



CURRICULUM VITAE (CVA)
IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION		CV date	18/01/2024
First name	Ana Riesgo Gil		
Family name	Riesgo Gil		
Gender (*)	Female	Birth date (dd/mm/yyyy)	11/10/1978
Social Security, Passport, ID number	50869228J		
e-mail	anariesgogil@mncn.csic.es	URL Web:	https://www.anariesgogil.com/
Open Researcher and Contributor ID (ORCID) (*)			0000-0002-7993-1523

(*) Mandatory

A.1. Current position

Position	Tenured Researcher (Científico Titular)		
Initial date	December 2023		
Institution	Museo Nacional de Ciencias Naturales de Madrid		
Department/Center			
Country	Spain	Teleph. number	648430223
Key words	Evolutionary biology, reproduction, genomics, phylogeny, microbiome, molecular evolution		

A.2. Previous positions (research activity interruptions, see call)

Period	Position/Institution/Country/Interruption cause
2020-2023	Ramón y Cajal Researcher MNCN/ Spain
2015-2020	Research Leader/ Natural History Museum of London/ UK
2012-2015	Juan de La Cierva Fellow/Universitat de Barcelona/Spain
2009-2012	Marie Curie Outgoing Fellow/Harvard University/USA and CEAB-CSIC/Spain
2008-2009	Ibercaja Excelencia en Investigación Fellow/University of Alberta/Canada
2007-2008	Research Assistant/ CEAB-CSIC/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Cell Biology	Universitat de Barcelona	2007
Licensed in Biology	Universidad Complutense de Madrid	2001

Part B. CV SUMMARY

I am researcher on the evolutionary biology and ecology field, focusing on marine invertebrates. I got my PhD in Cell Biology in 2007 (Universitat de Barcelona), and then obtained three postdoctoral fellowships: Ibercaja Excellence in Research Fellowship to be hosted at the University of Alberta, Canada (2008-2009), Marie Curie Outgoing Fellowship to be hosted at Harvard University (2009-2011) and CEAB-CSIC (2011-2012), and Juan de la Cierva Fellowship to be hosted at the Universitat de Barcelona (2012-2015). In June 2015, I was hired as Permanent Researcher at the Natural History Museum of London, and promoted to Research Leader in 2017. In August 2019, I obtained a Ramón y Cajal tenure-track position at the Museo Nacional de Ciencias Naturales de Madrid in Spain (MNCN) as the first in the area



Environmental Science and Technology, and I started at the MNCN in May 2020. In December 2022, I got a permanent position, “Científico Titular”, at MNCN, and I signed the contract to my current position in December 2023.

My research line focuses on the evolution and ecology of marine invertebrates, with a special focus on sponges. I combine many research techniques from molecular biology: genomic and transcriptomic techniques (including whole genome sequencing, RADseq, RNAseq, Spatial transcriptomics, and Sanger sequencing) to both classical morphology and the latest advances in electron microscopy. I have led 12 research projects as PI, CoI or Coordinator, and participated in 27 at national and international level, with over 7M euros of funding. My research production reaches >109 scientific papers and 6 book chapters (first author in more than 50% and senior/leading/corresponding author in 25%). Among the most relevant journals in which I have recently published I can highlight Nature Communications, Current Biology, Molecular Biology and Evolution, PNAS, Proceedings of the Royal Society B, and Molecular Ecology. I have been invited as keynote speaker to 6 conferences, including the opening keynote lecture at the XIX World Sponge Conference. Leiden and contributed 57 talks and posters to international conferences as first or senior author, and 21 contributions as middle author. I have supervised 12 postdoctoral researchers (4 MSCA), 7 PhD students (5 to completion) and 11 MRes students. I am an elected Fellow of the Linnean Society, and serve in the council of the Sociedad Española de Biología Evolutiva, and the Society of Invertebrate Morphology. I have attended I have reviewed articles for more than 50 different journals, and have been in the grant panel for several national and international agencies, including AEI (Spain), NSF (USA), DFG (Germany), MINCIENCIAS (Colombia), FORBIO (Norway), and Ministry of Science (Israel), European Commission FP7 and H2020, among others. I am on the editorial board of Invertebrate Systematics, Systematics and Biodiversity, and Journal of Natural History. I have teaching experience at national (Universitat de Barcelona) and international levels (*University College London, Imperial College, Invemar*). I have also experience in policy making including participation on the working group on the OSPAR deep-sea sponge aggregations assessment in 2021. My profile has accumulated 3564 citations (2387 since 2019), an H-index of 32.

