

Francisco García García

I am a researcher working in the Systems Genomics department of the Prince Felipe Research Center (CIPF) in Valencia, Spain, where our goal is to solve biological or clinical problems with computational approaches.

Research interests

- Transcriptional regulation: **functional interpretation of microRNA** studies.
- **Functional meta-analysis** of omics studies.
- Development of statistical **methods for the omics data analysis** and its **integration** from a perspective of Systems Biology.
- **Software development** that allow converting data produced by the new high-throughput technologies (proteomics, metabolomics,...) into valuable, meaningful biological information that can be used in biotechnological or biomedical sectors.
- Characterization of **genetic variation in human populations** by high-throughput technologies.

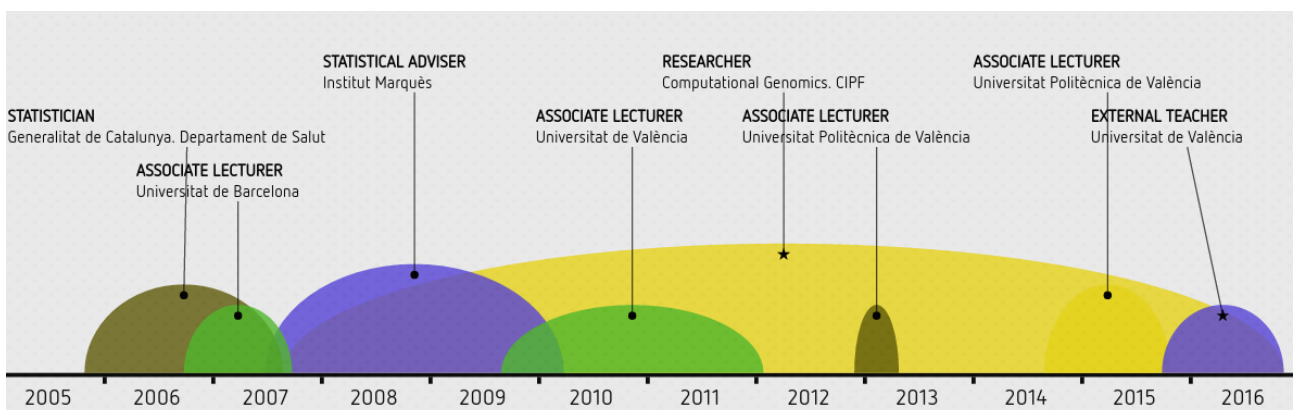
Education

2016 **PhD in Biomedicine and Biotechnology**, *Universitat de València*, Spain.

2012 **Master in Biostatistics**, *Universitat de València*, Spain.

2005 **BSc in Statistical Techniques and Sciences**, *Universitat de València*, Spain.

Experience



○ **Current:**

- Sep 2007 – **Researcher**, *Systems Genomics Department. Prince Felipe Research Centre (CIPF)*, Valencia, Spain.
- Oct 2015 – **External Lecturer**, *Master in Bioinformatics. University of Valencia*, Valencia, Spain.
- Feb 2005 – **Teaching collaborator**, *Valencian School for Health Studies (EVES). Generalitat Valenciana*, Valencia, Spain.

○ **Previous:**

- 2009–2012 **Associate Professor of Statistics**, *Statistics and Operations Research Department, Universitat de Valencia*, Spain.
- 2007–2010 **Statistical adviser**, *Institut Marquès*, Barcelona, Spain.
- 2006–2007 **Associate Professor of Statistics**, *Biostatistics Unit. Public Health Department, Universitat de Barcelona*, Spain.
- 2005–2007 **Statistician in the Mortality Registry**, *Health Department, Catalan Regional Government*, Barcelona, Spain.

