CURRICULUM VITAE ABREVIADO (CVA)

***IMPORTANT** – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.*

Part A. PERSONAL INFORMATION

First name	Annie		
Family name	Machordom		
Gender (*)	F	Birth date (dd/mm/yyyy)	31/10/1959
ID number	05397167X		
e-mail	annie@mncn.csic.es	URL Web: https://www.mncn.csic.es/es/quienes_somos/machordom-barbe-annie	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-0341-0809	

A.1. Current position

Position	Senior Researcher (Investigadora Científica)		
Initial date	June 2009		
Institution	Consejo Superior de Investigaciones Científicas (CSIC)		
Department/Center	Biodiversidad y Biología Evolutiva	Museo Nacional de Ciencias Naturales (MNCN)	
Country	Spain	Teleph. number	914111328
Key words	Evolutionary Biology, Molecular Systematics, Population Genetics, Biodiversity, Speciation, Marine Invertebrates, Conservation.		

A.2. Previous positions (research activity interuptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2002-2009	Researcher (Científica Titular) / CSIC / Spain / Promotion

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD: Biological Sciences	Complutense de Madrid University	1990
Licensed: Biological Sciences	Complutense de Madrid University	1982

Part B. CV SUMMARY

The central theme of my research falls within the field of Evolutionary Biology, Biodiversity and Conservation. I work with various animal models (especially marine invertebrates) to address topics related to speciation, diversification, phylogeny, taxonomy, phylogeography, hybrid species, and population structure, primarily from a genetic and genomic perspective. I am interested in understanding the evolutionary patterns we observe from data across different species and how we can use that data to ensure the conservation of biodiversity. Using the most informative methodologies available at each moment, and in line with technological advances,

I have characterized the genetic variation of many species using techniques such as karyology, allozyme variation, DNA restriction patterns, Sanger sequencing, and high-throughput sequencing technologies (e.g., next-generation or transcriptomic sequencing). I have also collaborated with numerous national and international specialists from a variety of fields (e.g., marine and developmental biology, morphology, geology), relying on their expertise to complement genetic data and analyses, resulting in co-authorship of several of our articles. At the core of this work is species identification, thanks to integrative taxonomy analysis, resulting in the description of numerous species, with almost a hundred of them being galatheids, ranking among the top authors worldwide over the last decade (https://www.marinespecies.org/aphia.php?p=stats_graph&type=authors&id=106671&resolution=fullhd). Based on this knowledge, we have been able to reveal evolutionary patterns, from the importance of allopolyploidy in fish evolution to dating several cases of speciation, identifying the paleogeographic situation that could explain the patterns found or the environmental factors that may condition gene flow in different marine invertebrates.

As a result of this work and collaborations, I currently have 189 publications, 168 of them in journals (153 of which are included in the Journal Citation Report or SCI), and 13 contributions as books or book chapters, in addition to multiple technical reports, 8 of which have ISBN. We have presented 160 communications at conferences and congresses. I have participated in 35 projects, 12 of which I led or am leading; 19 projects or agreements with administrations or companies, having led seven of them, and 17 International Collaboration Actions, in six of which I have acted as the principal investigator. The total funds obtained exceed €1,700,000. I have conducted stays in seven foreign centres and in three different national ones apart from the MNCN.

Regarding the impact of publications, there are 3794 citations in Web of Science, with an H-index of 36, and in Google Scholar, which includes other elements (such as non-indexed books or journals), the total number of citations is 6128, with an H-index of 44.

I also participate in the organization of certain research support structures. Since 2004, I have been responsible for the Molecular Systematics and Population Genetics Laboratory at the National Museum of Natural Sciences (MNCN). This laboratory is used by about 60 users, from a total of 30 research groups, and I coordinate the work of 6 technicians who are currently part of it.

I consider that the education and training of students is an important aspect of my role as a researcher: I have supervised 13 doctoral theses (11 of them completed by female researchers), 19 advanced study diplomas or master's projects (TFM), and 4 bachelor's degree final projects (TFG). I am currently supervising 2 doctoral theses. I have also participated in researcher training through various courses, including one with Mozambican students that helped them establish a marine biology laboratory in their country. In recent years, I have taught in the master's program in Biodiversity in Tropical Areas and their Conservation, which was originally taught in Ecuador under the auspices of the CSIC and the Menéndez Pelayo University, in coordination with Ecuadorian universities, and has been taught in Spain since 2016. I am currently the Academic Secretary of this master's program.