I have participated in **sampling cruises** in the Antarctica, the Cantabrian Sea, the Norwegian fjords, and the North Western Pacific (Canada), and have a wide **experience in scuba-diving** with ca. 200 dives in the Mediterranean, Caribbean, Atlantic and the Southern Ocean, as well as in continental waters of Canada and Spain.

Part C. RELEVANT MERITS

C.1. Publications (selected out from 50 publications in the last 5 years)

1. Díez-Vives, C. and **Riesgo, A.**, 2024. High compositional and functional similarity in the microbiome of deep-sea sponges. **The ISME Journal**, p.wrad030.
2. Hustus, K., Díez-Vives, C., Mitsi, K., Nutakki, J., Kering, V., Nguyen, I.T., Spencer, M.G., Leys, S.P., Hill, M.S., **Riesgo, A.** and Hill, A.L., 2023. Algal symbionts of the freshwater sponge *Ephydatia muelleri*. **Symbiosis**, 90(3), pp.259-273.
3. Campana, S., **Riesgo, A.**, Jongepier, E., Fuss, J., Muyzer, G., de Goeij, J.M. (2022). Meta-transcriptomic comparison of two sponge holobionts feeding on coral- and macroalgal-dissolved organic matter. **BMC Genomics**, 23(1): p.674.
4. Busch, K., Slaby, B.M., Bach, W., Boetius, A., Clefsen, I., Colaço, A., Creemers, M., Cristobo, J., Federwisch, L., Franke, A., Gavriilidou, A., Hethke, A., Kenchington, E., Mienis, F., Mills, S., **Riesgo, A.**, Ríos, P., Roberts, E.M., Sipkema, D., Pita, L., Schupp, P.J., Xavier, J.P., Rapp, H.T., Hentschel, U. (2022). Biodiversity, environmental drivers, and sustainability of the global deep-sea sponge microbiome. **Nature Communications**, 13(1): p-5160.
5. Geraghty, S., Koutsouveli, V., Hall, C., Chang, L., Sacristan-Soriano, O., Hill, M., **Riesgo, A.** and Hill, A. (2021). Establishment of Host–Algal Endosymbioses: Genetic Response to Symbiont Versus Prey in a Sponge Host. **Genome biology and evolution**, 13(11): evab252.



6. Díez-Vives, C., Taboada, S., Leiva, C., Busch, K., Hentschel, U. and **Riesgo, A.** (2020). On the way to specificity-Microbiome reflects sponge genetic cluster primarily in highly structured populations. **Molecular Ecology**, 29(22), pp.4412-4427.
7. Kenny, N.J., Francis, W., Rivera-Vicéns, R.E., Juravel, K., de Mendoza, A., Díez-Vives, C., Lister, R., Bezares-Calderon, L., Grombacher, L., Roller, M. and Barlow, L.D., Camilli, S., Ryan, J.F., Wörheide, G., Hill, A.L., **Riesgo, A.**, Leys, S. (2020). Tracing animal genomic evolution with the chromosomal-level assembly of the freshwater sponge *Ephydatia muelleri*. **Nature Communications**, 11, 3676.
8. Britstein, M., Cerrano, C., Burgsdorf, I., Zoccarato, L., Kenny, N.J., **Riesgo, A.**, Lalar, M. and Steindler, L. (2020) Sponge microbiome stability during environmental acquisition of highly specific photosymbionts. **Environmental Microbiology**, 22 (8), 3593-3607.
9. Georgieva, M.N., Taboada, S., **Riesgo, A.**, Díez-Vives, C., De Leo, F.C., Jeffreys, R.M., Copley, J.T., Little, C.T.S., Ríos, P., Cristobo, J., Hestetun, J.T., Glover, A.G. (2020). Evidence of vent-adaptation in sponges living at the periphery of hydrothermal vent environments: ecological and evolutionary implications. **Frontiers in Microbiology** 11, 1636
10. Kenny, N.J., Plese, B., **Riesgo, A.** and Itskovich, V.B. (2019). Symbiosis, Selection, and Novelty: Freshwater Adaptation in the Unique Sponges of Lake Baikal. **Molecular Biology and Evolution**, 36(11), 2462-2480.