Languages

- English **Professional working proficiency**
- French **Elementary proficiency**
- Catalan **Full professional proficiency**
- Spanish **Native**

Computer skills

- Programming: **R, LaTeX, Bash**
- Operating Systems: **Linux, Mac OS X, Windows**

Design and development of web tools for omics data analysis

- Babelomics** <http://babelomics.bioinfo.cipf.es>. Gene expression, genome variation and functional profiling analysis suite.
- BiERapp** <http://bierapp.babelomics.org/>. A web-based interactive framework to assist in the prioritization of disease candidate genes in whole exome sequencing studies.
- TEAM** <http://team.babelomics.org/>. Design and management of panels of genes for targeted enrichment and massive sequencing for clinical applications.
- CSVS** <http://csvs.babelomics.org/>. Database to provide information about the variability of the Spanish population to the scientific/medical community.

1. *Elucidation of biological processes underlying the drought stress response in sunflower (*Helianthus annuus* L.) by the integration of transcriptomics and metabolic data.* S Moschen, J Di Rienzo, J Higgins, T Tohge, M Watanabe, S González, M Rivarola, **F García-García**, J Dopazo, HE Hopp, R Hoefgen, A Fernie, N Paniago, P Fernández, R Heinz. *Plant Molecular Biology* (2017). doi:10.1007/s11103-017-0625-5. *Agricultural and Biological Sciences*, rank:80/289, Q, IF: 3.905.
2. *Global transcriptome analysis of primary cerebrocortical cells: Identification of genes regulated by triiodothyronine in specific cell types.* Authors: Gil-Ibañez P, **García-García F**, Dopazo J, Bernal J, Morte B. *Cereb Cortex*. 2017. pii: bhv273. PubMed PMID: 26534908. *Neurosciences*, rank: 17/256, Q1, IF: 8.285.
3. *Genomic expression differences between cutaneous cells from red hair color individuals and black hair color individuals based on bioinformatic analysis.* P Gimenez-Xavier, A Visconti, J Nsengimana, **F García-García**, G Tell-Marti, MJ Escamez, J Newton-Bishop, V Bataille, M del Río, J Dopazo, M Falchi, Susanna Puig. *Oncotarget*. 2017. *Oncology*, rank: 36/213, Q1, IF: 5.008.
4. *Mutations in TRAPPC11 are associated with a congenital disorder of glycosylation.* L Matalonga, M Bravo, C Serra Peinado, E García-Pelegri, O Ugarteburu, S Vidal, M Llambrich, E Quintana, P Fuster-Jorge, MN Gonzalez-Bravo, S Beltran, J Dopazo, **F Garcia-Garcia**, F Foulquier, G Matthijs, P Mills, A Ribes, G Egea, P Briones, F Tort and M Girós. *Human Mutation*. 2017. DOI: 10.1002/humu.23145. *Genetics Heredity*, rank: 23/166, Q1, IF: 5.089.
5. *Dysfunctional mitochondrial fission impairs cell reprogramming.* J Prieto, M Leon, X Ponsoda, **F García-García**, R Bort, E Serna, M Barneo-Muñoz, F Palau, J Dopazo, C Lopez, J Torres. *Cell Cycle*. 2016 Oct 18:0. DOI: 10.1080/15384101.2016.1241930. *Cell Biology*, rank: 68/187, Q2, IF: 3.952.
6. *Identification of the Photoreceptor Transcriptional Co-Repressor SAMD11 as Novel Cause of Autosomal Recessive Retinitis Pigmentosa.* M. Corton, A. Avila-Fernández, L. Campello, M. Sánchez, B. Benavides, M. I. López-Molina, L. Fernández-Sánchez, R. Sánchez-Alcudia, L. R. J. da Silva, N. Reyes, E. Martín-Garrido, O. Zurita, P. Fernández-San José, R. Pérez-Carro, **F. García-García**, J. Dopazo, B. García-Sandoval, N. Cuenca C. Ayuso. *Scientific Reports* 6, Article number: 35370 (2016 Oct) doi:10.1038/srep35370. *Multidisciplinary Sciences*, rank: 7/63, Q1, IF: 5.228.
7. *Gender differences in the inflammatory cytokine and chemokine profiles induced by binge ethanol drinking in adolescence.* M Pascual, J Montesinos, M Marcos, JL Torres, P Costa-Alba, **F García-García**, FJ Laso, C Guerri. *Addiction Biology*. 2016 Oct. *Substance Abuse*, rank: 2/18, Q1, IF: 4.547.
8. *Integrated Gene Set Analysis for microRNA Studies.* **Garcia-Garcia F**, Panadero J, Dopazo J, Montaner D. *Bioinformatics* 2016 Jun; doi: 10.1093/bioinformatics/btw334. *Biotechnology applied Microbiology*, rank: 15/161, Q1, IF: 5.766.
9. *The transcriptomics of an experimentally evolved plant-virus interaction.* J Hillung, **F García-García**, J Dopazo, J Cuevas, S Elena. *Sci Rep*. 2016 Apr 26;6:24901. doi: 10.1038/srep24901. *Multidisciplinary Sciences*, rank:7/63, Q1, IF: 5.228.

