



José Luis Ruiz Rodríguez
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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Degree in Basic and Experimental Biomedicine (2015, University of Seville) and MSc in **Omics Data Analysis** (2016, University of Vic-Central University of Catalonia). During my Degree, I enjoyed an Erasmus stay in the University of Parma (Dr Simone Ottonello, h-index: 43), and in the degree's thesis I developed a software for the **automatic quantification** of dendritic spines in **microscopy images** in the University of Seville (Dr Antonio Leal, h: 17). In my Msc, I studied human epigenomic variants (**EWAS**), linking environmental changes, DNA methylation patterns and disease (Dr Xavier Estivill, h: 115). I conducted my PhD thesis with a Spanish FPI contract directed by Dr Elena Gómez-Díaz (EBD-CSIC/IPBLN-CSIC, h: 25). The PhD project 'Transcriptional regulation and epigenetics underlying host-parasite interactions in human malaria' applied diverse multi-omic techniques. In this context, I developed novel bioinformatic pipelines for investigating transcriptional regulation in Plasmodium parasites and Anopheles mosquito hosts. The PhD results were presented in several national and international conferences, with multiple **publications as first author (5), co-author (2) and corresponding author (1)** in open-access high-impact journals (**out of 8, 4>75%, 2>95%**), such as Nucleic Acids Research. I integrated different Next Generation Sequencing techniques to profile the **genome, epigenome** and **transcriptome** of the human malaria parasite and its mosquito host. These include **ATAC-seq, ChIP-seq** or **RNA-seq**, some of which I applied to non-model organisms for the first time ever. Together with functional analyses, these have led to novel biological insights. In two research stays in the University of Glasgow (Erasmus and Spanish funding, > 3 years affiliation) in collaboration with Dr Thomas D. Otto (h: 57), I focused on comparative genomics and published a new pipeline to obtain, correct and annotate **de novo genome assemblies**. Beyond my PhD, I have also addressed the study of the transcriptome and epigenome of plants in collaboration with Dr Juan Jordano (IRNAS-CSIC, h: 26) and of amphibians in collaboration with Dr Iván Gómez-Mestre (h: 34). In addition, I have developed multiple software, peer-reviewed manuscripts and directed Msc Theses.

Overall, my interest in **computational biology** has been constant, including trainings with dozens of courses and seminars and activities. Examples of these include recent training in **scRNA-seq** and **scATAC-seq** (30 hours), machine learning (100 h), assembly and annotation of genomes (40 h), or Linux and Python applied to Bioinformatics (36 h), organized by public and private institutions. My accumulated expertise and technical skills have allowed me to continue my career as a technician in the Core Unit of Bioinformatics and Computational Biology (IPBLN-CSIC), being involved in innovative projects implementing up-to-date approaches, such as single-cell or spatial transcriptomics. Finally, I have given numerous talks and been involved in various outreach activities, being awarded in the National Outreach Contest 'BeCSIC'.

B.1. Breve descripción del Trabajo de Fin de Grado (TFG) y puntuación obtenida

The analysis of microscopy images has great potential for solving outstanding biomedical problems. Dendritic spines are still not fully understood, but the amount is variable in pathological conditions. However, the quantification is typically performed manually, which requires considerable efforts and implies bias. In my Degree's Thesis, I developed



a software to automatically analyze and count dendritic spines in different experimental situations through confocal microscopy. This software ensures the much required reproducibility of these studies. The project 'Automatic detection and quantification of dendritic spines' was performed in the Department of Medical Physiology and Biophysics at the School of Medicine of the University of Seville, with a calification of Excellent (9.9/10). The software SpineCounter is public (MathWorksFileExchange: 83003).

B.2. Breve descripción del Trabajo de Fin de Máster (TFM) y puntuación obtenida

Breastfeeding provides long-term biological benefits, including improvements in the human immune system. These advantages have been linked to milk components, including growth and immune factors, maternal cells or RNAs. In this context, the relationship between breastfeeding and childhood asthma or allergies is an open question. Long-term effects may be mediated by epigenetics, provided the known effect of diet in the epigenome. The aim of my Master's Thesis was to identify differential DNA methylation patterns associated with breastfeeding in cases of childhood asthma and allergies. I analyzed epigenomic (EWAS), proteomic and transcriptomic data in European children cohorts. Similarly, I analyzed the effects of environmental pollution in the epigenome of newborns, which resulted in a publication. The project 'Human breastfeeding and genome-wide DNA methylation' was performed in the Centre for Genomic Regulation (CRG) and the Centre for Research in Environmental Epidemiology (CREAL), with a calification of Excellent (9.5/10).



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

Quality Indicators from Scopus: (ScopusID 57204190223)

h-index: 8

Total number of citations: 260

Quality Indicators from Google Scholar: (scholar.google.es/citations?user=byHVKX4AAAAJ)

h-index: 9

i10-index: 9

Total number of citations: 381

Summary of publication statistics:

- * **14 scientific publications** (3 reviews, 10 original research, 1 preprint).
- * **7 publications as 1st author**, 5 2nd author, 3 corresponding author
- * **7 publications Q1** (top 25%), including **4 D1** (top 10%), ~400 citations and ~200 Altmetrics
- * 2 outreach/popular science publications (theconversation.com, eldiario.es)

José Luis Ruiz Rodríguez José Luis Ruiz Rodríguez

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ScopusID: **57204190223**
ResearcherID: **AAM-2823-2020**
Web of Science: **IAO-2501-2023**
Google Scholar: **<https://scholar.google.es/citations?hl=es&user=byHVKX4AAAAJ>**
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Personal web page: **linkedin.com/in/jlrlkdn**

Current professional situation

Employing entity: Functional Genomics Center Zurich (FGCZ-ETH/UZH) **Type of entity:** Public Research Body
Professional category: Expert Genome Informatics
Start date: 01/03/2025
Type of contract: Temporary employment contract **Dedication regime:** Full time

Previous positions and activities

	Employing entity	Professional category	Start date
1	Institute of Parasitology and Biomedicine López-Neyra (IPBLN-CSIC)	Technical Personnel for Support (Bioinformatics and Computational Biology Unit)	01/11/2022
2	Institute of Parasitology and Biomedicine López-Neyra (IPBLN-CSIC)	Technical staff	01/03/2022
3	Institute of Infection, Immunity and Inflammation (III-University of Glasgow)	Affiliate Researcher	24/04/2019
4	Institute of Parasitology and Biomedicine López-Neyra (IPBLN-CSIC)	PhD student	01/03/2019
5	Doñana Biological Station (EBD-CSIC)	PhD student	16/04/2017

