CV Date	12/03/2024

Part A. PERSONAL INFORMATION

First Name	Natalia		
Family Name	Petit Marty		
Sex	Not Specified	Date of Birth	
ID number Social Security, Passport			
URL Web	https://orcid.org/0000-0002-3810-1152		
Email Address			
Open Researcher and Contributor ID (ORCID)	0000-0002-3810-1152		

A.1. Current position

Job Title	1		
Starting date	2022		
Institution	Instituto de Investigaciones Marinas		
Department / Centre			
Country		Phone Number	
Keywords	Molecular evolution; Molecular markers and recognition; Population biology; Biodiversity status and trends; Extinction; Resource studies; Nature conservation		

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2019 - 2021	1 / The Hong Kong University
2018 - 2019	1 / Instituto Mediterráneo d Estudios Avanzados
2010 - 2013	1 / INSTITUTO DE BIOLOGIA EVOLUTIVA
2009 - 2010	1 / FUNDACIÓ BARCELONA MEDIA UNIVERSITAT POMPEU FABRA
2008 - 2008	1 / Universitat Autònoma de Barcelona
2004 - 2008	1 / Universitat Autònoma de Barcelona
2001 - 2002	1 / Instituto Nacional Investigaciones Agropecuarias (Argentina)

A.3. Education

Degree/Master/PhD	University / Country	Year
Genética	Universitat Autònoma de Barcelona	2008
Licenciatura en Genética	Universidad Nacional de Misiones (Argentina)	1999

Part B. CV SUMMARY

I was born in Argentina, where I obtained my Bachelor's degree in Genetics in 1999, and began working on research related to evolutionary biology and population genetics applied to agricultural research. During this period, I published seven peer-reviewed articles, two of which were as the first author and stemmed from my Undergraduate Thesis project presented in 1999 ("Reproductive isolation of South American fruit fly") which also led to a research stay at the International Atomic Energy Agency (IAEA, UN) in Vienna in 2003.

Subsequently, I relocated to Barcelona, Spain, where I commenced my post-graduate studies at the Autonomous University of Barcelona, focusing on molecular evolution theory. I successfully earned my Ph.D. degree in Genetics with the highest score (outstanding cum laude) in 2008. During my Ph.D. training, I taught Conservation Genetics and received a grant for a research stay at Stanford University's population genetics lab. My doctoral research resulted in three peer-reviewed articles as the first author (two as corresponding author) and two peer-reviewed articles as a co-author.

From 2009 to 2013, I held a post-doctoral position at the Institute of Evolutionary Biology in Barcelona, where I primarily conducted projects related to population genomics in primate species. The research of this time resulted in nine peer-reviewed articles (two as the first author), with notable contributions published in high-impact journals such as Nature or PNAS through the Great Ape International Consortium, of which I was part, jointly with more than 40 researchers around the world.

Following this, I transitioned to freelance work outside of academia and research-related activities on Menorca Island, Spain, from May 2013 until April 2018. To stand out, in this period, I designed and built a dynamic Database of Biodiversity of Menorca Island for the local government, leading to my involvement in marine conservation projects.

I was research collaborator for the Global Change research group at the Institute of Mediterranean Advanced Studies in the Balearic Islands from 2018 to 2019; researching into the genetic basis of the mass mortality of the fan mussel, Pinna nobilis with the support of PADI foundation. This project resulted in a peer-reviewed article published in Conservation Letters in 2020 (first and corresponding author), and become the pillar of my current research lines.

In 2018, I also initiated the citizen science project "Counting boats in Menorca" to quantify nautical pressure on seagrass meadows along the Menorca Coast during summer. This project led to the establishment of a Citizen science movement called "SOS Posidonia Menorca" and subsequently the NGO Posidònia, of which I served as president from 2022 to 2023. Notable achievements during my tenure include organizing two exhibitions related to sea conservation ("MPA" and "Posidonia is Life"), numerous TV and radio interviews, and various outreach articles.

In 2019, I was awarded a post-doctoral position at the Swire Institute of Marine Science and School of Biological Sciences at the University of Hong Kong, where I researched on the adaptive potential of marine species to changes in environmental conditions. From this period, I have published three peer-reviewed articles, two as the first and corresponding author. I also received a research grant from the School of Biological Sciences of the Hong Kong University to continue my research started in Menorca with the Conservation Letter article. This research grant resulted in a Undergraduated Final Project that I tutored and three ongoing projects: 1) Phase 3-SWIMS-FishBase/SeaLifeBase collaboration ; 2) Exploitation and conservation status of Rajiformes species in the Western Mediterranean; and 3) Pacbio long-reads metabarcoding for monitoring genetic diversity of marine species.

Finally, in 2022 I was awarded a post-doctoral position granted by Marie Skłodowska-Curie Actions (MSCA) with a score of 92% (minimun required 70%), to work on the adaptive potential of exploited fish species to global change (FishAdapt) at the Institute of Marine Research from the Spanish National Research Council (IIM-CSIC), which is my current position. Within this last two years I have published a peer-reviewed article as first & corresponding author; and one as collaborator.

