

Part A. PERSONAL INFORMATION

CV date

25/3/25

First and Family name	FRANCISCO MESTRES NAVAL		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0002-9073-4862	
	SCOPUS Author ID (*)	6701736563	
	WoS Researcher ID (*)	E-9220-2016	

(*) *Optional*

(**) *Mandatory*

A.1. Current position

Name of University/Institution	Universitat de Barcelona		
Department	Genética, Microbiología y Estadística		
Address and Country	Facultad de Biología. Av. Diagonal, 643. 08028-Barcelona. Spain		
Phone number	934034412	E-mail	fmestres@ub.edu
Current position	Professor	From	10th March 2020
Key words			

A.2. Education

PhD, Licensed, Graduate	University	Year
Licensed Biological Sciences	Universitat de Barcelona	1982
Ph. D. Biological Sciences	Universitat de Barcelona	1988

A.3. General indicators of quality of scientific production (see instructions)

Research merits from the Ministerio (Sexenios): 5. Last one: 2013-2018.

Teaching merits from the Ministerio (Quinquenios): 7. Last one: 2016-2020.

These merits are also associated with the corresponding autonomic research and teaching merits: 5 and 6, respectively

Number of supervised Ph.D. Thesis in the last 10 years: 1.

Number of supervised TFM (Final Master Projects) in the last 10 years: 4.

Number of supervised TFG (Final Degree Projects) in the last 10 years: 12.

Publication data according to Web of Science (Thompson Reuters):

Total citations: 1325 (5213 according to Google Scholar)

Average citation by year 1982-2024: 31.55

Total number of indexed publications in journals: 72

Total number of publications in the first quartile (Q1): 22

Total number of books or book chapters: 10

h index: 18 (according to WoS); 22 (according to Google Scholar)

Reads in ResearchGate: 36,087

Part B. CV SUMMARY (max. 3500 characters, including spaces)

I graduated in Biology from the University of Barcelona in 1982, developing a degree thesis on Human Genetics supervised by Prof. A. Prevosti and obtaining the qualification of Excellent. I obtained the Ph. D. in 1988 (Apto cum laude). It was supervised by Prof. L. Serra. My thesis dealt with the colonization of America by *Drosophila subobscura* analyzing lethal genes and chromosomal inversions. The main achievements were to estimate the initial number of colonizers and the close relationship between the colonization of North and South America. My postdoctoral stay took place at the University of California at Irvine and was supervised by Prof. F.J. Ayala (1990-1991). I was able to carry out this stay thanks to a ministerial scholarship. I studied the variation in space and time of the associations between lethal genes and inversions.

Linked as a teacher to the University of Barcelona since 1985 (Assistant Prof.), in 1990 I won the competitive examinations for Profesor Titular de Universidad (Associated Prof.). Later, I obtained the Accreditation for University Professor (2014) and the Chair in 2020.

My main lines of research are and have been: 1. The adaptation of colonizing populations of *D. subobscura* in America, using classical genetic markers (chromosomal inversions and lethal genes) and molecular (nuclear DNA sequences). 2. The adaptive value of the chromosomal inversions with regard to the global warming of our planet. 3. The genetic content, at the molecular level, of the inversions, their adaptive value and their recombination rates. 5. The effect of marine fronts in the Atlanto-Mediterranean transition on the distribution of haplotypes for the *COI* mitochondrial gene in crabs of the species *Liocarcinus depurator* and *Geryon longipes*. 4. The structure of human populations of forensic interest and writing articles for professionals of the Legal Sciences; external advisor of the Division of the Scientific Police, CME-Mossos d'Esquadra (Police of Catalonia). 6. Diverse collaborations in the field of Human Genetics.

I have participated in 28 research projects and 7 teaching projects (2 as PI).