- 1** **Employing entity:** Institute of Parasitology and Biomedicine López-Neyra (IPBLN-CSIC)
Professional category: Technical Personnel for Support (Bioinformatics and Computational Biology Unit)
Start-End date: 01/11/2022 - 28/02/2025 **Duration:** 2 years - 4 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
- 2** **Employing entity:** Institute of Parasitology and Biomedicine López-Neyra (IPBLN-CSIC)
Department: Instituto de Parasitología y Biomedicina López-Neyra
Professional category: Technical staff

**Start-End date:** 01/03/2022 - 31/10/2022**Duration:** 7 months - 30 days**Type of contract:** Temporary employment contract**Dedication regime:** Part time**Area of leadership and/or management activity:** Public Research Body

- 3** **Employing entity:** Institute of Infection, Immunity and Inflammation (III-University of Glasgow) **Type of entity:** University Research Institute
Professional category: Affiliate Researcher
Start-End date: 24/04/2019 - 31/07/2022

- 4** **Employing entity:** Institute of Parasitology and Biomedicine López-Neyra (IPBLN-CSIC)
Department: Instituto de Parasitología y Biomedicina López-Neyra
Professional category: PhD student
Start-End date: 01/03/2019 - 15/09/2021 **Duration:** 2 years - 6 months - 19 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Area of leadership and/or management activity: Public Research Body

- 5** **Employing entity:** Doñana Biological Station (EBD-CSIC)
Department: Estación Biológica de Doñana
Professional category: PhD student
Start-End date: 16/04/2017 - 28/02/2019 **Duration:** 1 year - 10 months - 15 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Area of leadership and/or management activity: Public Research Body

Summary of professional activity

I joined the Functional Genomics Center of Zurich (FGCZ-ETH/UZH) in March 2025. Previous position (November 2022-March 2025) was at the Bioinformatics and Computational Biology Unit (IPBLN-CSIC), under the competitive call "Technical Personnel for Support". Degree "Basic and Experimental Biomedicine" (University of Seville, US, 2011-2015), Msc "Omics Data Analyses" (University of Vic, UVic-UCC, 2015-2016). During my PhD I, performed multi-omics analyses, mainly epigenomics of the human malaria parasite and the mosquito host, doctoral program "Molecular Biology, Biomedicine and Clinical Research" (US, 2016-2022). I have participated in 9 Research Projects, authored 14 scientific publications, and contributed to multiple national and international conferences. Overall, my profile is of a generalist Bioinformatician and Data Scientist, mainly leveraging multi-omics and next-generation sequencing (NGS) datasets of a plethora of organisms, both model and non-model. My current interests include multidisciplinary bioinformatics and up-to-date techniques, such as machine learning, scRNAseq, scATAC-seq, or spatial transcriptomics. I have also developed and currently maintain public software, e.g. a tool for the automatic quantification of dendritic spines (SpineCounter), a pipeline for the assembly and automatic correction of de novo genomes (ILRA), a pipeline for transcriptomics analyses (reanalyzerGSE), and an R package for pathways analyses of scRNA-seq data (scMetabCombnR).



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

- 1** **University degree:** Higher degree
Name of qualification: Msc Omics Data Analysis
Degree awarding entity: University of Vic - Central University of Catalonia (UVic-UCC)
Date of qualification: 04/11/2016
Average mark: Excellent
- 2** **University degree:** Higher degree
Name of qualification: Degree Basic and Experimental Biomedicine
Degree awarding entity: University of Seville (US)
Date of qualification: 06/07/2015
Average mark: Good

Doctorates

Doctorate programme: PhD Molecular Biology, Biomedicine and Clinical Research
Degree awarding entity: University of Seville (US) **Type of entity:** University
Date of degree: 04/11/2022
European doctorate: Yes
Thesis title: Transcriptional regulation and epigenetic mechanisms underlying host-parasite interactions in human malaria
Thesis director: Elena Gómez Díaz
Recognition of quality: Yes

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

- 1** **Training title:** Microsoft PowerPoint 365
Awarding entity: INSTITUTO NACIONAL DE ADMINISTRACION PUBLICA
End date: 15/01/2025 **Duration in hours:** 25 hours
- 2** **Type of training:** Course
Training title: Tools and services in BCB "CSIC4CSIC" 2nd edition
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
End date: 14/11/2024 **Duration in hours:** 10 hours
- 3** **Type of training:** Webinar
Training title: Maximizing Genomic Insights: An In-Depth Look at Long Read Sequencing
Awarding entity: Novogene

**End date:** 07/11/2024**Duration in hours:** 2 hours**4 Type of training:** Course**Training title:** Occupational hazards associated with remote working**Awarding entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency**End date:** 09/10/2024**Duration in hours:** 3 hours**5 Type of training:** Course**Training title:** Descriptive statistics and scientific hypothesis testing in R**Awarding entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency**End date:** 04/10/2024**Duration in hours:** 30 hours**6 Type of training:** Course**Training title:** MOOC Machine Learning and Big Data for Bioinformatics**Awarding entity:** University of Granada (UGR) **Type of entity:** University**End date:** 17/06/2024**Duration in hours:** 100 hours**7 Type of training:** Course**Training title:** Tools and services in BCB "CSIC4CSIC"**Awarding entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency**End date:** 07/06/2024**Duration in hours:** 20 hours**8 Type of training:** Course**Training title:** Emotional Wellbeing #BIWM CSIC 360**Awarding entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency**End date:** 30/04/2024**Duration in hours:** 25 hours**9 Type of training:** Course**Training title:** Occupational hazards associated with screen and data visualization**Awarding entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency**End date:** 04/10/2023**10 Type of training:** Course**Training title:** Introduction to applied statistics with R software**Awarding entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency**End date:** 09/06/2023**Duration in hours:** 60 hours**11 Type of training:** Webinar**Training title:** A Beginner's guide to next generation sequencing applications in DNA research**Awarding entity:** Novogene**End date:** 20/04/2023**Duration in hours:** 2 hours**12 Type of training:** Webinar**Training title:** A Beginner's guide to next generation sequencing: principles and recent developments**Awarding entity:** Novogene

