). Marie Curie Alumni Association (MCAA). 500 €.
- **Young investigator travel award** (2025). Society for Molecular Biology & Evolution (SMBE). 3,000 \$.
- **EACR travel award** (2025). European Association for Cancer Research (EACR). 745 €.
- **FEBS YSF grant** (2024). Federation of European Biochemical Societies (FEBS). 1.000 €.
- **MCAA micro grant** (2024). Marie Curie Alumni Association (MCAA). 1.000 €.
- **Mangold Fellowship** (2023). Lindau Nobel Laureate Meeting, Germany. 560 €.
- **SEBBM grant** (2022). Sociedad Española de Bioquímica y Biología Molecular, Spain. Budget: 100 €.
- **EuroMarine Young Scientist Fellowship** (2017). European Marine Research Network, Spain. 500 €.

SUPERVISION AND MENTORSHIP

I have supervised **five undergraduate and master's students** during their theses in France and Spain, three of them subsequently pursued a PhD after, and one received an award for the quality of their thesis. In two of these cases, I acted as the sole supervisor without the involvement of a senior co-supervisor.

I am currently **supervising three students**: the PhD student Nupur Potukuchi from University of Bremen (Germany), the MSc student Nur M Farhad from University of Basque Country (Spain) and the Bachelor intern Maxim Hess from University of Bremen (Germany).

PhD supervision (1 - ongoing)

“Immunity mechanisms of bivalve transmissible cancers” - ONGOING

Starting date: February 2026

Student: Nupur Potukuchi

Supervisor(s): Alicia L Bruzos

Language: English

Expected defense date: February 2029

University, country: Universität Bremen, GERMANY

MSc. supervision (4)

“Automated hemic neoplasia diagnosis in common cockles using image analysis” - ONGOING

Academic Year: 2025/2026
Student: Nur M Farhad
Supervisor(s): Alicia L Bruzos
Language: English
Grade: pending
Defense date: September 2026
Degree: Master in Marine Environment (Erasmus Mundus)
University, country: Universidad del País Vasco, SPAIN

“Horizontal transmission of cancer in bivalve species on the French Atlantic coast”

Academic Year: 2023/2024
Student: Angèle Moulin
Supervisor(s): Alicia L Bruzos
Language: French
Grade: Good (14/20)
Defense date: 14/06/2024
Degree: Master Sciences de la Mer (M1)
University, country: Université de Caen Normandie, FRANCE

“Preliminary study of the dispersal of contagious cancer cells in the ocean”

Academic Year: 2023/2024
Student: Géo Bujard
Supervisor(s): Alicia L Bruzos
Language: English
Grade: Good (60.63/100)
Defense date: 06/2024
Degree: Master Sciences de la Mer (M1)
University, country: Sorbonne Université, FRANCE

“Identification of driver mutations in transmissible cancers through exome sequencing analysis”

Academic Year: 2019/2020
Student: Iago Otero Coto
Supervisor(s): Alicia L Bruzos and Jose MC Tubio
Language: English
Grade: First Class (9.5/10)
Defense date: 07/2020
Degree: MSc in Bioinformatics
University, country: Universidade da Coruña, SPAIN

BSc. supervision (3)

“Donor-derived and transplant-transmitted cancers in humans - systematic review”

Academic Year: 2025/2026
Student: Alfonso Borbón Lanuza
Supervisor(s): Alicia L Bruzos and Katrina Espinar Herranz
Language: Spanish.
Grade: Good (7.8/10)
Defense date: 30/06/2021
Degree: BSc in Biomedicine
University, country: Universidad Alfonso X El Sabio, SPAIN.

“Molecular diagnostic of different clonal lineages of transmissible cancer”

Academic Year: 2020/2021
Student: Andrea E. Arias Díaz
Supervisor(s): Alicia L Bruzos and Jose MC Tubio
Language: Galician. Awarded for its linguistic quality by the USC Language Normalization Service in the category of *sciences*.
Grade: Outstanding (9/10)
Defense date: 07/2021
Degree: BSc in Biology

University, country: Universidade de Santiago de Compostela, SPAIN.