I have published 163 articles and book chapters; of those, 72 articles are indexed in Science Citation Index (22 of them Q1). I have made 63 and 45 presentations at international and national conferences, respectively.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

- ZIVANOVIC, G., ARENAS, C. and MESTRES, F. (2023). "The adaptive value of chromosomal inversions and climatic change. Studies on the natural populations of *Drosophila subobscura* from the Balkans". *Insects* 14: 596.
- COLMENERO, A., SERRA, B., LAGARES, C., ROJO-FRANCÀS, E., PÉREZ-GIL, J.L., MESTRES, F. and ABELLÓ, P. (2023). "Genetic variability and connectivity in the Western Mediterranean populations of the bathyal crab *Geryon longipes*". *Diversity* 15: 534.
- OJEDA, V., SERRA, B., LAGARES, C., ROJO-FRANCÀS, E., SELLÉS, M., MARCO-HERRERO, E., GARCÍA, E., FARRÉ, M., ARENAS, C., ABELLÓ, P. and MESTRES, F. (2022). "Interannual fluctuations in connectivity among crab populations (*Liocarcinus depurator*) along the Atlantic-Mediterranean transition". *Scientific Reports* 12: 9797.
- MADRENAS, R., BALANYÀ, J., ARENAS, C., KHADEM, M. and MESTRES F. (2020). "Global warming and chromosomal inversion adaptation in isolated populations: *Drosophila subobscura* populations from Madeira". *Entomological Science* 23: 74–85.
- ZIVANOVIC, G., ARENAS, C. and MESTRES, F. (2019). "Rate of change for the thermal adapted inversions in *Drosophila subobscura*". *Genetica* 147: 401–409.
- ARENAS, C., ZIVANOVIC, G. and MESTRES, F. (2018). "Chromosomal Thermal Index: a comprehensive way to integrate the thermal adaptation of *Drosophila subobscura* whole karyotype" *Genome* 61: 73-78.
- LAVRINIENKO, A., JESÄNIEMI, J., WATTS, P. C., SERGA, S., PASCUAL, M., MESTRES, F. and KOZERETSKA, I. (2017). "First record of the invasive pest *Drosophila suzukii* (Matsumura, 1931) (Diptera: Drosophilidae) in Ukraine indicates multiple sources of invasion". *J. Pest Sci.* 90: 421-429.
- PASCUAL, M., PALERO, F., GARCIA-MERCHAN, V.H., MACPHERSON, E., ROBAINAS-BARCIA, A., MESTRES, F., RODA, T. and ABELLÓ, P. (2016). "Temporal and spatial genetic differentiation in the crab *Liocarcinus depurator* across the Atlantic-Mediterranean transition". *Scientific Reports* 6:29892.

- PEGUEROLES, C., FERRÉS-COY, A., MARTÍ-SOLANO, M., AQUADRO, C.F., PASCUAL, M. and MESTRES, F. (2016). "Inversions and adaptation to the plant toxin ouabain shape DNA sequence variation within and between chromosomal inversions of *Drosophila subobscura*". Scientific Reports 6: 23754
- ZIVANOVIC, G., ARENAS, C. and MESTRES, F. (2016). "Individual inversions or their combinations: which is the main selective target in a natural population of *Drosophila subobscura*?" J. Evol. Biol. 29: 657-664.
- ZIVANOVIC, G., ARENAS, C. and MESTRES, F. (2014). "Inbreeding and thermal adaptation in *Drosophila subobscura*". Genome 57: 481-488.
- PEGUEROLES, C., AQUADRO, C. F., MESTRES, F. and PASCUAL, M. (2013). "Gene flow and gene flux shape evolutionary patterns of variation in *Drosophila subobscura*". Heredity 110: 520-529.
- IRIGOIEN, I., MESTRES, F. and ARENAS, C. (2013). "The depth problem: identifying the most representative units in a data group". IEEE/ACM Transactions on Computational Biology and Bioinformatics 10: 161-172.
- PEGUEROLES, C., ORDÓÑEZ, V., MESTRES, F. and PASCUAL, M. (2010). "Recombination and selection in the maintenance of the adaptive value of inversions". J. Evol. Biol. 23: 2709-2717.