**End date:** 19/01/2023**Duration in hours:** 2 hours**13 Type of training:** Course**Training title:** Single-cell RNA-seq analysis with R/Bioconductor**Awarding entity:** Physalia**End date:** 11/06/2021**Type of entity:** Business**Duration in hours:** 30 hours**14 Type of training:** Course**Training title:** Scopus metrics and usage**Awarding entity:** ELSEVIER-FECYT**End date:** 08/06/2021**Duration in hours:** 5 hours**15 Training title:** 1st Virtual Women in Malaria conference**Awarding entity:** Women in Malaria**End date:** 24/03/2021**Type of entity:** Associations and Groups**Duration in hours:** 15 hours**16 Type of training:** Course**Training title:** 5th Symposium of Bioinformatics**Awarding entity:** University of Granada (UGR)**End date:** 26/02/2021**Duration in hours:** 10 hours**17 Type of training:** Course**Training title:** Time management**Awarding entity:** University of Seville (US)**End date:** 17/11/2020**Duration in hours:** 3 hours**18 Type of training:** Course**Training title:** Elevator Pitch**Awarding entity:** University of Seville (US)**End date:** 22/10/2020**Duration in hours:** 3 hours**19 Type of training:** Course**Training title:** 2nd Symposium for CSIC PhD Students**Awarding entity:** Spanish National Research Council (CSIC)**End date:** 16/10/2020**Duration in hours:** 6 hours**20 Type of training:** Course**Training title:** Conflict management**Awarding entity:** University of Seville (US)**End date:** 22/09/2020**Duration in hours:** 5 hours**21 Type of training:** Course**Training title:** Writing Great Research Papers**Awarding entity:** Charlesworth Author services**End date:** 15/06/2020**Type of entity:** Business**Duration in hours:** 1 hour**22 Type of training:** Course**Training title:** Persuasive communication**Awarding entity:** University of Seville (US)**End date:** 09/06/2020**Duration in hours:** 3 hours



- 23** **Type of training:** Course
Training title: 4th Symposium of Bioinformatics
Awarding entity: University of Granada (UGR)
End date: 14/02/2020 **Duration in hours:** 10 hours
- 24** **Type of training:** Course
Training title: Assembly and Annotation of Genomes
Awarding entity: Physalia **Type of entity:** Business
End date: 15/02/2019 **Duration in hours:** 40 hours
- 25** **Type of training:** Course
Training title: Python for Bioinformatics
Awarding entity: Doñana Biological Station (EBD-CSIC) **Type of entity:** State agency
End date: 23/11/2018 **Duration in hours:** 20 hours
- 26** **Type of training:** Course
Training title: Linux for Bioinformatics
Awarding entity: Doñana Biological Station (EBD-CSIC) **Type of entity:** State agency
End date: 09/11/2018 **Duration in hours:** 16 hours
- 27** **Type of training:** Course
Training title: Specific English: Online meetings in English (Level C1)
Awarding entity: Spanish National Research Council (CSIC)
End date: 02/11/2018 **Duration in hours:** 30 hours
- 28** **Type of training:** Course
Training title: To enjoy while creating effective talks
Awarding entity: Spanish National Research Council (CSIC)
End date: 10/07/2018 **Duration in hours:** 16 hours
- 29** **Type of training:** Course
Training title: English: Competence in Science Online (Level C1)
Awarding entity: Spanish National Research Council (CSIC)
End date: 22/06/2018 **Duration in hours:** 60 hours
- 30** **Type of training:** Course
Training title: English: Online meetings (Level C1)
Awarding entity: Spanish National Research Council (CSIC)
End date: 03/11/2017 **Duration in hours:** 30 hours

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C1	C1	C1	C1	C1



Teaching experience

Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Revisiting bulk omics data in the new wave of single-cell knowledge
Type of project: Final Degree Project
Entity: University of Granada (UGR)
Student: Angel Martín Domínguez
Date of reading: 26/06/2025
- 2** **Project title:** Microbiota and mosquito-borne diseases: A metatranscriptomics workflow for the taxonomic and functional profiling of these unexpected guests
Type of project: Final Master Project
Entity: University Pablo de Olavide (UPO)
Student: Angel Martín Domínguez
Date of reading: 15/10/2024
- 3** **Project title:** Characterization of the expression of the antiinflammatory neuropeptide cortistatin in neuroimmune diseases: A bioinformatics approach leveraging patient databases
Type of project: Final Master Project
Entity: University of Granada (UGR) **Type of entity:** University
Student: Adrián López Carretero
Date of reading: 17/09/2024
- 4** **Project title:** Differential expression of isoforms and alternative splicing of the mosquito malaria vector *Anopheles gambiae* in response to infection
Type of project: Final Master Project
Entity: University of Granada (UGR) **Type of entity:** University
Student: Barbara Díaz Terenti
Date of reading: 14/12/2020
- 5** **Project title:** The transcriptome of the mosquito *Anopheles gambiae* during infection by different malaria parasites
Type of project: Final Master Project
Entity: University of Granada (UGR) **Type of entity:** University
Student: Óscar Morales Lezcano
Date of reading: 25/09/2020
- 6** **Project title:** The transcriptome of the malaria parasite *Plasmodium malariae* during infection of the mosquito vector *Anopheles gambiae*
Type of project: Final Master Project
Entity: University of Granada (UGR) **Type of entity:** University
Student: Miriam Sánchez Polo
Date of reading: 21/09/2020
- 7** **Project title:** Expression patterns of virulence genes in the human malaria parasite *Plasmodium falciparum* during its life-cycle in the mosquito
Type of project: Final Master Project
Entity: University of Seville (US) **Type of entity:** University



Student: María Rodríguez Plá
Date of reading: 03/07/2018

Courses and seminars given

Type of event: Course
Name of the event: BIO638-Next Generation Sequencing Applied to Metagenomics
Organising entity: FGCZ/ETH-UZH
Type of entity: Public Research Body
Hours of teaching: 23
Teaching date: 14/05/2025

Scientific and technological experience

Research and development groups/teams

- 1** **Name of the group:** Core Service of Bioinformatics and Computational Biology
Name of principal investigator: Eduardo Andrés León
Type of collaboration: Co-authorship of publications
City of group: Granada, Spain
Affiliation entity: Spanish National Research Council (CSIC)
Start date: 01/11/2022
Type of entity: Public Research Body
Duration: 3 years
- 2** **Name of the group:** Neuroimmunology of inflammatory and autoimmune diseases
Name of principal investigator: Mario Delgado Mora
Type of collaboration: Co-authorship of publications
City of group: Granada, Spain
Affiliation entity: Spanish National Research Council (CSIC)
Start date: 01/03/2022
Type of entity: Public Research Body
Duration: 7 months - 30 days
- 3** **Name of the group:** Otto Lab
Name of principal investigator: Thomas Dan Otto
Type of collaboration: Co-authorship of publications
City of group: Glasgow, United Kingdom
Affiliation entity: University of Glasgow (UoG)
Start date: 24/04/2019
Duration: 3 years - 3 months
- 4** **Name of the group:** GomezDiaz Lab
Name of principal investigator: Elena Gómez Díaz
Type of collaboration: Co-authorship of publications
City of group: Granada, Spain
Affiliation entity: Spanish National Research Council (CSIC)
Start date: 16/04/2017
Duration: 4 years - 6 months
- 5** **Name of the group:** Genomics and Disease
Name of principal investigator: Xavier Estivill
Type of collaboration: Co-authorship of publications