10. *Serum metabolomic profiling facilitates the non-invasive identification of metabolic biomarkers associated with the onset and progression of non-small cell lung cancer.* Puchades-Carrasco, L., Jantus-Lewintre, E., Pérez-Rambla, C., **García-García, F.**, Lucas, R., Calabuig, S., Pineda-Lucena, A. *Oncotarget*. 2016 Feb 12. doi: 10.18632/oncotarget.7354. *Oncology, rank: 36/213, Q1, IF: 5.008.*
11. *267 Spanish exomes reveal population-specific differences in disease-related genetic variation.* Dopazo J, Amadoz A, Bleda M, Garcia-Alonso L, Alemán A, **García-García F**, Rodriguez JA, Daub JT, Muntané G, Rueda A, Vela-Boza A, López-Domingo FJ, Florido JP, Arce P, Ruiz-Ferrer M, Méndez-Vidal C, Arnold TE, Spleiss O, Alvarez-Tejado M, Navarro A, Bhattacharya SS, Borrego S, Santoyo-López J, Antiñolo G. *Mol Biol Evol.* 2016 Jan 13, doi: 10.1093/molbev/msw005. *Biochemistry Molecular Biology, rank: 5/289, Q1, IF: 13.649.*
12. *Assessment of targeted next generation sequencing as a tool for the diagnosis of Charcot-Marie-Tooth disease and hereditary motor neuropathy.* V Lupo, **F García-García**, P Sancho, C Tello, M García-Romero, L Villarreal, A Alberti, R Sivera, J Dopazo, S Pascual-Pascual, C Márquez-Infante, C Casasnovas, T Sevilla, C Espinós. *The Journal of Molecular Diagnostics.* 2016 Jan. *Pathology, rank: 7/79, Q1, IF: 5.201.*
13. *Differential features between chronic skin inflammatory diseases revealed in new psoriasis and atopic dermatitis skin-humanized mouse models.* Authors: M Carretero, S Guerrero-Aspizua, N Illera, V Galvez, M Navarro, **F García-García**, J Dopazo, J L Jorcano, F Larcher and M del Rio. *Nucl. J Invest Dermatol.* 2016 Jan;136(1):136-45. doi: 10.1038/JID.2015.362. *Dermatology, rank: 1/61, Q1, IF: 6.915.*

Full list of publications in PubMed.

ResearchGate, LinkedIn, ResearcherID (B-1929-2014).

Congress contributions in 2017

1. *Molecular diagnosis of hereditary peripheral neuropathies: gene panel or exoma sequencing?* Congreso Interdisciplinar de Genética Humana. 25-28 Apr, 2017 Madrid. Authors: Vincenzo Lupo; Ana Sánchez Monteagudo; **Francisco García-García**; Marisa Barreiro; Mar García Romero; Antonia Alberti; Sophia Derdak; Enric Serra; Sergi Beltran; Celedonio Marquéz; Carlos Casasnovas; Samuel Ignacio Pascual; Marina Frasset; Teresa Sevilla; Carmen Espinós.
2. *Genomic expression differences between cutaneous cells from red hair color individuals and black hair color individuals based on bioinformatic analysis.* X Symposium on Rare Diseases. Mar, 23th – 24th 2017 Madrid. Authors: Gimenez-Xavier P, Puig-Butille JA, Tell-Marti G, Visconti A, Nsengimana J, **García-García F**, Escamez MJ, Newton-Bishop J, Bataille V, Del Río M, Dopazo J, Falchi M, Mila M, Puig S.
3. *Common and specific transcriptomic profile, molecular pathways and signaling circuits in three rare skin disorders: XPC, KS and RDEB.* X Symposium on Rare Diseases. Mar, 23th – 24th 2017 Madrid. Authors: Francisco Díaz, Carlos León, **Francisco García-García**, Esteban Chacón, María José Escámez, Sara Guerrero, Claudio Conti, Marta García, Adela García, Fernando Larcher,

