



CURRENT POSITION

Associate Team Coordinator

[Khaos Research](#) · Málaga, Andalusia, Spain
2025-12 - Present

CURRENT POSITION

Postdoctoral researcher - FPU-POP Fellowship

[Universidad de Málaga](#) · Lenguajes y Ciencias de la Computación (LCC) · Málaga, Andalusia, Spain
2025-12 - Present

CURRENT STAY

Postdoctoral Researcher (International Stay)

[Centre for Research and Technology Hellas](#), [INAB|CERTH](#) · Thermi, Greece
2026-09 - 2026-09

RESEARCH FOCUS

Artificial intelligence

Bioinformatics

Biomedical data analysis

Gene regulatory network inference

Evolutionary biclustering

Co-expression pattern detection

Context-guided computational methods

Domain knowledge integration

Interpretable AI

PORTFOLIO SUMMARY

Researcher in artificial intelligence and bioinformatics focused on context-guided computational methods for biomedical data analysis. I am a computer scientist and researcher in artificial intelligence applied to bioinformatics, working at the intersection of computational methods, biomedical data analysis, evolutionary computation, and reproducible scientific software.

My academic background comprises Bachelor's Degree in Health Engineering with a specialization in Bioinformatics from Universidad de Málaga; Master's degree in Software Engineering and Artificial Intelligence from Universidad de Málaga; and Ph.D. in Computer Science from Universidad de Málaga. My professional experience spans 5 years and 7 months at Universidad de Málaga. This is complemented by research stays of 2 months at Kiyono Lab, belonging to GSES, belonging to The University of Osaka, located in Toyonaka, Japan; 1 month at INAB, belonging to Centre for Research and Technology Hellas, located in Thermi, Greece; 1 month at ORKAD, belonging to CRIStAL, belonging to Université de Lille, located in Lille, France; 3 months at Athena Research and Innovation Center in Information, Communication and Knowledge Technologies, located in Athens, Greece; and 3 months at ORKAD, belonging to CRIStAL, belonging to Université de Lille, located in Lille, France, for a total of 10 months abroad.

My research output includes 6 journal papers and 1 conference paper. The publication record includes 2 papers in international collaboration and 1 paper in national collaboration. Within funded research projects, my roles include working team member in 4 research projects. I have reviewed 15 manuscripts for scientific journals.

The software portfolio includes 16 software projects and 4 published packages. The public software portfolio spans 15 repositories, with 64 stars and 3 forks. Package usage records 21,100 downloads.

My teaching activity includes 4 academic years at Universidad de Málaga, amounting to 180 classroom hours, 4 academic years, 8 courses, and 4 degree programmes. This teaching activity began in the 2022/2023 academic year at Universidad de Málaga, when I was the youngest lecturer to take on teaching duties in the Department of Languages and Computer Science, a fact later acknowledged in a 2026 recommendation letter signed by the Director of the ETSII de la UMA. It also includes 1 teaching innovation project. Academic supervision includes 1 final degree project and 1 external internship.

Scientific dissemination activity covers 2 scientific dissemination articles, 2 presentations, 27 press items, 17 social media items, and 1 TV media item. Press coverage spans 14 outlets. Social media items with available metrics account for 68,300 views, with the highest recorded item reaching 38,700 views.

This academic trajectory has been recognized and supported through honors: Master's End-of-Program Extraordinary Award Profesor José María Troya Linero; Bachelor's End-of-Program Extraordinary Award Profesor José María Troya Linero;

7 TOTAL PUBLICATIONS

16 SOFTWARE PROJECTS

4 RESEARCH PROJECTS

180 TEACHING HOURS

5 WORK INSTITUTIONS

21,100 PACKAGE DOWNLOADS

68,300 KNOWN SOCIAL VIEWS

Destacad@s Awards 2021; and Award for the Best High School Academic Record; grants: D2 research stay grant, covering Postdoctoral Researcher (International Stay) at The University of Osaka; IMMUNO-model COST Action STSM grant, covering Postdoctoral Researcher (International Stay) at Centre for Research and Technology Hellas; ROAR-NET COST Action mobility grant, covering Postdoctoral Researcher (International Stay) at Université de Lille; FPU mobility grant, covering Postdoctoral Researcher (International Stay) at Athena Research and Innovation Center in Information, Communication and Knowledge Technologies; FPU mobility grant, covering Predoctoral Researcher (International Stay) at Université de Lille; and Predoctoral grant (FPU), covering PhD candidate - FPU Fellowship at Universidad de Málaga and Postdoctoral researcher - FPU-POP Fellowship at Universidad de Málaga.