I have published 24 peer-reviewed articles (11 as first author, 8 as corresponding); assisted to more than 20 international congresses, and actively participated in citizen and outreach science, co-tutored 2 Master Final Projects and one Final Undergraduate project.

My primary research interest lies in applying my expertise in molecular evolution to contribute to the sustainable management of marine natural resources.

B.1. Brief summary of the Undergraduate Thesis (or equivalent) and score obtained

B.1. Breve descripción del Trabajo de Fin de Grado (TFG) y puntuación obtenida Título del Trabajo: Diseño de un dispositivo para la medida del relleno capilar en cuidados intensivos

En colaboración con el grupo de investigación IASalud, este proyecto se centra en el diseño de un dispositivo automatizado y portátil para medir el tiempo de relleno capilar (CRT) en Unidades de Cuidados Intensivos (UCI). El objetivo es proporcionar una solución integral que mejore la consistencia y eficiencia de las mediciones en entornos críticos como las UCI, optimizando así la atención médica. El proyecto aborda aspectos de sensorización biomédica, automatización y portabilidad. El trabajo está está actualmente en desarrollo.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. Ferragut-Perello, Francesca; Ram{\'i}rez-Amaro, Sergio; Tsikliras, Athanassios C; Petit-Marty, Natalia; Dimarchopoulou, Donna; Massut{\'i}, Enric; Serrat, Alba; Ordines, Francesc. 2023. Exploitation and Conservation Status of the Thornback Ray (Raja clavata) in the Balearic Islands (Western Mediterranean). Fishes. MDPI. 8-2, pp.117-117.

2 **Scientific paper**. Petit-Marty, Natalia; Casas, Laura; Saborido-Rey, Fran. 2023. State-of-the-art of data analyses in environmental DNA approaches towards its applicability to sustainable fisheries management. Frontiers in Marine Science. Frontiers. 10, pp.1061530-1061530.

3 **Scientific paper**. Petit-Marty, Natalia; Min, Liu; Tan, Iris Ziying; et al; Schunter, Celia. 2022. Declining population sizes and loss of genetic diversity in commercial fishes: a simple method for a first diagnostic. Frontiers in Marine Science. Frontiers. 10.3389/fmars.2022.8, pp.2021-12.

4 **Scientific paper**. Petit-Marty, N; Nagelkerken, I; Connell, SD; Schunter, C. 2021. Natural CO2 seeps reveal adaptive potential to ocean acidification in fish. Evolutionary Applications. willey. eva.13239.

5 **Scientific paper**. Petit-Marty, Natalia; V{\'a}zquez-Luis, Maite; Hendriks, Iris E. 2020. Use of the nucleotide diversity in COI mitochondrial gene as an early diagnostic of conservation status of animal species. Conservation Letters. pp.e12756-e12756.

6 **Scientific paper**. Santpere, Gabriel; Lopez-Valenzuela, Maria; Petit-Marty, Natalia; Navarro, Arcadi; Espinosa-Parrilla, Yolanda. 2016. Differences in molecular evolutionary rates among microRNAs in the human and chimpanzee genomes. BMC genomics. BioMed Central. 17-1, pp.1-12.

7 **Scientific paper**. Stevison, Laurie S; Woerner, August E; Kidd, Jeffrey M; et al; Wall, Jeffrey D. 2016. The time scale of recombination rate evolution in great apes. Molecular biology and evolution. Oxford University Press. 33-4, pp.928-945.

8 **Scientific paper**. Santpere, Gabriel; Carnero-Montoro, Elena; Petit, Natalia; et al; others. 2015. Analysis of five gene sets in chimpanzees suggests decoupling between the action of selection on protein-coding and on noncoding elements. Genome Biology and Evolution. Oxford University Press. 7-6, pp.1490-1505.

9 **Scientific paper**. Ullastres, Anna; Petit, Natalia; Gonz{\'a}lez, Josefa. 2015. Exploring the phenotypic space and the evolutionary history of a natural mutation in Drosophila melanogaster. Molecular biology and evolution. Oxford University Press. 32-7, pp.1800-1814.

10 **Scientific paper**. Nam, Kiwoong; Munch, Kasper; Hobolth, Asger; et al; Schierup, Mikkel Heide. 2015. Extreme selective sweeps independently targeted the X chromosomes of the great apes. Proceedings of the National Academy of Sciences. National Academy of Sciences. 112-20, pp.6413-6418.

11 **Scientific paper**. Prado-Martinez, Javier; Sudmant, Peter H; Kidd, Jeffrey M; et al; others. 2013. Great ape genetic diversity and population history. Nature. Nature Publishing Group UK London. 499-7459, pp.471-475.

