

# ALICIA L. BRUZOS, PhD

<https://albruzos.github.io>

[albruzos@gmail.com](mailto:albruzos@gmail.com)

+34 644 957 498



*As a molecular biologist, I have always been intrigued by the evolutionary convergence of cancers across different species, how malignant cells evolve to invade or 'travel to' distant tissues and, in some cases, even cross species boundaries. My research focuses on cancer genomics in marine bivalves to uncover universal conserved mechanisms that underlie cancer transmissibility and metastasis.*

## **PERSONAL INFORMATION**

*Date of birth:* 29-March-1993 (32 years old)

*Nationality:* Spain

## **EDUCATION**

- Sep 2016 – Sep 2022 **PhD in Molecular Medicine**, Universidade de Santiago de Compostela, SPAIN. *"Evolution of bivalve transmissible cancers"*. Cum laude<sup>1</sup>. International mention.
- Sep 2023 – Feb 2025 **MSc in University Teaching**, Universidad Europea de Madrid (*online*), SPAIN.
- Sep 2015 – Jul 2016 **MSc in Bioinformatics**, Universitat Autònoma de Barcelona, SPAIN.
- Sep 2011 – Jul 2015 **BSc in Biology**, Universidade de Santiago de Compostela, SPAIN. Erasmus year at Université Libre de Bruxelles, BELGIUM.

**LANGUAGES:** **English** C1\* (*IELTS* certification in July 2021, *CAE* in Dec. 2014); **French** B2\* (*DELF* certification in May 2020); **German** A1\*; **Galician** C1\* (*Celga* certification in July 2011); **Spanish** C2\* (native).

## **ACADEMIC POSITIONS**

- Sep 2025 – ongoing **Junior group leader (Minerva Fast Track fellowship)**. Max Planck Institute for Marine Microbiology, GERMANY. Symbiosis Department.
- Jul 2023 – Aug 2025 **Postdoctoral researcher (Marie Skłodowska-Curie fellowship)**. Université de Caen Normandie, FRANCE. *PI:* Camille Détrée and Pascal Claquin. BOREA Lab.
- Sep 2021 – Apr 2023 **Postdoctoral researcher**<sup>2</sup>. The Francis Crick Institute, University College London, UNITED KINGDOM. *PI:* Veronica Kinsler. Precision Medicine Lab.
- Sep 2016 – Sep 2021 **Predoctoral student (Spanish national predoctoral fellowship)**. University of Santiago de Compostela and University of Vigo, SPAIN. *PhD director:* Seila Díaz. Mobile Genomes Lab led by Jose Tubio.

## **RESEARCH STAYS AS A VISITING SCIENTIST**

- 2024, Jul – Aug **Centro de Ciências do Mar (CCMAR)**, Algarve, PORTUGAL. Lab led by Ana M Amaral. *Funding:* AquaExcel TNA grant.
- 2021, Jan – Apr **Korea Advanced Institute of Science and Technology (KAIST)**, Daejeon, SOUTH KOREA. Lab led by Youngseok Ju. *Funding:* grant of Boehringer Ingelheim Fonds.
- 2020, Sep – Dec **Universidade de Vigo**, Vigo, SPAIN. Lab led by David Posada.
- 2019, Mar – Apr **University of Galway**, Galway, IRELAND. Lab led by Mark Johnson. *Funding:* Assemble Plus (grant agreement no. 730984).
- 2018, Sep – Dec **Pacific Northwest Research Institute (PNRI)**, Seattle, USA. Lab led by Michael Metzger. *Funding:* Spanish Ministry of Science (ref. BES-2016-078166).
- 2014, Jun – Jul **Université Libre de Bruxelles**, Brussels, BELGIUM. Intern at the Evolutionary Biology and Ecology Unit. *Supervisor:* Prof Patrick Mardulyn.

## **MAJOR RESEARCH INTERESTS**

Evolution of marine contagious cancers, Cancer genomics and transcriptomics, Development of bivalve cell lines.

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

<sup>2</sup> Starting date a year earlier to PhD defense due to fellowship ending, with a salary reduction until PhD completion.

\*According to *The Common European Framework of Reference for Languages*.

**SCIENTIFIC PRODUCTION**ORCID: [0000-0003-4362-545X](https://orcid.org/0000-0003-4362-545X)ResearcherID: [D-7235-2018](https://orcid.org/0000-0003-4362-545X)

I have authored **12 peer-reviewed international JCR Q1 publications** (11 of which are D1), and **10 book chapters** with ISBN (6 of which as first author). Notably, I am **first author on 4 publications**, the **corresponding author on one**, and **5 are not co-authored by my thesis director**, reflecting my capacity for autonomous research. My work has garnered over **2,100 accumulated citations** ([G Scholar](#), [WOS](#), [ResearchGate](#), [Scopus](#)).