“Characterization of a genomic molecular marker of a marine transmissible cancer”

Academic Year: 2019/2020

Student: Ana Copena Soutelo

Supervisor(s): Alicia L Bruzos and Jose MC Tubio

Language: Spanish

Grade: Outstanding (9/10)

Defense date: 22/07/2020

Degree: BSc in Biology

University, country: Universidade de Santiago de Compostela, SPAIN.

Student internship supervision (3)

Student: Maxim Hess

Internship period: July to October 2026 (3-months)

Internship type: Bachelor internship, mandatory

Supervisor(s): Alicia L Bruzos

Sending institution: University of Bremen, GERMANY

Receiving institution: Max Planck Institute for Marine Microbiology, GERMANY

Student: Katarina Tvrđić

Internship period: 09-February to 9-May 2026 (3-months)

Internship type: Erasmus + scholarship

Supervisor(s): Alicia L Bruzos

Sending institution: University of Split, CROATIA

Receiving institution: Max Planck Institute for Marine Microbiology, GERMANY

Student: Artemisia Ntoula

Internship period: 01-June to 31-July 2019 (2-months)

Internship type: Erasmus + scholarship

Supervisor(s): Alicia L Bruzos and Jose MC Tubio

Sending institution: University of Patras, GREECE

Receiving institution: Universidade de Santiago de Compostela, SPAIN

PhD evaluation committees

External/international evaluator:

Candidate: Laura Tomás

PhD Thesis title: Evolution and genomic heterogeneity in solid tumors.

Institution: Universidade de Vigo, SPAIN

Date of report: 23 August 2024

Candidate: Amanda Guitián Caamaño

PhD Thesis title: New signaling pathways implicated in resistance to targeted therapy in tumors with alterations of the MAPK pathway.

Institution: Universidade da Coruña, SPAIN

Date of defense: 16 February 2024

Member of the PhD tribunal (secretary)

Candidate: Sofia Blanco González

PhD Thesis title: Molecular insights into the mechanisms underlying doubly uniparental inheritance (DUI) of mitochondrial DNA and sex determination in marine mussels (*Mytilus* spp.).

Institution: Universidade de Vigo, SPAIN

Date of defense: 7 May 2026 (pending)

UNIVERSITY TEACHING

Table 2. University teaching experience.

Academic year	University, country	Course	Degree	Hours	Language	Students number	Type (my role)
2025/2026	Sorbonne Université, FRANCE	Marine Biology: from the molecule to the organism (UE SBME19B)	Master Biologie moléculaire et cellulaire (BMC)	2	English	12	seminar (lecturer)
2024	Universidad de O'Higgins, CHILE	Aquatic Systems	Licenciatura en Ciencias Ambientales (título profesional Ingeniero Ambiental)	4.5	Spanish	10	seminar + practice (lecturer)
		Climate change and anthropogenic pressures	Magíster en Ciencias Ambientales y de la Tierra	3	Spanish	8	seminar (lecturer)
2023/2024	Université Caen Normandie, FRANCE	Physiology from the gene to the organism (UE SBME19B)	Master Sciences de la Mer	2	French	~15	seminar (lecturer)
	Universitat Autònoma de Barcelona, SPAIN	Core bioinformatics (module 2)	Master in Bioinformatics	1	English	~20	seminar (lecturer)
2022/2023	University College London, UNITED KINGDOM	Medical Student-Selected Component (elective module to learn about cancer research)	Medicine Bachelor and Bachelor of Surgery	12	English	20	seminar + practice (lecturer)
		Meet a researcher module	BSc. in Biological Sciences (Faculty of Life Sciences, FLS)	16	English	18	seminars (lecturer)
2021/2022		Medical Student-Selected Component (elective module to learn about cancer research)	Medicine Bachelor and Bachelor of Surgery	12	English	20	seminar + practice (lecturer)
2020/2021	Universidade de Santiago de Compostela, SPAIN	Genetics I	Bachelor of Science in Biology	40	Spanish	~30	seminars (lecturer)
		Genetics II	Bachelor of Science in Biotechnology	8	Spanish	~30	seminars (teaching assistant)
2019/2020		Genetics I	Bachelor of Science in Biology	13	Spanish	~30	seminars (lecturer)
		Human Genetics	Bachelor of Science in Biology	2	Spanish	~80	online seminar (lecturer)
2018/2019		Genetics II	Bachelor of Science in Biology	16	Spanish	~30	lab practice (teaching assistant)
2017/2018	Universidade de Vigo, SPAIN	Genetics II	Bachelor of Science in Biology	3	English	~20	bioinformatic practice (teaching assistant)