City of group: Barcelona, Spain

Affiliation entity: Centre for Genomic Regulation (CRG)

Start date: 01/09/2015

Duration: 1 year

6 Name of the group: Medical Physics

Name of principal investigator: Antonio Leal Plaza

Type of collaboration: Co-authorship of publications

City of group: Seville, Spain

Affiliation entity: University of Seville (US). School of Medicine

Start date: 01/09/2014

Duration: 1 year

7 Name of the group: Biotechnology-Chemistry

Name of principal investigator: Antonio J. Márquez

City of group: Seville, Spain

Affiliation entity: University of Seville (US). School of Chemistry

Start date: 01/09/2013

Duration: 1 year

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

1 Name of the project: Chromatin regulation in seeds of early post-germinative development: further genomic and mechanistic analyses (SEEDCHROMREG)

Degree of contribution: Technician

Entity where project took place: Spanish National Research Council (CSIC)

Name principal investigator (PI, Co-PI....): B. Jordano Fraga

Nº of researchers: 5

Type of participation: Team member

Code according to the funding entity: PID2023-146963OB-I00

Start-End date: 09/2024 - 09/2026

Total amount: 62.500 €

Relevant results: Scientific publications

Dedication regime: Part time

2 Name of the project: Epigenetics tools for the targeted improvement of seedlings (EpiGerm)

Degree of contribution: Technician

Entity where project took place: Spanish National Research Council (CSIC)

Name principal investigator (PI, Co-PI....): Juan Bautista Jordano Fraga

Nº of researchers: 4

Type of participation: Team member

Name of the programme: Spanish Ministry of Science and Innovation Grants

Code according to the funding entity: PID2020-112693RB127-100

Start-End date: 09/2021 - 02/2025

Participating entity/entities: Spanish Ministry of Science and Innovation; Spanish National Research Council

Total amount: 127.050 €

Relevant results: Scientific publications

Dedication regime: Part time

Applicant's contribution: Epigenomics and Transcriptomics data analyses (FAIRE-seq and RNA-seq)



3 Name of the project: New therapeutic strategy for the treatment of inflammatory and autoimmune diseases: mesenchimal stem cells v2.0 (ASC v2.0)

Degree of contribution: Technician

Entity where project took place: Spanish National Research Council (CSIC)

Name principal investigator (PI, Co-PI....): Mario Delgado Mora

Nº of researchers: 5

Type of participation: Team member

Name of the programme: PAIDI 2020

Code according to the funding entity: P20_01255

Start-End date: 10/2021 - 12/2022

Participating entity/entities: Junta de Andalucía; Spanish National Research Council

Total amount: 120.000 €

Relevant results: Scientific publication

Dedication regime: Part time

Applicant's contribution: Omics data analyses of transcriptomics datasets

4 Name of the project: Mission: Zero Malaria

Degree of contribution: Technician

Entity where project took place: Spanish National Research Council (CSIC)

Name principal investigator (PI, Co-PI....): Elena Gómez Díaz

Nº of researchers: 1

Type of participation: Team member

Name of the programme: Project of the 3rd edition 'Tell about Science' (Cuenta la Ciencia) of the General Foundation of the Spanish National Research Council

Start-End date: 01/2020 - 01/2022

Participating entity/entities: Spanish National Research Council

Total amount: 4.000 €

Relevant results: Outreach material comprising boardgames and videogames successfully tested and distributed amongst school children

Dedication regime: Part time

Applicant's contribution: Grants from the General Foundation of the Spanish National Research Council to promote outreach and scientific culture and improve the participation of non-researchers in R&D processes.

5 Name of the project: A genome on the move: Genetic and epigenetic regulatory networks of the malaria parasite in the mosquito

Degree of contribution: Researcher

Entity where project took place: Spanish National Research Council (CSIC)

Name principal investigator (PI, Co-PI....): Elena Gómez Díaz

Nº of researchers: 1

Type of participation: Team member

Name of the programme: Spanish Ministry of Science and Innovation Grants. 2019

Code according to the funding entity: PID2019-111109RB-I00

Start-End date: 06/2020 - 09/2021

Participating entity/entities: Spanish Ministry of Science and Innovation; Spanish National Research Council

Total amount: 198.000 €

Relevant results: Several scientific publications

Dedication regime: Full time

Applicant's contribution: Through the integration of multiple Next Generation Sequencing techniques, we investigated chromatin-based mechanisms of transcriptional regulation controlling developmental progression in Plasmodium spp., focusing on the mosquito, which is the most critical part of the parasite life cycle. We



also used whole genome sequencing, de novo assemblies and comparative genomics to investigate natural genomic and epigenomic variation in human malaria parasites from field isolates in malaria endemic regions

6 Name of the project: Epigenetics of Plasmodium-Anopheles interactions

Degree of contribution: Researcher

Entity where project took place: Spanish National Research Council (CSIC)

Name principal investigator (PI, Co-PI....): Elena Gómez Díaz

Nº of researchers: 1

Type of participation: Team member

Name of the programme: Spanish Ministry of Economy and Competitiveness Grants. 2015

Code according to the funding entity: BFU2015-65000-R

Start-End date: 01/2016 - 08/2018

Participating entity/entities: Spanish Ministry of Economy and Competitiveness; Spanish National Research Council

Total amount: 130.000 €

Relevant results: Several scientific publications

Dedication regime: Full time

Applicant's contribution: Through the integration of multiple omics data analyses, we investigated chromatin-based and epigenetic mechanisms of transcriptional regulation controlling development of Plasmodium spp., particularly in the part of the life cycle in the mosquito. We also studied chromatin and transcriptomic changes are elicited in malaria-infected Anopheles mosquitoes, and identified regulatory mechanisms underlying responses to infection

Transferencia e intercambio de conocimiento

Developed and maintain public software:

- * SpineCounter: Automatic detection and quantification of dendritic spines (es.mathworks.com/matlabcentral/fileexchange/83003-spinecounter)
- * ILRA: Improvement of Long Reads Assemblies (github.com/ThomasDOtto/ILRA)
- * reanalyzerGSE: Transcriptomics pipeline (github.com/BioinfoIPBLN/reanalyzerGSE)
- * scMetabCombnR: R package for pathway activity computation on scRNA-seq data(github.com/BioinfoIPBLN/scMetabCombnR)