**SCIENTIFIC PUBLICATIONS<sup>3</sup>**

1. Riachi, M et al. (includes [Bruzos, AL<sup>7/26</sup>](#)). (2025) *Keratinocyte cholesterol deficiency is a druggable final common pathway in hyperproliferative inflammatory skin disease*. In Press: **Journal of Investigative Dermatology**. [doi.org/10.1016/j.jid.2025.02.157](https://doi.org/10.1016/j.jid.2025.02.157) (OA). Metrics JCR (2023): IF=5.7, rank 7/147 (D1).
2. Santamarina, M\*; [Bruzos, AL<sup>2/5\\*</sup>](#); 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](https://doi.org/10.1016/j.jip.2024.108232) (OA). Metrics JCR (2023): IF=3.6, rank 7/181 (D1).
3. Martín, SB\*; Polubothu, S\*; [Bruzos AL<sup>3/18\\*</sup>](#); ... 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). Metrics JCR (2023): IF=5.7, rank 7/147 (D1).
4. [Bruzos, AL<sup>1/45\\*</sup>](#); Santamarina, M\*; García, D\*; ... 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](https://doi.org/10.1038/s43018-023-00641-9) ([download here](#)). Metrics JCR (2023): IF=23.5, rank 11/245 (D1). Issue cover → 
5. Garcia-Souto, D\*; [Bruzos, AL<sup>2/20\\*</sup>](#); Díaz, S\*; ... 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](https://doi.org/10.7554/eLife.66946) (OA). Metrics JCR (2022): IF=7.7, rank 7/92 (D1).
6. Hermida, M et al. (includes [Bruzos, AL<sup>5/8</sup>](#)). (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. [10.1038/s41598-022-21214-3](https://doi.org/10.1038/s41598-022-21214-3) (OA). Metrics JCR (2022): IF=4.6, rank 22/73 (Q2).
7. Ricardo, F et al. (includes [Bruzos, AL<sup>3/8</sup>](#)). (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](#)). Metrics JCR (2021): IF=10.8, rank 26/279 (D1).
8. Álvarez, EG et al. (includes [Bruzos, AL<sup>13/43</sup>](#)). (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](https://doi.org/10.1038/s41467-021-26805-8) (OA). Metrics JCR (2021): IF=17.7, rank 6/73 (D1).
9. Bailey, MH et al. (includes [Bruzos AL<sup>21/21</sup>](#)). (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](https://doi.org/10.1038/s41467-020-18151-y) PCAWG consortium (OA). Metrics JCR (2021): IF=17.7, rank 6/73 (D1).
10. Li, CH et al. (includes [Bruzos AL<sup>8/8</sup>](#)). (2020). *Sex differences in oncogenic mutational processes*. In: **Nature Communications**, 11:4330. [doi.org/10.1038/s41467-020-17359-2](https://doi.org/10.1038/s41467-020-17359-2) PCAWG consortium (OA). Metrics JCR (2021): IF=17.7, rank 6/73 (D1).
11. Rodríguez-Martin, B et al. (includes [Bruzos, AL<sup>15/53</sup>](#)). (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](https://doi.org/10.1038/s41588-019-0562-0) (OA). Metrics JCR (2020): IF=38.3, rank 2/175 (D1).
12. The ICGC/TCGA Pan-Cancer Analysis of Whole Genomes Consortium (includes [Bruzos AL](#), position 60 of 1340 authors, corresponding authors are Campbell, PJ; Getz, G; Korbel, JA; Stuart, JM; Stein, LD). (2020) *Pan-Cancer analysis of whole genomes*. In: **Nature**, 578:82-93. [doi.org/10.1038/s41586-020-1969-6](https://doi.org/10.1038/s41586-020-1969-6) (OA). Metrics JCR (2020): IF=49.9, rank 1/73 (D1). Issue cover → 

**Under review: publications available as preprints or request**

13. [Bruzos, AL<sup>1/7\\*</sup>](#) 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*. bioRxiv: [doi.org/10.1101/2025.07.30.667629](https://doi.org/10.1101/2025.07.30.667629). Under review on Philosophical Transactions of the Royal Society B.
14. Polubothu S et al. (includes [Bruzos AL](#)). (2025) *Mosaic PRKCA fusions cause a novel congenital melanocytoma syndrome associated with uveal melanoma*. Under review on Journal of Invest. Dermatology.

<sup>3</sup> Publications are listed in reverse chronological order. The \* denotes first authorship (2, 3, 4 and 5); <sup>0/0</sup> denotes (my position / total number of authors); ‡ =corresponding author (2); OA=open access; JCR=Journal Citation Reports; IF=impact factor.