Teaching experience

I have gained teaching experience (**134.5 certified direct teaching hours**, excluding time dedicated to preparation, grading, or exam supervision) at **five public universities across four countries** (Spain, UK, France, and Chile). My teaching has included both theoretical and practical sessions delivered in **different languages** (English, Spanish/Galician, and French) to **undergraduate and master's students**. Throughout all my academic positions, I have actively sought teaching opportunities, for instance, I recently contributed 7.5 hours of teaching at the Universidad de O'Higgins as part of a research project funded by the Chilean government. A detailed table of my teaching experience is provided on Table 2.

Training and accreditations as a university lecturer

- 2025: **Qualification Section 64 – Maître de conférences**, Ministère de l'Enseignement Supérieur, FRANCE.
- 2025: **Master of Science in University Teaching** (*see Education Section above*), Universidad Europea de Madrid, SPAIN. 1,500 hours, 60 ECTS.
- 2023: **Profesor Ayudante Doctor (PAD)**. Agencia Nacional de Evaluación de la Calidad de la Acreditación (ANECA), SPAIN. Accreditation for the Spanish Public University System, similar to a non-tenured assistant professor, must hold a PhD. It allows the official supervision of PhD students within the Spanish university system.
- 2021: **Research Supervision**. University College London, UK. Course to qualify as a supervisor of PhD students at UCL, 4 hours training.
- 2017: **Higher Education Lecturing Accreditation (HELA)**. Universidade de Vigo, SPAIN. Course and test required to teach in English at Uvigo, 16 hours training and a test.

RELEVANT CERTIFICATIONS

I hold the following certifications relevant to research safety, fieldwork, and training:

- First-Aid Certification: Sauveteur Secouriste du Travail (SST)** (2023). Université de Caen Normandie, FRANCE. Focused on first-aid response for accidents during field missions.
- Biological Risk Management Certification** (UNE-CWA 15973, 2017). Universidade de Vigo, SPAIN.
- Craft Skipper License (PER), with Sailing Specialization** (2017). Issued by the Consellería do Mar (Xunta de Galicia) and Sailway, SPAIN. Total of 75 hours: 30 hours of theory and 45 hours of practical training (16h engine, 12h VHF, 16h sailing, 1.5h examination).
- Animal Experimentation Certification (Functions A+B+C+D+E)** (2017). Centro de Estudios Biosanitarios, SPAIN. 140 hours, including hands-on training with fish and rodents. Officially accredited by the Comunidad de Madrid.
- Open Water Diver License** (2014). Scuba Schools International (SSI) and Mergullo Compostela, SPAIN.
- Outdoor Activity Instructor Certification: Monitora de Actividades de Tempo Libre** (2012). Escola Aire Libre de Cáritas Diocesana de Santiago, SPAIN. Certified by the Consellería de Traballo (Xunta de Galicia). 350 hours, with emphasis on group coordination and outdoor safety.
- Driver license** (2011).

SERVICE TO THE COMMUNITY

Journal reviewing activity

See verified reviews on Publons: www.webofscience.com/wos/author/rid/D-7235-2018 I have been invited to review manuscripts for the international community in the following recognized scientific journals:

- 1 *Science*
- 1 *Molecular Ecology*
- 2 *Science Advances*
- 1 *Proceedings of the Royal Society B: Biological Sciences*
- 1 *Scientific Reports*

Project call evaluation committees

- **MSCA-COFUND Iberus InterDoc Programme: 2nd Call (2026)**. Panels *Health Technologies* and *Agrofood and Nutrition*. Assessment of 18 doctoral candidate applications.