Scientific and technological activities

Scientific production

- 1** H index: 8
Source of H-Index: WOS
- 2** H index: 9
Source of H-Index: GOOGLE SCHOLAR
- 3** H index: 8
Source of H-Index: SCOPUS

Publications, scientific and technical documents

- 1** Daniel J García; Marco A Pulpillo-Berrocal; José L Ruiz; Eduardo Andrés-León; Laura C Terrón-Camero. Human Papillomavirus-encoded microRNAs as regulators of human gene expression in anal squamous cell carcinoma: A meta-transcriptomics study. non-coding RNA. Multidisciplinary Digital Publishing Institute, 09/06/2025.
DOI: 10.3390/ncrna11030043
Type of production: Scientific paper
Position of signature: 2
Total no. authors: 5
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 2** José L. Ruiz; Arturo Marín Alguacil; Jessica Carreira de Paula; Tamara Gómez-Moracho; Pedro García Olmedo; Eduardo Andrés-León; Jennifer Solano Parada; Francisco Orantes Bermejo; Antonio Osuna; Luis Miguel de Pablos. Genome drafts of Lotmaria passim strains C2 and C3 isolated from honeybees in Spain. Microbiology Resource Announcements. American Society for Microbiology, 27/11/2024.
DOI: 10.1128/mra.00642-24
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 10
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 3** Barbara Díaz Terenti; José L. Ruiz; Elena Gómez-Díaz. Alternative splicing and its regulation in the malaria vector Anopheles gambiae. Frontiers in Malaria. Frontiers, 26/04/2024.
DOI: 10.3389/fmala.2024.1347790
Type of production: Scientific paper
Position of signature: 2
Total no. authors: 3
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 4** Eduardo Salas-Espejo; Laura C. Terrón-Camero; José L. Ruiz; Nerea M. Molina; Eduardo Andrés-León. Exploring the human reproductive microbiome: Cutting-edge methods for the taxonomic characterization of microorganisms. Seminars in Reproductive Medicine. Thieme Medical Publishers, 06/02/2024.
DOI: 10.1055/s-0044-1779025
Type of production: Scientific paper
Format: Journal

**Position of signature:** 2**Total no. authors:** 5**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** Yes

- 5** Julia Castillo-González; José Luis Ruiz; Ignacio Serrano-Martínez; Irene Forte-Lago; Ana Ubago-Rodríguez; Marta Caro; Jesús Miguel Pérez-Gómez; Alejandro Benítez-Troncoso; Eduardo Andrés-León; Macarena Sánchez-Navarro; Raúl M. Luque; Elena González-Rey. Cortistatin deficiency reveals a dysfunctional brain endothelium with impaired gene pathways, exacerbated immune activation, and disrupted barrier integrity. *Journal of Neuroinflammation*. Biomed Central, 26/09/2023. ISSN 1742-2094

DOI: 10.1186/s12974-023-02908-5**Type of production:** Scientific paper**Position of signature:** 2**Total no. authors:** 12**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** No

- 6** José Luis Ruiz; Laura C. Terrón-Camero; Julia Castillo-González; Iván Fernández-Rengel; Mario Delgado; Elena González-Rey; Eduardo Andrés-León. reanalyzerGSE: tackling the everlasting lack of reproducibility and reanalyses in transcriptomics. *bioRxiv*. 13/07/2023. ISSN 2692-8205

DOI: 10.1101/2023.07.12.548663**Type of production:** Scientific paper**Position of signature:** 1**Corresponding author:** Yes**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

- 7** José Luis Ruiz; Susanne Reimering; Mandy Sanders; Juan David Escobar-Prieto; Nicolas MB Brancucci; Diego F Echeverry; Abdirahman I Abdi; Matthias Marti; Elena Gómez-Díaz; Thomas D Otto. From contigs towards chromosomes: automatic Improvement of Long Read Assemblies (ILRA). *Briefings in Bioinformatics*. Oxford University Press, 05/07/2023. ISSN 1477-4054

DOI: 10.1093/bib/bbad248**Type of production:** Scientific paper**Position of signature:** 1**Total no. authors:** 10**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** Yes

- 8** José Luis Ruiz; Lisa C Ranford-Cartwright; Elena Gómez-Díaz. The regulatory genome of the malaria vector *Anopheles gambiae*: integrating chromatin accessibility and gene expression. *NAR genomics and bioinformatics*. 3 - 1, Oxford University Press, 20/01/2021. ISSN 2631-9268

DOI: 10.1093/nargab/lqaa113**Type of production:** Scientific paper**Position of signature:** 1**Total no. authors:** 3**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** No

- 9** Óscar M. Lezcano; Miriam Sánchez-Polo; José Luis Ruiz; Elena Gómez-Díaz. Chromatin structure and function in mosquitoes. *Frontiers in genetics*. 11, pp. 9431. *Frontiers*, 07/12/2020. ISSN 1664-8021

DOI: 10.3389/fgene.2020.602949**Type of production:** Scientific paper**Position of signature:** 1**Total no. authors:** 4**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** Yes