RESEARCH
FOOTPRINT AND
PUBLICATION
COLLABORATIONS

PUBLICATION COLLABORATION

7 Total papers	2 International papers	3 Countries
Kyiv, Ukraine		
1 paper		
Lille, France		
1 paper		
Málaga, Spain		
7 papers		
Valencia, Spain		
1 paper		

RESEARCH STAYS

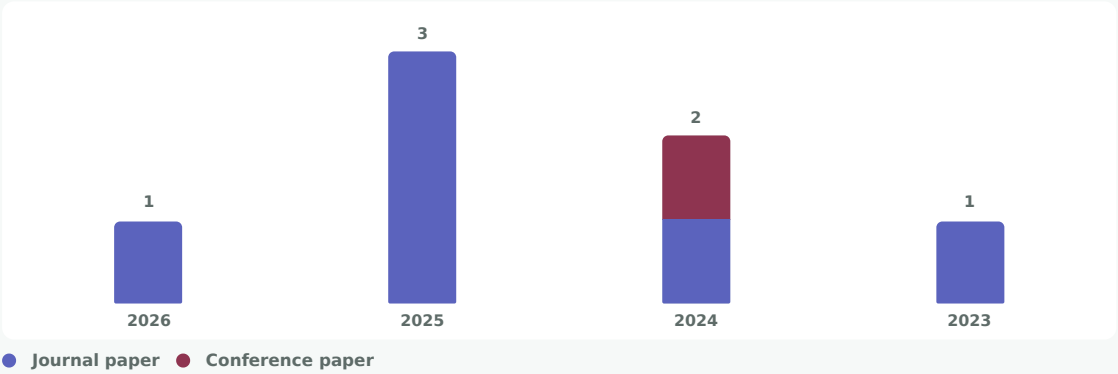
4 Cities	3 Countries	5 Stays
10 Months abroad		
Athens, Greece		
3 months		
Lille, France		
4 months		
Thermi, Greece		
1 month		
Toyonaka, Japan		
2 months		

RESEARCH APPOINTMENTS

3 Appointments	1 Cities	1 Countries
2 Active appointments		
Málaga, Spain		
3 Appointments		

PUBLICATIONS

PUBLICATIONS BY YEAR



2026

1 PAPER

● JOURNAL PAPER

2026-05-09

Deciphering the Influence of Gut Microbiome Disruption on Human Health Through Multi-Algorithm Approaches

Bohdan Vodianyky, María Luisa Antequera-Gómez, Adrián Segura-Ortiz, Anton Popov, José García-Nieto, Ismael Navas-Delgado

Current Bioinformatics · Bentham Science Publishers Ltd.

DOI: [10.2174/0115748936437763260125211015](https://doi.org/10.2174/0115748936437763260125211015)

Organizations: [Khaos Research](#), [ITIS](#), [Universidad de Málaga](#), [IBIMA Plataforma BIONAND](#), [Instituto de Ingeniería Oceánica](#), [National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”](#)

Positions: [Associate Team Coordinator](#), [Postdoctoral researcher - FPU-POP Fellowship](#)

Grants: [Predoctoral grant \(FPU\)](#)

● JOURNAL PAPER 2025-12-06

Multi-Objective Consensus Optimization for Gene Regulatory Networks Inference: A Preference-Based Approach

Adrián Segura Ortiz, Antonio Jesús Nebro Urbaneja, José Manuel García Nieto, José Francisco Aldana Montes

Computational Biology and Chemistry · Elsevier

DOI: [10.1016/j.compbiolchem.2025.108827](https://doi.org/10.1016/j.compbiolchem.2025.108827)

Organizations: [Khaos Research](#), [ITIS](#), [Universidad de Málaga](#), [IBIMA Plataforma BIONAND](#)

Positions: [PhD candidate - FPU Fellowship](#)

Grants: [Predoctoral grant \(FPU\)](#)

Software: [PBEvoGen](#)

● JOURNAL PAPER 2025-09-01

Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks

Adrián Segura Ortiz, Karen Giménez Orenge, José Manuel García Nieto, Elisa Oltra, José Francisco Aldana Montes

Computers in Biology and Medicine · Elsevier

DOI: [10.1016/j.compbiomed.2025.110632](https://doi.org/10.1016/j.compbiomed.2025.110632)