12 **Scientific paper**. Petit, Natalia; Pi{\~n}eyro, David; Lopez-Panades, Elisenda; Casacuberta, Elena; Navarro, Arcadi. 2012. HeT-A_pi1, a piRNA target sequence in the Drosophila telomeric retrotransposon HeT-A, is extremely conserved across copies and species. Plos one. Public Library of Science San Francisco, USA. 7-5, pp.e37405-e37405.

13 **Scientific paper**. Gazave, Elodie; Darr{\'e}, Fleur; Morcillo-Suarez, Carlos; et al; others. 2011. Copy number variation analysis in the great apes reveals species-specific patterns of structural variation. Genome research. Cold Spring Harbor Lab. 21-10, pp.1626-1639.

14 **Scientific paper**. Petit, N; Barbadilla, Antonio. 2009. Selection efficiency and effective population size in Drosophila species. Journal of Evolutionary Biology. Blackwell Publishing Ltd Oxford, UK. 22-3, pp.515-526.

15 **Scientific paper**. Petit, N; Barbadilla, A. 2009. The efficiency of purifying selection in Mammals vs. Drosophila for metabolic genes. Journal of evolutionary biology. Blackwell Publishing Ltd Oxford, UK. 22-10, pp.2118-2124.

16 **Scientific paper**. Segura, Diego; Petit-Marty, Natalia; Sciurano, Roberta; et al; Vilardi, Juan. 2007. Lekking behavior of Anastrepha fraterculus (Diptera: Tephritidae). Florida Entomologist. BioOne. 90-1, pp.154-162.

17 **Scientific paper**. Petit, Natalia; Casillas, Sonia; Ruiz, Alfredo; Barbadilla, Antonio. 2007. Protein polymorphism is negatively correlated with conservation of intronic sequences and complexity of expression patterns in Drosophila melanogaster. Journal of molecular evolution. Springer-Verlag. 64, pp.511-518.

18 **Scientific paper**. Casillas, S{\`o}nia; Petit, Natalia; Barbadilla, Antonio. 2005. DPDB: a database for the storage, representation and analysis of polymorphism in the Drosophila genus. Bioinformatics. Oxford University Press. 21-suppl_2, pp.ii26-ii30.

19 **Scientific paper**. Petit-Marty, N; Vera, MT; Calcagno, G; et al; Vilardi, JC. 2004. Sexual behavior and mating compatibility among four populations of Anastrepha fraterculus (Diptera: Tephritidae) from Argentina. Annals of the Entomological Society of America. Entomological Society of America. 97-6, pp.1320-1327.

20 **Popular science article**. 2023. Cambio global y la vulnerabilidad de las especies marinas explotadas. Revista INVESTIGACIÓN (Axencia Galega de Innovación), ISSN: 1889 – 4399.Instituto de Cultura Ciencia y Tecnología.. 30, pp.46-54.

C.2. Conferences and meetings

1 Natalia Petit Marty; Laura Casas; Reinhold Hanel; Sergio Ramirez Amaro; Fran Saborido Rey. Genomic Analysis of levels and patterns of genetic diversity in populations of European hake.. ICES-Annual Science Conference (ASC). Interantional Council for the exploration of Seas (ICES. 2023.

2 Natalia Petit Marty; Celia Schunter. Declining population sizes and loss of genetic diversity in commercial fishes: A simple method for a first diagnostic. FishBase &SeaLifeBase Simposium. FishBase &SeaLifeBase. 2022. Malaysia.

3 Schunter, CM; Petit-Marty, N. The importance of genetic diversity in commercial fsh species and a simple detection of decline. FishBase and SeaLifeBase Symposium. FishBase and SeaLifeBase. 2021. France.

4 Petit-Marty, NP; Nagelkerken, I; Conell, SD; Schunter, CM. Natural CO2 seeps give clues about fish adaptation to ocean acidification. VII International Symposium on Marine Sciences (ISMS 2020). Spain. 2020. Spain.

5 Natalia Petit Marty; Maite Vazquez Luis; Iris Hendricks. Use of the nucleotide diversity in COI mitochondrial gene as an early diagnostic of conservation status of animal species: the endangered bivalve Pinna nobilis as a case study. REMAR Workshop. ISMS (International Symposium on Marine Sciences). ISMS. 2020. Spain.

C.3. Research projects and contracts

1 **Project**. 101066785, FISHADAPT. European Commission. Fran Saborido Rey. (Instituto de Investigaciones Marinas). From 01/07/2022. 165.312,96 €. Principal investigator. Analysis of genomics data of exploited fish, for the evaluation of its adaptive potential to changes in environmental conditions

2 **Contract**. An early diagnostic on the conservation status of economically important fishes from the South China Sea Natalia Petit Marty. (The University of Hong Kong). 06/2020-01/06/2021. 10.000 €.

3 **Contract**. Study of the relationship between genetic structure and susceptibility to haplosporidium infection in populations of the endangered bivalve, Pinna nobilis Natalia Petit Marty. 04/2018-01/04/2019. 7.000 €.