- 10** Concepción Almoguera; Pilar Prieto-Dapena; Raúl Carranco; José Luis Ruiz; Juan Jordano. Heat stress factors expressed during seed maturation differentially regulate seed longevity and seedling greening. *Plants*. 9 - 3, pp. 335 - 9431. Multidisciplinary Digital Publishing Institute, 06/03/2020. ISSN 2223-7747
DOI: 10.3390/plants9030335
Type of production: Scientific paper
Position of signature: 4
Total no. authors: 5
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 11** Olena Gruzieva; Cheng-Jian Xu; Paul Yousefi; Caroline Relton; Simon Kebede Merid; Carrie V. Breton; Lu Gao; Heather E. Volk; Jason I. Feinberg; Christine Ladd-Acosta; Kelly Bakulski; Charles Auffray; Nathanaël Lemonnier; Michelle Plusquin; Akram Ghantous; Zdenko Herceg; Tim S. Nawrot; Costanza Pizzi; Lorenzo Richiardi; Franca Rusconi; Paolo Vineis; Manolis Kogevinas; Janine F. Felix; Liesbeth Duijts; Herman T. den Dekker; Vincent W. V. Jaddoe; José L. Ruiz; Mariona Bustamante; Josep Maria Antó; Jordi Sunyer; Martine Vrijheid; Kristine B. Gutzkow; Regina Grazuleviciene; Carles Hernandez-Ferrer; Isabella Annesi-Maesano; Johanna Lepeule; Jean Bousquet; Anna Bergström; Inger Kull; Cilla Söderhäll; Juha Kere; Biobank-based Integrative Omics Studies (BIOS) Consortium; Ulrike Gehring; Bert Brunekreef; Allan C. Just; Rosalind J. Wright; Cheng Peng; Diane R. Gold; Itai Kloog; Dawn L. DeMeo; Göran Pershagen; Gerard H. Koppelman; Stephanie J. London; Andrea A. Baccarelli; Erik Melén. Prenatal particulate air pollution and DNA methylation in newborns: an epigenome-wide meta-analysis. *Environmental health perspectives*. 127 - 5, National Institute of Environmental Health Sciences (United States), 31/05/2019. ISSN 1552-9924
DOI: 10.1289/EHP4522
Type of production: Scientific paper
Position of signature: 27
Total no. authors: 55
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 12** José Luis Ruiz; Elena Gómez-Díaz. The second life of Plasmodium in the mosquito host: gene regulation on the move. *Briefings in functional genomics*. 18 - 5, pp. 313 - 357. Oxford University Press, 06/05/2019. ISSN 2041-2657
DOI: 10.1093/bfpg/elz007
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 2
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 13** José Luis Ruiz; Rakiswendé S. Yerbanga; Thierry Lefèvre; Jean B. Ouedraogo; Victor G. Corces; Elena Gómez-Díaz. Chromatin changes in *Anopheles gambiae* induced by *Plasmodium falciparum* infection. *Epigenetics & chromatin*. 12 - 1, pp. 1 - 18. BioMed Central, 07/01/2019. ISSN 1756-8935
DOI: 10.1186/s13072-018-0250-9
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 6
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 14** José Luis Ruiz; Juan J. Tena; Cristina Bancells; Alfred Cortés; José Luis Gómez-Skarmeta; Elena Gómez-Díaz. Characterization of the accessible genome in the human malaria parasite *Plasmodium falciparum*. *Nucleic acids research*. 46 - 18, pp. 9414 - 9431. Oxford University Press, 17/07/2018. ISSN 1362-4962
DOI: 10.1093/nar/gky643
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 6
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No

- 15** José L. Ruiz. Leer el libro de la vida: la genética, la epigenética y la bioinformática. eldiario.es. 31/01/2025. Available on-line at: <https://www.eldiario.es/andalucia/blogs/un-relato-andaluz/leer-libro-vida-genetica-epigenetica-bioinformatica_132_12006011.html>.

Type of production: Popular science article

Format: Journal

Position of signature: 1

Degree of contribution: Author or co-author of scientific or technical document for the general public

Total no. authors: 1

Corresponding author: No

- 16** José L. Ruiz. Abierta una puerta al genoma completo de todos los organismos del mundo. The Conversation. 15/09/2023. Available on-line at: <<https://theconversation.com/abierta-una-puerta-al-genoma-completo-de-todos-los-organismos-del-mundo-211053>>.

Type of production: Popular science article

Format: Journal

Position of signature: 1

Degree of contribution: Author or co-author of scientific or technical document for the general public

Total no. authors: 1

Corresponding author: No

Works submitted to national or international conferences

- 1** **Title of the work:** The dynamic transcriptome of Plasmodium malariae in the mosquito
Name of the conference: BioMalPar XXI: Biology and Pathology of the Malaria Parasite
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Heidelberg,
Date of event: 20/05/2025
Organising entity: European Molecular Biology Laboratory (EMBL)
- 2** **Title of the work:** Interacciones virus-huésped mediadas por miRNAs virales: hacia una comprensión más profunda de la patogénesis viral
Name of the conference: Jornadas Andaluzas de Bioinformática JABI 2025
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: No
City of event: Málaga, Spain
Date of event: 12/05/2025
Organising entity: Fundación Progreso y Salud
Daniel J. García; Marco A. Pulpillo-Berrocal; Alexandre Lamas; Álvaro Gómez-Guillamón; José L. Ruiz; Eduardo Andrés-León; Laura C. Terrón-Camero.
- 3** **Title of the work:** Advanced data analyses for bioinformatics, from meta-transcriptomics to improved spatial transcriptomics
Name of the conference: 3rd Research Conference PTS Granada
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Granada, Spain
Date of event: 05/02/2025
Organising entity: PTS Granada
- 4** **Title of the work:** Comparison of workflows for transcriptomics data analyses of the Nanostring nCounter platform
Name of the conference: 3rd Research Conference PTS Granada
Type of event: Conference

Type of participation: 'Participatory - poster
City of event: Granada, Spain
Date of event: 05/02/2025
Organising entity: PTS Granada

5 **Title of the work:** Protective effect of cortistatin upon thymic regression and involvement into immunosenescence
Name of the conference: 3rd Research Conference PTS Granada
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Granada, Spain
Date of event: 05/02/2025
Organising entity: PTS Granada

6 **Title of the work:** Quantifying context-dependent biological functions at the single-cell level
Name of the conference: 3rd Research Conference PTS Granada
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Granada, Spain
Date of event: 04/02/2025
Organising entity: PTS Granada

7 **Title of the work:** Protective effect of cortistatin upon thymic regression
Name of the conference: 7th European Congress of Immunology
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Dublin, Ireland
Date of event: 01/09/2024
Organising entity: European Federation of Immunological Societies

8 **Title of the work:** Microbiota and mosquito-borne diseases: A metatranscriptomics workflow for the taxonomic and functional profiling of these unexpected guests
Name of the conference: Jornadas Andaluzas de Bioinformática JABI 2024
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Granada, Spain
Date of event: 26/06/2024
Organising entity: Fundación Progreso y Salud
Jose L. Ruiz; Angel Martín Domínguez; Laura Carmen Terron-Camero; Eduardo Andres-Leon.

9 **Title of the work:** Making the most of your transcriptomic landscapes: A computational workflow to quantify activity of context-specific biological functions at the single-cell level
Name of the conference: Jornadas Andaluzas de Bioinformática JABI 2024
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Granada, Spain
Date of event: 25/06/2024
Organising entity: Fundación Progreso y Salud
With external admission assessment committee: Yes