Organizations: [Khaos Research](#), [ITIS](#), [Universidad de Málaga](#), [IBIMA Plataforma BIONAND](#), [Universidad Católica de Valencia San Vicente Mártir](#)

Positions: [PhD candidate - FPU Fellowship](#)

Grants: [Predoctoral grant \(FPU\)](#)

Software: [BIO-INSIGHT](#)

● JOURNAL PAPER 2025-05-29

Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data

Adrián Segura Ortiz, Adán José García, Laetitia Jourdan, José Manuel García Nieto

Computer Methods and Programs in Biomedicine

DOI: [10.1016/j.cmpb.2025.108846](https://doi.org/10.1016/j.cmpb.2025.108846)

Organizations: [Khaos Research](#), [ITIS](#), [Universidad de Málaga](#), [IBIMA Plataforma BIONAND](#), [Université de Lille](#), [CRISTAL](#), [ORKAD](#), [INFINITE](#)

Positions: [PhD candidate - FPU Fellowship](#)

Research stays: [Predoctoral Researcher \(International Stay\)](#)

Grants: [Predoctoral grant \(FPU\)](#), [FPU mobility grant](#)

Software: [MOEBA-BIO](#)

● JOURNAL PAPER 2024-09-16

Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks

Adrián Segura Ortiz, José Manuel García Nieto, José Francisco Aldana Montes, Ismael Navas Delgado

Computers in Biology and Medicine

DOI: [10.1016/j.compbiomed.2024.108850](https://doi.org/10.1016/j.compbiomed.2024.108850)

Organizations: [Khaos Research](#), [ITIS](#), [Universidad de Málaga](#), [IBIMA Plataforma BIONAND](#)

Positions: [PhD candidate - FPU Fellowship](#)

Grants: [Predoctoral grant \(FPU\)](#)

Software: [MO-GENECI](#)

● CONFERENCE PAPER 2024-06-28

Exploiting medical-expert knowledge via a novel memetic algorithm for the inference of gene regulatory networks

Adrián Segura Ortiz, José Manuel García Nieto, José Francisco Aldana Montes

International Conference on Computational Science · Springer Nature Switzerland

DOI: [10.1007/978-3-031-63772-8_1](https://doi.org/10.1007/978-3-031-63772-8_1)

Organizations: [Khaos Research](#), [ITIS](#), [Universidad de Málaga](#), [IBIMA Plataforma BIONAND](#)

Positions: [PhD candidate - FPU Fellowship](#)

Grants: [Predoctoral grant \(FPU\)](#)

Software: [Memetic-GENECI](#)

● JOURNAL PAPER

2023-02-14

GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks

Adrián Segura Ortiz, José Manuel García Nieto, José Francisco Aldana Montes, Ismael Navas Delgado

Computers in Biology and Medicine

DOI: [10.1016/j.compbio.2023.106653](https://doi.org/10.1016/j.compbio.2023.106653)

Organizations: [Khaos Research](#), [ITIS](#), [Universidad de Málaga](#), [IBIMA Plataforma BIONAND](#)

Positions: [PhD candidate - FPU Fellowship](#)

Grants: [Predoctoral grant \(FPU\)](#)

Software: [Single-GENECI](#)

SOFTWARE

COMMIT ACTIVITY

LANGUAGES

Python	53.3%
Java	16.2%
MATLAB	10.4%
JavaScript	4.5%
R	3.9%
Shell	2.3%
CSS	2.2%
Other	7.3%

16 Software projects

4 Published packages

25 Research domains

64 Stars

3 Forks

3 Open issues

2026-08-28 Latest push

SOFTWARE PROJECTS

SOFTWARE PROJECT

SPATHI

Similarity-weighted Population-Aware Transcriptional Heterogeneity Inference

Python tool for inferring group-specific gene regulatory networks from single-cell RNA-seq data by weighting cells according to their transcriptomic proximity to each target population.

Push 2026-08-28

SOFTWARE PROJECT

SALVI

Component-oriented framework for quality-diversity biclustering of heterogeneous data with reproducible pipelines, monitoring, and explainable bicluster outputs.

Python · MIT · 0 stars · 0 forks · 16 commits

Push 2026-08-04

SOFTWARE PROJECT

ANDREA

Automated Network Discovery, Reproducible Evaluation and Analysis

Platform for aggregated network discovery, simulation, inference, and benchmarking workflows.