## SELECTED INVITED PRESENTATIONS

I have presented my research at **52 national and international conferences** across **nine countries**. This includes **5 invited talks**, **20 oral presentations** delivered by myself, **23 poster presentations** (13 of which I personally presented), and **6 award-winning contributions** (3 for best talk and 3 for best poster). Additionally, I have served on the scientific and organizing committees of **3 conferences** in Spain, the UK, and France. Beyond conferences, I have been invited to deliver **8 core seminars** at scientific institutions in 4 different countries. Below a selection:

- **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](https://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*.

## AWARDS AND HONORS

I have been a finalist or awardee in **14 national and international competitions** recognizing my research and outreach efforts. Among them, I would like to highlight:

- **'For Women in Science' Young Talents Award** (Fondation L'Oréal-UNESCO, France, 2024). Awardee (20,000€), recognizing the excellence and impact of a research career.
- **W.D. Hamilton Award** (Society for the Study of Evolution, USA, 2023). Finalist (500\$), awarded for outstanding contributions by early-career researchers in evolutionary biology.



Other awards include:

- **Young Scientific Talent Prize** (2025). Campus France and the Cité internationale universitaire de Paris. *Finalist*.
- **Best Talk Prize** (2023, 2022). Reunión de jóvenes investigadore/as en el extranjero, Spain.
- **Outreach Award in Medicine and Health** (2023). Fundación Lilly & The Conversation, Spain. *Finalist*.
- **3MT Video Award: Cuéntame11F** (2022). Citizen initiative 11 febrero, Spain. *First place*.
- **Women's Name Award: Scientific Vocations** (2022). Fundación Merck Salud, Spain.
- **IDEAX21 - International Creative Jam** (2020). Xunta de Galicia, Spain.
- **Best Scientific Panel Prize** (2019, 2017). Foro Acui, Spain. *First place (450€ in 2019; 400€ in 2017)*.
- **National Speech Competition** (2015). Club de Debate Compostela, Spain. *Finalist*.
- **Best Poster Prize** (2015). Genetics Department, Univ. Santiago de Compostela, Spain. *First place*.
- **Open Software Translation Award** (2013). USC Engineering Tech. School, Spain. *First place (600€)*.

## FUNDING

### Competitive fellowships:

- 2024 **Minerva Fast Track Fellowship (2025-2028)**. Max Planck Society, GERMANY. *ON HOLD*.
- 2023 **National Postdoctoral 'Juan de la Cierva' Fellowship (2024-2026)**. Spanish Ministry of Science (ref. JDC2022-048396-I), SPAIN. *DECLINED to accept the MSCA in France*.
- 2023 **EU MSCA Fellowship (2023-2025)**. Marie Skłodowska-Curie Actions (MSCA-cofund) and Région Normandie (ref. 101034329), EU and FRANCE. *ONGOING*.
- 2017 **National Doctoral Fellowship (2017-2021)**. Spanish Ministry of Economy, Industry and Competitiveness (ref. BES-2016-078166), SPAIN. *CONCLUDED*.
- 2013 **Erasmus scholarship (2013-2014)**. European Union. *CONCLUDED*.
- 2009 **Summer Exchange scholarship (1 month)**. Alliance Française, FRANCE. *CONCLUDED*.

**Research projects:** I have secured funding from **five international projects** of over 40,000 €: an *Exploration Fund Grant* (5,000 €) from The Explorers Club ([USA](#)) in 2024; a *FOVI project* (ref. FOVI230047; 30,000 €) in 2023 as a collaborator from Gobierno de [Chile](#); 2 *EU transnational access TNA grants* (together over 10,000 €), one for [Ireland](#) in 2019 (Assemble+) and the other one for [Portugal](#) in 2024 (AquaExcel3.0); and a BIF grant (2,370 €) from Boehringer Ingelheim Fonds ([Germany](#)) in 2021.

### Travel/conference grants.

- 2025 **Young investigator travel award**. Society for Molecular Biology & Evolution (SMBE). 3,000 \$.
- 2025 **EACR travel award**. European Association for Cancer Research (EACR). 745 €.
- 2024 **FEBS YSF grant**. Federation of European Biochemical Societies (FEBS). 1,000.00 €.
- 2024 **MCAA micro grant**. Marie Curie Alumni Association (MCAA). 1,000.00 €.
- 2023 **Mangold Fellowship**. Lindau Nobel Laureate Meeting, Germany. 560.00 €.
- 2022 **SEBBM grant**. Sociedad Española de Bioquímica y Biología Molecular, Spain. Budget: 100.00 €.
- 2017 **EuroMarine Young Scientist Fellowship**. European Marine Research Network, Spain. 500.00 €.