- 10** **Title of the work:** The neuropeptide Cortistatin regulates the programming of brain endothelial cells under physiological and pathological conditions
Name of the conference: 11th World Congress of Neuroscience IBRO
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Granada, Spain
Date of event: 09/09/2023
Organising entity: International Brain Research Organization
- 11** **Title of the work:** The reanalyzerGSE pipeline: tackling the everlasting lack of reproducibility and reanalyses in transcriptomics data
Name of the conference: Jornadas Andaluzas de Bioinformática JABI 2023
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Sevilla, Spain
Date of event: 05/07/2023
Organising entity: Fundación Progreso y Salud
- 12** **Title of the work:** Protective role of Cortistatin in thymic involution and immunosenescence
Name of the conference: 44 Congreso de la Sociedad Española de Inmunología
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Bilbao, Spain
Date of event: 10/05/2023
Organising entity: SOCIEDAD ESPAÑOLA DE INMUNOLOGIA
- 13** **Title of the work:** Characterization of chromatin accessibility during the seed to seedling transition in *Nicotiana tabacum*
Name of the conference: XVI Meeting of Plant Molecular Biology
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Sevilla, Spain
Date of event: 14/09/2022
Organising entity: CSIC, US, IBVF
- 14** **Title of the work:** The transcriptome of the human malaria parasite *Plasmodium malariae* during sporogony
Name of the conference: BioMalPar XVII: Biology and Pathology of the Malaria Parasite
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Online (COVID-19),
Date of event: 25/05/2021
Organising entity: European Molecular Biology Laboratory (EMBL)
- 15** **Title of the work:** Automatic Improvement of PacBio genome Assemblies (IPA) applied to seven clinical malaria samples
Name of the conference: IV National Congress for Young Researchers in Biomedicine
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Online (COVID-19),
Date of event: 04/11/2020



Organising entity: ConBioPreVal

- 16** **Title of the work:** Automatic Improvement of PacBio genome Assemblies (IPA) applied to seven clinical malaria samples
Name of the conference: VII Bioinformatics Student Symposium
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Madrid, Spain
Date of event: 17/10/2019
Organising entity: ISCB Regional Students Group-Spain (RSG-Spain)
- 17** **Title of the work:** The regulatory genome of the human malaria vector, *Anopheles gambiae*: an integrated analysis of chromatin accessibility and transcription
Name of the conference: BioMalPar XV: Biology and Pathology of the Malaria Parasite
Type of event: Conference
Type of participation: Participatory - others
City of event: Heidelberg, Germany
Date of event: 28/05/2019
Organising entity: European Molecular Biology Laboratory (EMBL)
- 18** **Title of the work:** Chromatin-mediated transcriptional responses of *Anopheles gambiae* to an infection by the human malaria parasite *Plasmodium falciparum*
Name of the conference: BioMalPar XIV: Biology and Pathology of the Malaria Parasite
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Heidelberg, Germany
Date of event: 23/05/2018
Organising entity: European Molecular Biology Laboratory (EMBL)
- 19** **Title of the work:** Characterization of the accessible genome in the human malaria parasite *Plasmodium falciparum*
Name of the conference: 1st European PhD and Postdoc Symposium: "Breaking Down Complexity: Innovative models and techniques in Biomedicine"
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 15/11/2017
Organising entity: European Academy for Biomedical Science (ENABLE)
- 20** **Title of the work:** Epigenome-wide meta-analysis of DNA methylation in children related to prenatal particulate air pollution exposure
Name of the conference: 29th Annual Scientific Conference of the International Society for Environmental Epidemiology (ISEE)
Type of event: Conference
Type of participation: Participatory - others
City of event: Sydney, Australia
Date of event: 24/09/2017
Organising entity: International Society for Environmental Epidemiology (ISEE)
"Epigenome-wide meta-analysis of DNA methylation in children related to prenatal particulate air pollution exposure".



- 21** **Title of the work:** Characterization of the accessible genome and cis-regulatory regions in the human malaria parasite *Plasmodium falciparum*
Name of the conference: BioMalPar XIII: Biology and Pathology of the Malaria Parasite
Type of event: Conference
Type of participation: Participatory - others
City of event: Heidelberg, Germany
Date of event: 29/05/2017
Organising entity: European Molecular Biology Laboratory (EMBL)
- 22** **Title of the work:** Characterization of the accessible genome in the human malaria parasite *Plasmodium falciparum*
Name of the conference: Gene-regulatory systems in development
Type of event: Conference
Type of participation: Participatory - others
City of event: Carmona, Spain
Date of event: 27/03/2017
Organising entity: Zencode-DEVCOM (European Initial Training Network on Developmental and Computational Biology)

Science Outreach activities

- 1** **Title of the work:** Work In Progress seminar IPBLN-CSIC
Name of the event: WIP IPBLN
Type of event: Conferences given
Date of event: 08/10/2024
Organising entity: Instituto de Parasitología y Biomedicina López-Neyra
Type of entity: State agency
- 2** **Title of the work:** Talks and outreach activities
Name of the event: European Researchers' Night
Type of event: Conferences given
City of event: Granada,
Date of event: 27/09/2024
Organising entity: European Commission
- 3** **Title of the work:** Let's talk about Science at schools
Name of the event: Let's talk about Science at schools
City of event: Granada,
Date of event: 2024
Organising entity: Ayuntamiento de Granada
Type of entity: Ayuntamiento
- 4** **Title of the work:** Talks and outreach activities
Name of the event: Science without Labels
Type of event: Conferences given
City of event: Granada,
Date of event: 2024
Organising entity: Fundación Española para la Ciencia y la Tecnología
Type of entity: Foundation



- 5** **Title of the work:** Visit a Research Center
Name of the event: Visit a Research Center
Type of event: Visita
City of event: Granada, Spain
Date of event: 2024
Organising entity: Ayuntamiento de Granada
Type of entity: Ayuntamiento
- 6** **Title of the work:** Talks and outreach activities
Name of the event: Coffee with Science
Type of event: Conferences given
City of event: Granada,
Date of event: 15/11/2023
Organising entity: Fundación Española para la Ciencia y la Tecnología
Type of entity: Junta de Andalucía, Fundación DESQBRE
- 7** **Title of the work:** Talks and outreach activities
Name of the event: Visit a Research Center
Type of event: Conferences given
City of event: Granada,
Date of event: 15/11/2023
Organising entity: Ayuntamiento de Granada
Type of entity: IPBLN
- 8** **Title of the work:** Talks and outreach activities
Name of the event: Workshop of Science
Type of event: Conferences given
City of event: Granada,
Date of event: 11/10/2023
Organising entity: Ayuntamiento de Granada
Type of entity: IPBLN
- 9** **Title of the work:** Media interview
Name of the event: Media interview
Type of event: Media interviews
City of event: Granada,
Date of event: 02/10/2023
Organising entity: Diario ABC, S.L.
Type of entity: Business
Available on-line at: <<https://www.abc.es/economia/bioinformaticos-cerebros-tecnologicos-dan-nueva-vida-ciencia-20231002201351-nt.html>>.
- 10** **Title of the work:** Talks and outreach activities
Name of the event: European Researchers' Night
Type of event: Conferences given
City of event: Granada,
Date of event: 29/09/2023
Organising entity: European Commission
- 11** **Title of the work:** Talks and outreach activities
Name of the event: European Researchers' Night
Type of event: Conferences given
City of event: Granada,
Date of event: 30/09/2022
Organising entity: European Commission