- **UKRI OPP1082: BBSRC standard research grant (2026).** I was invited to review in round 1 the application APP98343 for the UK Research and Innovation Public Funding Service.

Member of juries. I have served on the jury of the Galicia Spin-Off Awards (Gciencia, 2024).

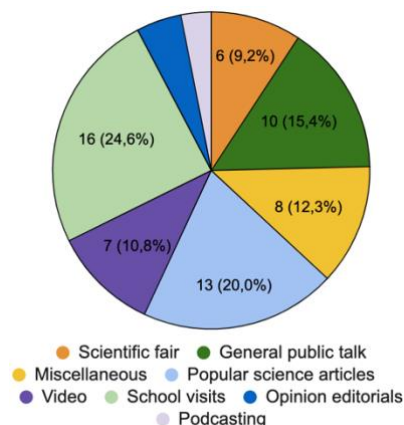
Institutional responsibilities

2021-2022	Representative of PhD students	EDIUS, Univ. de Santiago de Compostela, SPAIN
2017-2018	Quality Commission	International Doctoral School, Univ. de Vigo, SPAIN

Outreach activity

Every year, I devote some hours to communicate science to different types of audiences, I am strongly committed to making science accessible, particularly in towns where opportunities to engage with scientists are limited. I have actively participated in over 60 public science outreach events, as follows:

- **16 school visits** (Spain, UK, France)
- **13 popular science articles** (e.g., The Conversation)
- **9 talks for the general public** (e.g. *Pint of Science* in London, A Coruña, and Caen)
- **7 promotional videos** (e.g., AquaExcel project)
- **5 workshops on scientific fairs**
- **3 opinion editorials**
- **2 podcasting** or school radio projects
- **7 miscellaneous activities** such as contributing to children's science coloring book or the school radio program of IES Mata Jove.



Complete list with more details here: albruzos.github.io/outreach.

Professional membership

- *Marie Curie Alumni Association* (MCAA) since 2023
- *European Association for Cancer Research* (EACR) since 2019.

Media coverage

PR clipping: albruzos.github.io/media

Renowned media have featured my research publications and various scientific activities (outreach events, awards, or career steps) in over 250 news items published in more than 40 media platforms across 10 countries. This includes *BBC radio*, *The New York Times*, *El País* or *La Voz de Galicia*, as well as in TV newscasts from 2 countries (*France3normandie*, *Televisión de Galicia*, *T. Princ. Asturias*, *Canal Sur*). Beyond promoting my research, I am often invited to share my opinion on scientific careers, current topics, or to advocate for women in science. **These initiatives highlight my dedication to science communication and my leadership in public engagement.**

Annex 1: Award letter of the Minerva Fast Track fellowship (Max Planck Society, 2023)



Die MAX-PLANCK-GESELLSCHAFT
zur Förderung der Wissenschaften e. V.