C.2. Congresses

Invited talks in the last 5 years:

1. **2023. Riesgo, A.** Population genomics of deep-sea organisms and their symbionts to aid in their conservation. XXIII Seminario de Genética de Poblaciones y Evolución. Las Caldas, Asturias
2. **2022. Riesgo, A.** Sponges as major key players of marine and freshwater ecosystems. XIX World Sponge Conference. Leiden, The Netherlands. (Opening Lecture).
3. **2022. Riesgo, A.** Sponge sexual strategy and the role of bacteria. Conferences Jacques-Monod: Origin of Metazoans. Roscoff, France.
4. **2022. Riesgo, A.** Ecophysiological responses to changing environmental conditions in marine invertebrates: molecular keys to adaptation. Ecological Uniformitarianism—key or lock? British Geological Survey. London, UK.
5. **2021. Riesgo, A.** Molecular ecology of keystone species in VMEs to support conservation strategies. ISOBAY 17, Gijón, Spain.
6. **2019. Riesgo, A.** Origins and evolution of sex: biology and ecology of sexual reproduction in the ancient lineage of sponges. UK EvoDevo. Southampton, UK.

Selected regular contributions:

1. **2024. Riesgo, A.** Conservation of sex determination markers along animals: the case of genotypic sex determination in sponges. IX SESBE Meeting. Málaga, Spain.
2. **2024. Verdes, A., Giacomello, S., Riesgo, A.** Understanding venom evolution and function in ribbon worms through Spatial Transcriptomics. IX SESBE Meeting. Málaga, Spain.
3. **2023. Gallego, R., Arias, B., Díez-Vives, C., Neave, E., Wang, C., Shum, P., Cárdenas, P., Steffen, K., Taboada, S., Villamor, A., Drewery, J., Mariani, S., and Riesgo, A.** Tales from the deep: using sponges to survey deep water ecosystems. CISA2023: V Iberian Congress of Biological Systematics. Madrid, Spain.
4. **2023. Turon, M., Ford, M., Maldonado, M., Sitjá, C., Riesgo, A., Díez-Vives, C.** Contribution of vertical and horizontal transmission to microbiome composition through the ontogeny of the marine sponge *Crambe crambe*. CISA2023: V Iberian Congress of Biological Systematics. Madrid, Spain.
5. **2023. Corral-Lou, A., Gallego, R., Taboada, S., Ramón-Laca, A., Alcaraz, L., Mercado, B., Pérez-Ruzafa, Á., and Riesgo, A.** Assessing biodiversity and anthropogenic impacts in the Mar Menor using environmental DNA metabarcoding through sponge tissue collection. CISA2023: V Iberian Congress of Biological Systematics. Madrid, Spain.