- 12** **Title of the work:** Talks and outreach activities
Name of the event: European Researchers' Night
Type of event: Conferences given
City of event: Granada,
Date of event: 27/11/2020
Organising entity: European Commission
- 13** **Title of the work:** Video outreach of the thesis project
Name of the event: 2nd Edition of the National Outreach Contest BeCSIC
Type of event: Contest
Date of event: 22/01/2020
Organising entity: Spanish National Research Council (CSIC)
- 14** **Title of the work:** Talks and outreach activities
Name of the event: European Researchers' Night
Type of event: Conferences given
City of event: Granada,
Date of event: 27/09/2019
Organising entity: European Commission
- 15** **Title of the work:** Talks and outreach activities
Name of the event: 16th Sevillian Science Fair
Type of event: Conferences given
City of event: Seville,
Date of event: 05/05/2018
Organising entity: Andalusian Society of Science Outreach (SADC) **Type of entity:** Associations and Groups
- 16** **Title of the work:** Talks and outreach activities
Name of the event: 15th Sevillian Science Fair
Type of event: Conferences given
City of event: Sevilla,
Date of event: 13/05/2017
Organising entity: Andalusian Society of Science Outreach (SADC)

R&D management and participation in scientific committees

Evaluation and revision of R&D projects and articles

- 1** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: BMC Biology
Start date: 05/2025
- 2** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Epigenetics & Chromatin
Start date: 02/2025



- 3** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Briefings in Bioinformatics
Start date: 01/2025
- 4** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Scientific Reports
Start date: 01/2025
- 5** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: BMC Genomics
Start date: 11/2024
- 6** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Malaria Journal
Start date: 08/2024
- 7** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Briefings in Bioinformatics
Start date: 07/2024
- 8** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Briefings in Bioinformatics
Start date: 06/2024
- 9** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Briefings in Bioinformatics
Start date: 02/2024
- 10** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Journal of Visualized Experiments
Start date: 05/2023
- 11** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Scientific Reports
Start date: 03/2021
- 12** **Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Animal Gene
Start date: 12/2020



- 13 Name of the activity:** Peer review for scientific journal
Performed tasks: Peer review for scientific journal
Entity where activity was carried out: Ecosistemas
Start date: 04/2020

Other achievements

Stays in public or private R&D centres

- 1 Entity:** University of Glasgow (UoG)
City of entity: Glasgow, United Kingdom
Start-End date: 24/04/2019 - 31/07/2022 **Duration:** 3 years - 3 months
Goals of the stay: Affiliate Researcher
Provable tasks: Scientific publications (<https://github.com/ThomasDOtto/ILRA>,
doi.org/10.1101/2021.07.30.454413)
- 2 Entity:** University of Glasgow (UoG)
City of entity: Glasgow, United Kingdom
Start-End date: 01/02/2021 - 02/03/2021 **Duration:** 33 days
Goals of the stay: Doctorate
Provable tasks: Scientific publications (<https://github.com/ThomasDOtto/ILRA>,
doi.org/10.1101/2021.07.30.454413)
- 3 Entity:** University of Glasgow (UoG). Erasmus Placement
City of entity: Glasgow, United Kingdom
Start-End date: 01/05/2019 - 01/07/2019 **Duration:** 62 days
Goals of the stay: Doctorate
Provable tasks: Scientific publications (<https://github.com/ThomasDOtto/ILRA>,
doi.org/10.1101/2021.07.30.454413)
- 4 Entity:** Andalusian Center for Development Biology (CABD)
City of entity: Seville, Spain
Start-End date: 01/09/2017 - 10/09/2017
Goals of the stay: Doctorate
Provable tasks: Expertise in ATAC-seq
- 5 Entity:** University of Seville (US)
City of entity: Seville, Spain
Start-End date: 20/01/2017 - 21/01/2017
Goals of the stay: Doctorate
Provable tasks: Expertise in ChIP-seq
- 6 Entity:** University of Parma (UNIPR). Erasmus Placement
City of entity: Parma, Italy
Start-End date: 01/07/2013 - 01/09/2013 **Duration:** 2 months
Goals of the stay: Degree
Provable tasks: Scientific work scored as Excellent in the Degree

Obtained grants and scholarships

- 1** **Name of the grant:** 3-years Technician Staff Contract
Aims: Technician staff
Awarding entity: Spanish Ministry of Science and Innovation (MICIN)
Conferral date: 01/11/2022 **Duration:** 4 years
End date: 30/10/2025
Entity where activity was carried out: Spanish National Research Council
- 2** **Name of the grant:** 4-years PhD Research Grant
Aims: Pre-doctoral
Awarding entity: Spanish Ministry of Economy and Competitiveness (MINECO)
Conferral date: 16/04/2017 **Duration:** 4 years - 5 months
End date: 16/09/2021
Entity where activity was carried out: Spanish National Research Council
- 3** **Name of the grant:** Erasmus Placement
Aims: Pre-doctoral
Awarding entity: University of Seville (US)
Conferral date: 01/05/2019 **Duration:** 2 months
End date: 09/2013
Entity where activity was carried out: University of Glasgow
Faculty, institute or centre: Institute of Infection, Immunity & Inflammation
- 4** **Name of the grant:** Erasmus Placement
Aims: Degree
Awarding entity: University of Seville (US)
Conferral date: 01/07/2013 **Duration:** 2 months
End date: 09/2013
Entity where activity was carried out: University of Parma
Faculty, institute or centre: Department of Life-Science
- 5** **Name of the grant:** BioMalPar XIV Travel Grant
Aims: Pre-doctoral
Awarding entity: EMBL Corporate Partnership Programme **Type of entity:** R&D Centre
Conferral date: 16/04/2018
- 6** **Name of the grant:** ENABLE - Travel grant
Aims: Pre-doctoral
Awarding entity: ENABLE **Type of entity:** Associations and Groups
Conferral date: 31/07/2017



Scientific societies and professional associations

Name of the society: Spanish Society of Bioinformatics and Computational Biology (SEBiBC)

Affiliation entity: Spanish Society of Bioinformatics and Computational Biology (SEBiBC)

Start date: 2021

Prizes, mentions and distinctions

Description: 7th prize. 2nd Edition of the National Outreach Contest BeCSIC

Awarding entity: Spanish National Research Council (CSIC)

Conferral date: 22/01/2020

Other merits of research activity

Peer review

- 15 peer reviews of 14 manuscripts, including Q1 and D1 journals

Awards and Invitations:

- Doctorate. International Mention, cum laude
- 7th prize in the 2nd Edition of the National Outreach Contest 'BeCSIC'
- Conference BioSouth 2023. Invited Speaker Roundtable