Likewise, I have participated in various outreach campaigns, both in terms of purely scientific results and in raising awareness about the issue of invasive species or encouraging the integration of girls into STEM careers.

I obtained my position as a Scientific Researcher at the Spanish National Research Council (CSIC) at the MNCN in 2002, and in 2009, I was promoted to Senior Researcher. My research has been recognized with five six-year research periods (consecutive since 1991), and I am among the most prominent Spanish researchers according to an impact ranking in the field of Biology: Zoology (https://grupodih.info/).

Part C. RELEVANT MERITS

C.1. Publications

We have published 76 articles in indexed journals in the period from 2014 to 2023. Most of them provide basic data on genetic differentiation from populations to higher taxonomic levels, contrasting different hypotheses to explain the observed patterns and attempting to correlate these patterns with various abiotic or paleogeographic factors. The taxa include species with varying levels of protection, as we aim for our data to be useful for conservation. My signature as the last author reflects my role as the Principal Investigator. We could highlight:

Macpherson, E.; Rodríguez-Flores, P. C. & Machordom, A. 2023. Integrative approach to describe new species of squat lobsters of the genera *Heteronida* Baba & de Saint Laurent, 1996 and *Torbenella* Baba, 2008 (Decapoda, Munididae) from the Southwestern Pacific Ocean. *European Journal of Taxonomy*, 860: 116-140. https://doi.org/10.5852/ejt.2023.860.2055

Machordom, A.; Ahyong, S. T.; Andreakis, N.; Baba, K.; Buckley, D.; García-Jiménez, R.; McCallum, A. W.; Rodríguez-Flores, P. C. & Macpherson, E. 2022. Deconstructing the crustacean squat lobster genus *Munida* to reconstruct the evolutionary history and systematics of the family Munididae (Decapoda, Anomura, Galatheoidea). *Invertebrate Systematics*, 36(10): 926–970. https://doi.org/10.1071/IS22013

López-Márquez, V.; Cushman, S. A.; Templado, J.; Wan, H. Y.; Bothwell, H. M. & Machordom, A. 2021. Genetic connectivity of two marine gastropods in the Mediterranean Sea: seascape genetics reveals species-specific oceanographic drivers of gene flow. *Molecular Ecology*, 30: 4608-4629. https://doi.org/10.1111/mec.16080

Navarro Campoy, A.; Addamo, A. M.; Machordom, A.; Meade, A.; Rivadeneira, M. M.; Hernández, C. E. & Venditti, C. 2020. The origin and correlated evolution of symbiosis and coloniality in scleractinian corals. *Frontiers in Marine Science*, 7: 461. https://doi.org/10.3389/fmars.2020.00461

Rodríguez-Flores, P. C.; Macpherson, E.; Buckley, D. & Machordom, A. 2019. High morphological similarity coupled with high genetic differentiation in new sympatric species of coral-reef squat lobsters (Crustacea: Decapoda: Galatheidae). *Zoological Journal of the Linnean Society*, 185(4): 984-1017. https://doi.org/10.1093/zoolinnean/zly074

Araujo, R.; Buckley, D.; Nagel, K.-O. García-Jiménez, R. & Machordom, A. 2018. Species boundaries, geographic distribution and evolutionary history of the Western Palaearctic freshwater mussels *Unio* (Bivalvia: Unionidae). *Zoological Journal of the Linnean Society*, 182: 275-299. https://doi.org/10.1093/zoolinnean/zlx039

Fernández-Álvarez, F. Á.; Machordom, A.; García-Jiménez, R.; Salinas-Zavala, C. A. & Villanueva, R.; 2018. Predatory flying squids are detritivores during their early planktonic life. *Scientific Reports*, 8: 3440. https://doi.org/10.1038/s41598-018-21501-y

Araujo, R.; Schneider, S.; Row, K. J.; Erpenbeck, D. & Machordom, A. 2017. The origin and phylogeny of Margaritiferidae (Bivalvia, Unionoida): a synthesis of molecular and fossil data. *Zoologica Scripta*, 46: 289-307. https://doi.org/10.1111/zsc.12217