C.2. Research projects

- Proyecto AGAUR / Unión Europea. Fons europeu de desenvolupament regional "Impuls de Catalunya com a regió valoritzadora i transferidora de coneixement en l'àmbit blau - Catalan Network for Blue Innovation (BlueNetCat)" (2018). (2018-2021). Investigador Principal: Dra. Maria Lourdes Reig Puig. Inicio: 2018-2021. Importe: 1,003,986.00. Participación: Investigador. Proyecto evaluado.
- Grup de Recerca Consolidat "Grup de Recerca en Biologia i Ecologia Bentòniques". Expediente 2017 SGR 1120 (2017). Investigador principal: Dr. Javier Romero Martinengo. Inicio: 2018-2020. Importe: 15,000.00 Participación: Investigador. Proyecto evaluado.
- Ministerio de Economía y Competitividad "Biodiversidad marina y genómica: de las poblaciones a las comunidades". Proyecto CTM2017-88080-C2-2-R (2017). Investigador principal: Dra. Marta Pascual Berniola. Inicio: 2018-2020. Importe: 163,592.00. Participación: Investigador. Proyecto evaluado
- Grup de Recerca Consolidat "Grup de Recerca en Biologia i Ecologia Bentòniques". Expediente 2014 SGR 336 (2014). Investigador principal: Dr. Javier Romero Martinengo. Inicio: 2014-2017. Importe: 45,000.00. Participación: Investigador. Proyecto evaluado.
- Ministerio de Economía y Competitividad: "Abordando retos en investigación marina con herramientas genéticas: especies introducidas, caracterización de la Biodiversidad, adaptación al calentamiento global". Proyecto CTM2013-48163-C2-2-R (2013). Investigador principal: Dra. Marta Pascual Berniola. Inicio: 2014-2016. Importe: 205,700.00. Participación: Investigador. Proyecto evaluado.

C.3. Contracts, technological or transfer merits

C.4. Patents

C.5 Awards and distinctions

In possession of the Bronze Medal to the Police Merit with Blue badge (CME - Cos Mossos d'Esquadra, Police of Catalunya). "The award of this medal has been motivated by the valuable and extraordinary collaboration in the training of the UCLB in DNA mixtures, which allows the resolution of cases in a satisfactory way." Delivery: April 22, 2013. Published in DOGC Number 6538.

C.6 Member of scientific societies and institutions. Reviewer of journals and projects

Member of the following scientific societies: Spanish Society of Genetics (since 1991), Society for the Study of Evolution (since 1992), Catalan Society of Biology (since 2004), Institut de Recerca de la Biodiversitat (since 2007) and European Society for Evolutionary Biology (since 2010).

I have been reviewer for indexed journals: Journal of Evolutionary Biology, Frontiers in Ecology and Evolution, Scientific Reports, Evolution, Heredity, Genome, Hereditas, Journal of Zoological Systematics and Evolutionary Research, Functional Ecology, Scientia Marina, Journal of Biological Research, Animal Biodiversity and Conservation.

Evaluator of research projects for: ANEP (Spain), NSF (USA), CSIC (Uruguay), FONCYT (Argentina) AGAUR (Spain) and SNSF (Swiss National Science Foundation).

Evaluator of the "Young Research Awards" (Agency for University Adjustment and Research Management, AGAUR. Catalunya). 2013-2015.

C7. Management

Coordinator of the "Genetics" Doctoral Program at the University of Barcelona from February 2020 to 2022. Accredited towards Excellence (2022).

Coordinator of the Second Course of the Biochemistry Degree (University of Barcelona). Assistant to the Head of Studies (2015-2016 to 2022-2023).

Coordinator of the Official Master "Genetics and Genomics" at the University of Barcelona from 2017 to 2019. Accreditation: Excellent.

Coordinator of the "Genetics" Doctoral Program at the University of Barcelona from 2009 to 2014. Quality mention 2003-00366 (until October 2011). Mention towards Excellence: MEE2011-0321 (from 2011 to the present).