6. **2022.** Mitsi, K., Diez-Vives, C., Taboada, S., Verdes, A., Conejero, M., Cuesta, D., Kolomyjec, S., Nichols, S., Manconi, R., Fiore, C., Evans, K., Lucey, J., Morales, J., Leys, S. Hill, A.H., Riesgo, A. The relationship between the genotype and the microbial communities in the freshwater sponge *Ephydatia muelleri*. XIX World Sponge Conference. Leiden, The Netherlands.
7. **2022.** Verdes, A., **Riesgo, A.** Mapping transcriptome-wide gene expression within sponge tissue sections to investigate gonad evolution. XIX World Sponge Conference. Leiden, The Netherlands.
8. **2022.** Neave, E., Cai, W., Harper, L., **Riesgo, A.**, Mariani, S. Unravelling basin scale fish community structure through eDNA analysis of sponge tissues from natural history collections. XIX World Sponge Conference. Leiden, The Netherlands.
9. **2020.** Taboada, S., Ríos, P., Mitchell, A., Shuangqiang, W., Davies, A., Kenchington, E., Cranston, A., Busch, K., Tonzo, V., Cárdenas, P., Leiva, C., Koutsouveli, V., Cristobo, J., Hentschel, U., Rapp, H.T., Drewery, J., Arias, M.B., **Riesgo, A.** Genetic diversity, gene flow and hybridization in fan-shaped demosponges (*Phakellia* spp.) in the northeast Atlantic deep sea. Deep-sea Biology Society Conference, online, UK.
10. **2019.** Díez-Vives, C., Taboada, S., Hentschel, U., **Riesgo, A.** Understanding the drivers of community structure of sponge symbionts. Gordon Research Conference Animal-Microbe Symbioses as Nested Ecosystems. Mount Snow West Dover, USA.

C.3. Research projects (selected from the last 5 years)

- 2024-2026.** Monitoreo de biodiversidad en ecosistemas marinos vulnerables de aguas profundas mediante ADN ambiental con esponjas como muestreadores naturales (MOBIOMAR). Total: 126.200€. Funding body: Ministerio de Ciencia, Innovación y Universidades. PI: Ana Riesgo
- 2022-2025.** Biodiversity Genomics Europe (Grant ID 101059492). Total: 10.000.000€ (For MNCN: 317.079,59€). Coordinator: Naturalis Biodiversity Centre, WP leader: Ana Riesgo. Funding body: European Commission, HORIZON-CL6-2021-BIODIV-01-01.
- 2021-2025.** Freshwater sponges as natural eDNA samplers for monitoring the biodiversity of Iberian rivers (PIE-202030E006). Total: 150.000€. P.I.: Ana Riesgo. Funding body: CSIC, Spain.
- 2021-2025.** Marine sponge biodiversity from genes to ecosystems: delivering knowledge and tools for sustainable management and conservation (SponBIODIV). Total: 1.953.609€ (For MNCN: 62.150€). Funding body: Biodiversa+ project European Biodiversity Partnership. PI Joana Xavier & Paco Cárdenas, WP leader: Ana Riesgo.
- 2021.** Origins of gonads (PID14610). Total: 20.000€. P.I.: Ana Riesgo. Funding body: EASI-GENOMICS, European Consortium.
- 2021-2025.** SMARTEx: Seabed Mining and Resilience To EXperimental impact. Total: £4.000.000. P.I.: Daniel Jones, CoI: Ana Riesgo (+9 others). Funding body: Natural Environment Research Council (NERC), UK.
- 2020-2024.** EVOSEX: Evolution of animal sexual reproduction: genomic toolkits, microbiomes, and macroevolutionary patterns in sponges (PID2019-105769GB-I00). Total: 188.000€. P.I.: Ana Riesgo. Funding body: Ministerio de Ciencia e Innovación. Program: Generación de Conocimiento, Spain.
- 2020-2023.** A Freshwater Sponge Holobiont: A broadly accessible emerging model system to understand evolutionary and ecological consequences of host:alga and host:microbe symbiont specialization. Total: \$300.000. P.I.: April Hill, Co-P.I.: Ana Riesgo, Sally Leys. Funding body: Betty and Gordon Moore Foundation, USA.
- 2020-2023.** SpongeDNA: Bolstering marine biodiversity exploration and monitoring through natural environmental DNA samplers (NE/T007028/1). Total: £599.140. P.I.: Stefano Mariani, Co-P.I.: Ana Riesgo. Funding body: Natural Environment Research Council (NERC), UK.