verleiht

Dr. Alicia Bruzos

das

Minerva Fast Track Fellowship
der Max-Planck-Gesellschaft
2023

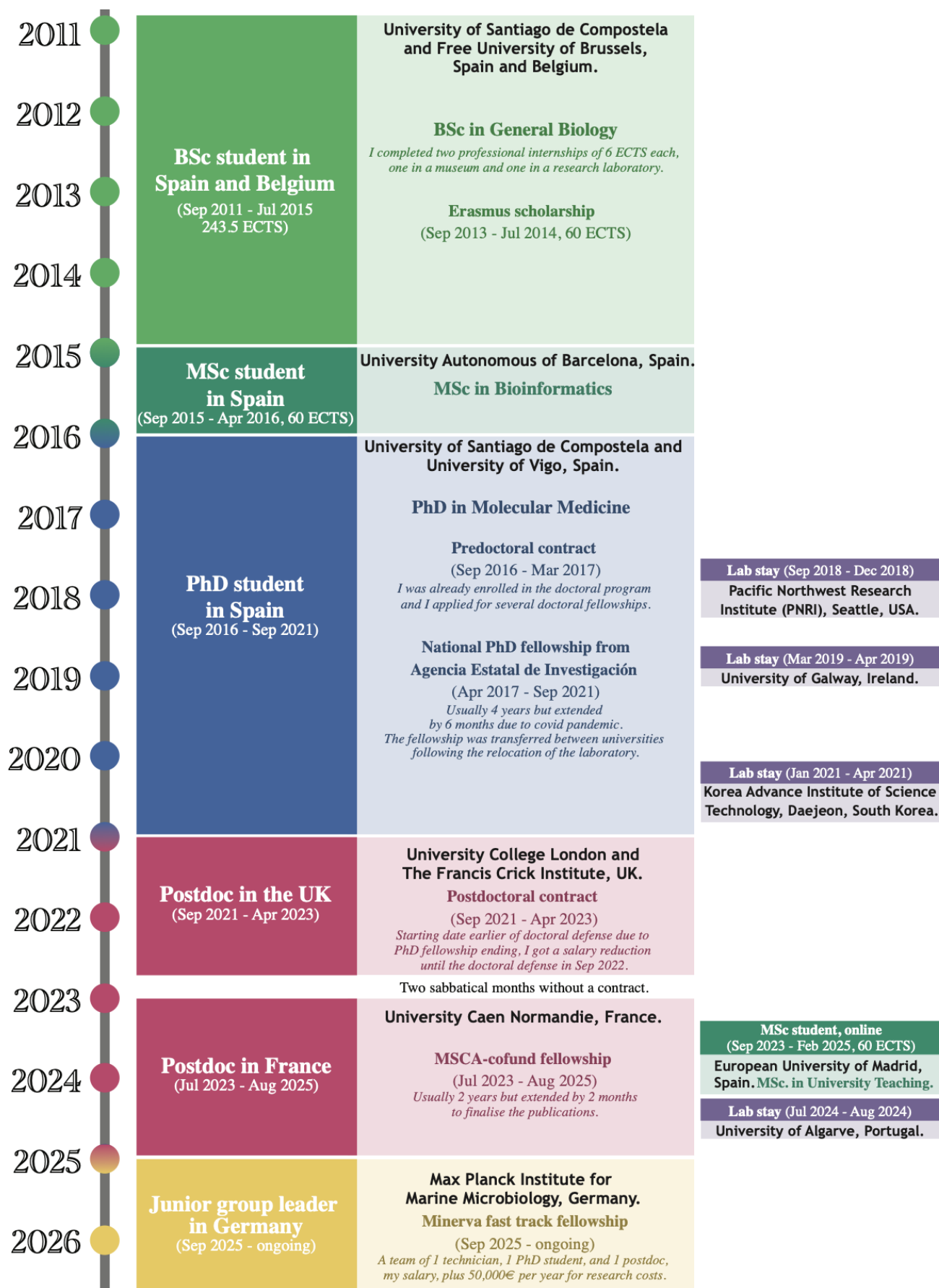
Das Fellowship wird Dr. Bruzos verliehen, um ihre Forschung zu übertragbaren Krebsarten bei Muscheln am Max-Planck-Institut für marine Mikrobiologie fortsetzen zu können.

München, im Juni 2024

A handwritten signature in blue ink, belonging to Patrick Cramer, is positioned above his name and title.

Patrick Cramer
Präsident der Max-Planck-Gesellschaft
zur Förderung der Wissenschaften e. V.

Annex 2: Chronological career timeline



Note on title equivalence: Germany and Spain have both been members of the Bologna Process since 1999, which standardizes higher education across Europe. Alicia L. Bruzos completed the three Bologna cycles: 240+ ECTS in the first cycle (Bachelor), 120 ECTS in the second cycle (2 Master's degrees), and a third-cycle doctoral degree. More information: <https://ehea.info>