## MENTORING OF STUDENTS

I have supervised **five undergraduate and master's students** during their theses in France and Spain, three of which decided to pursue a PhD. **Most recently**, I mentored Angèle Moulin (Université de Caen Normandie, 2023–2024) and Géo Bujard (Sorbonne Université, 2023–2024) during their master's thesis. **Earlier**, I supervised the undergraduate theses of Andrea E. Arias Díaz (Universidade de Santiago de Compostela, 2020–2021), who received an award for her degree thesis, Ana Copena Soutelo (U. de Santiago de Compostela, 2019–2020), the master thesis of Iago Otero Coto (Universidade da Coruña, 2019–2020), and the international student Artemisia Ntoula (University of Patras, Greece) during an Erasmus internship at U. de Santiago de Compostela (summer 2019). These experiences have allowed me to support early-career researchers.

## HIGH EDUCATION TEACHING

I have gained teaching experience (**132.5 certified teaching hours**) at five public universities across four countries (Spain, UK, France, and Chile), delivering theoretical and laboratory sessions in different languages (English, Spanish/Galician, and French) to undergraduate and master's students. Highlights include lecturing in the MSc *Sciences de la Mer* program at Université de Caen Normandie (2023–2025), teaching medical students at University College London (2021–2023), contributing to genetics courses at U. de Santiago de Compostela (2017–2021), and recent contributions at the Universidad de O'Higgins (7.5 hours, 2024 with the FOVI project). These experiences have improved my ability to adapt to diverse academic settings. I hold national accreditations as an assistant professor Spain (PAD ANECA) and France (Section 64).

## SERVICE TO THE COMMUNITY

- **Conference organization.** I have been involved in organizing 3 conferences: 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); and the Chilean Coastal Ecological Health Symposium (2024), with 30 attendees, 4 plenary talks, and a panel discussion; hosted by UNICAEN (France).
- **Reviewing activity.** I have been invited to review five manuscripts for the international community in highly-recognized journals: 1 *Science*, 1 *Molecular Ecology*, 1 *Science Advances*, 1 *Proc. Biol. Sci.*, 1 *Scientific Rep* (see verified reviews on Publons: D-7235-2018).
- **Member of juries and evaluation committees.** I have been the external evaluator of two PhD thesis (L. Tomás, U. de Vigo, 2024; A. Guitián Caamaño, U. da Coruña, 2024), and I have recently served on the jury of Galicia Spin-Off Awards (2024), called and organized by GCIencia.
- **Institutional citizenship.** I have served as an elected spokeswoman for doctoral students on the committees of the International Doctoral Schools at *Universidade de Santiago de Compostela* (2021-2022) and *Universidade de Vigo* (2017-2018). In Vigo, I was also part of its Quality Commission.
- **Professional membership:** I am an active member of the *Marie Curie Alumni Association* (MCAA) since 2023 and the *European Association for Cancer Research* (EACR) since 2019.

## RELEVANT CERTIFICATIONS

I hold a **first-aid certification** (2023) from the Université de Caen Normandie, focused on fieldwork-related emergencies. I am certified in **biological risk management** (UNE-CWA 15973, 2017) and in **animal experimentation procedures** (A+B+C+D+E, 140 hours, 2017), including practical training with fish and rodents, accredited by the Comunidad de Madrid. My field training includes a **Craft Skipper License** (PER, 60 hours, 2017), combining theoretical and practical modules (engine, VHF, sailing); an **Open Water Diver License** (60 hours, 2014); and a certification of **Outdoor Activity Instructor** by Consellería de Traballo da Xunta de Galicia (350 hours, 2012), which involved extensive training in group coordination and safety in outdoor settings.

## OUTREACH ACTIVITY

I have actively participated in over 40 public science outreach events, including 16 school visits (Spain, UK, France), 12 popular science articles (e.g., *The Conversation*), 8 talks for the general public (e.g. *Pint of Science* in London, A Coruña, and Caen), 6 promotional videos (e.g., AquaExcel project), 5 workshops on scientific fairs, 3 opinion editorials, and 5 miscellaneous activities such as contributing to children's science colouring book or the school radio program of IES Mata Jove. **I am strongly committed to making science accessible, particularly in towns where opportunities to engage with scientists are limited.**

## MEDIA COVERAGE

Renowned media have featured my research publications and various scientific activities -such as outreach activities, 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.** PR clipping: [albruzos.github.io/media](https://albruzos.github.io/media).

**SOCIAL MEDIA:**  [@BruzosAliciaL](https://www.linkedin.com/in/albruzos)  [@BruzosAliciaL](https://www.youtube.com/channel/UCBzUzUzUzUzUzUzUzUzUzUz)  [@alicialbruzos](https://www.researchgate.net/profile/Alicia-L-Bruzos)  [@BruzosAliciaL](https://twitter.com/BruzosAliciaL)