Addamo, A. M.; Vertino, A.; Stolarski, J.; García-Jiménez, R.; Taviani, M. & Machordom, A. 2016. Merging scleractinian genera: the overwhelming genetic similarity between solitary *Desmophyllum* and colonial *Lophelia*. *BMC Evolutionary Biology*, 16: 108. https://doi.org/10.1186/s12862-016-0654-8

Calvo, M.; Alda, F.; Oliverio, M.; Templado, J. & Machordom, A. 2015. Surviving the Messinian Salinity Crisis? Divergence patterns in the genus *Dendropoma* (Gastropoda: Vermetidae) in the Mediterranean Sea. *Molecular Phylogenetics and Evolution*, 91: 17-26. https://doi.org/10.1016/j.ympev.2015.05.004

C.2. Congress

In the last 10 years, 50 presentations have been given at Congresses or Conferences (160 in total). Among the most recent:

VI Congreso Nacional sobre Especies Exóticas Invasoras y I Congreso Ibérico –EEI2022. 20-22 April 2022. Pamplona. Lambistos, I.; Martínez Olmedo, B.; Machordom, A. & Perdices, A. INVASAQUA y SIBIC: buscando sinergias y retos estratégicos para la gestión de EEI acuáticas. Especies exóticas invasoras de agua dulce y sistemas estuarinos: materiales Life INVASAQUA para la sensibilización y prevención de su entrada en la Península Ibérica.

Congress of the European Society for Evolutionary Biology. Prague, Check Republic, 14-19 August 2022. Thumsová, B.; Price, S. J.; González-Cascón, V.; Voros, J.; Martínez-Silvestre, A.; Rosa, G. M.; Machordom, A. & Bosch, J. Origin and emergence of viruses causing outbreaks on Iberian amphibians.

VIII Congreso de la Sociedad Española de Biología Evolutiva (SESBE). 2-4 February 2022. Vigo. Repullés, M.; López-Márquez, V.; Templado, J. & Machordom, A. Genetic structure and clonality assessment of the endangered Mediterranean coral *Cladocora caespitosa* in its whole distribution area.

The Crustacean Society Meeting (TCS2019). 26-30 May 2019. Hong Kong, China. Rodríguez-Flores, P. C.; Macpherson, E.; Ahyong, S. T. & Machordom, A. Moving forward by moving back: integrative systematics supports revival of old, and creation of new genera in the composite taxon, *Munidopsis* Whiteaves, 1874.

C.3. Research projects

In the last 10 years, I have participated in 13 projects (35 in my entire career), being the Principal Investigator (PI) in five of them. For instance:

Agencia Estatal de Investigación-MICIN. Museo Nacional de Ciencias Naturales. Expansiones y regresiones en especies marinas y salobres. Signatura genómica en un Mediterráneo cambiante (EX(t)REMYS). Ref. PID2019-108644GB-I00. 2020-2024. PI.

Fundación Biodiversidad. Ministerio para la Transición Ecológica y el Reto Demográfico. Sociedad de Amigos del Museo Nacional de Ciencias Naturales (SAM). Efectos de la expansión de especies exóticas/invasoras en los parámetros genómico-poblacionales de especies autóctonas costeras: los corales *Cladocora caespitosa* y *Oculina patagonica* como ejemplo (CORALIEN). Ref. G78659737. 2020-2023. PI.

Programa LIFE (Comisión Europea). Especies exóticas invasoras de aguas dulces y sistemas estuarinos: sensibilización y prevención en la Península Ibérica (Life-INVASAQUA). Ref. LIFE17 GIE/ES/000515. 2018-2023. Researcher.

European Commission. Joint Research Centre (JRC). MedCORs - Guidelines for the assessment of marine ecological corridors in the Mediterranean Sea. Ref. 20218207. 2021-2022. PI.

C.4. Contracts, technological or transfer merits

In the last 10 years we have been contracted by four institutions: Ministerio de Agricultura, Alimentación y Medio Ambiente; Consejería de Medio Ambiente, Ordenación del Territorio y Sostenibilidad, Comunidad de Madrid; TRAGSATEC, and the European Commission, Joint Research Centre (JRC). Except the for the first one, I was responsible for these contracts.

I have participated in outreach activities at various levels, ranging from training laboratory technicians to my involvement in different projects or initiatives aimed at popularizing science among schoolchildren, especially girls, such as on the International Day of Women and Girls in Science (see, for example: https://www.mncn.csic.es/es/visita-el-mncn/audiocuento/annie-machordom).