Blanca Duarte, Ángeles Mencía, Almudena Holguín, José Bonafont, Sara Llames, Marta Pévida, José Carbonell, Álvaro Meana, Joaquín Dopazo, Marcela del Río.

4. *BiER collaborative projects in 2016*. X Symposium on Rare Diseases. Mar, 23th – 24th 2017 Madrid. Authors: **Francisco García-García**, Alejandro Alemán, Francisco Salavert Torres, Joaquín Dopazo
5. *RNA-seq data analysis in the miR-96 mutant mouse Diminuendo reveals the nasal epithelium as a target tissue to explore drug-based therapeutic approaches*. X Symposium on Rare Diseases. Mar, 23th – 24th 2017 Madrid. Authors: Morín M, Lewis M, **García-García F**, Borreguero L, Barca V, Ajenjo M, Dopazo J, Steel KP and Moreno-Pelayo MA.

Full list of 80 congress contributions.

Teaching in 2016-2017

1. *Genomic Data Analysis (GDA 2017 Biodonostia)*. Systems Genomics Department. Biodonostia. San Sebastián, Spain. 2017, 7-9 Jun.
2. *Genomic Data Analysis (GDA 2017)*. Systems Genomics Department. Prince Felipe Research Center (CIPF). Valencia, Spain. 2017, 6-10 Mar.
3. *In silico studies in Biomedicine*. Master in Bioinformatics. Universitat de València. Spain. 2016, Sep-Dec.
4. *Basics on Bioinformatics and Genomics*. Master in Bioinformatics. Universitat de València. Spain. 2016, Feb-Jul 2017, Feb-Jul.
5. *Personalized Medicine in Clinical Practice: Genomic Big Data Management*. Master's Degree in Biomedical Biotechnology. Universitat Politècnica de València. Valencia, Spain. 2016, 12-15 Dec.
6. *Epidemiology and Statistics in Reproductive Health*. Teaching Unit for Midwives. Valencian School for Health Studies. Valencia, Spain. 2016 Nov.
7. *Massive Data Analysis course on Next Generation Sequencing Data Analysis*. Systems Genomics Department. Prince Felipe Research Center (CIPF). Valencia, Spain. 2016, 28-30 Sep.
8. *Statistical methods applied to Health Surveillance data analysis*. Work-Related Medicine Unit. Valencian School for Health Studies. Valencia, Spain. 2016 Jul-Sep.
9. *Genomic and Transcriptomic Data Analysis*. Instituto Gulbenkian de Ciência (IGC). Oeiras, Portugal. 2016, 18-20 May.
10. *Statistical Graphs*. Research Development Programme. Prince Felipe Research Center (CIPF). Valencia, Spain. 2016 Abril.

11. *Transcriptomics Data Analysis and Functional Profiling*. Master in Bioinformatics and Computational Biology National School of Health - ISCIII. Madrid, Spain. 2016, 16-17 Mar.
12. *Genomic Data Analysis (GDA 2016)*. Systems Genomics Department. Prince Felipe Research Center (CIPF). Valencia, Spain. 2016, 29 Feb - 4 Mar.
13. *Next Generation Sequencing Applications in Transcriptomics*. Master in Biomedical Technologies Management and Development. Universidad Carlos III de Madrid, Spain. 2016, 24 Feb.

Full list of 60 teaching activities.