Python · MIT · 0 stars · 0 forks · 115 commits

Push 2026-08-28

SOFTWARE PROJECT

AMIGA

Autonomous Multi-objective Individual GRN Assessment

Python package for learning-to-rank post-Pareto selection of consensus gene regulatory networks.

Python · MIT · 0 stars · 0 forks · 17 commits

Push 2026-06-15

SOFTWARE PROJECT**Push 2026-04-24****GENECI****GEne NETwork Consensus Inference**

Repository for the GENECI software ecosystem for consensus inference of gene regulatory networks.

Java · MIT · 52 stars · 3 forks · 296 commits

SOFTWARE PROJECT**Push 2025-02-20****PBEvoGen****Preference-Based Evolutionary Gene Network Inference**

Preference-guided multi-objective consensus optimization framework for gene regulatory network inference.

Java · MIT · 0 stars · 0 forks · 6 commits

SOFTWARE PROJECT**Push 2026-07-20****MOEBA-BIO****Multi-Objective Evolutionary Biclustering Algorithm for BIOmedical applications**

Java framework for evolutionary biclustering in biomedical data with domain-knowledge integration and self-configuration of biclustering parameters.

Java · MIT · 5 stars · 0 forks · 168 commits

SOFTWARE PROJECT**Push 2025-02-20****Memetic-GENECI****Memetic GEne NETwork Consensus Inference**

Software project derived from Single-GENECI with a local search phase guided by known interactions.

Java · MIT · 1 star · 0 forks · 11 commits

SOFTWARE PROJECT**Push 2025-02-21****BIO-INSIGHT****Biologically Informed Optimizator - INtegrating Software to Infer Grns by Holistic Thinking**

Software project for biologically informed consensus inference of gene regulatory networks using many-objective evolutionary optimization.

Java · MIT · 1 star · 0 forks · 12 commits

SOFTWARE PROJECT**Push 2025-02-20****MO-GENECI****Multi-Objective GEne NETwork Consensus Inference**

Software project for multi-objective consensus inference of gene regulatory networks using confidence levels, topology, and recurrent biological motifs.

MATLAB · MIT · 1 star · 0 forks · 9 commits

SOFTWARE PROJECT**Push 2024-02-08****Hector****Software tool for workflow orchestration**

Workflow orchestrator that records grouped topological order for workflows and controls execution from component and definition specifications.

Go · 3 stars · 0 forks · 51 commits

SOFTWARE PROJECT**Push 2025-02-20****Single-GENECI****Single-Objective GEne NETwork Consensus Inference**

Software project implementing an evolutionary algorithm to determine an optimal ensemble of machine learning techniques for gene regulatory network inference.

Python · MIT · 1 star · 0 forks · 7 commits

SOFTWARE PROJECT**Push 2022-12-06****PsycoTreat**

Application for registration and treatment workflows for patients associated with mental health centers, including roles, appointments, diagnoses, medication search, and messaging.

HTML · MIT · 0 stars · 0 forks · 9 commits

SOFTWARE PROJECT**Push 2023-06-23****PrimerDesigner**

Program for designing an optimal universal primer with maximum hybridization over aligned FASTA sequences.

Java · MIT · 0 stars · 0 forks · 8 commits

SOFTWARE PROJECT**Push 2023-09-19****KmerCounter**

Java project for k-mer frequency analysis in FASTA and multi-FASTA files.

Java · MIT · 0 stars · 0 forks · 4 commits

SOFTWARE PROJECT**Push 2023-09-19****DNATranslatorAnalyzer**

DNA sequence analyzer for reverse and reverse-complement construction, nucleotide frequency calculation, six-frame translation, and stop-codon fragment detection.

Java · MIT · 0 stars · 0 forks · 3 commits

SOFTWARE PACKAGES

PYPI

GENECI

Software package whose main functionality consists of an evolutionary algorithm to determine the optimal ensemble of machine learning techniques for genetic network inference based on the confidence levels and topological characteristics of its results.

19430 downloads · 6 releases · Python <3.11,>=3.10.7

Latest 4.0.1.2

MAVEN

MOEBA-BIO

MOEBA-BIO: Multi-Objective Evolutionary Biclustering Algorithm for BIOMedical applications.

1 release · 14 dependencies · Java 11

Latest 1.0.0

PYPI

AMIGA

Learning-to-rank for post-Pareto selection of consensus gene regulatory networks

774 downloads · 1 release · Python <3.14,>=3.11

Latest 0.1.0

PYPI

ANDREA

Platform for aggregated network discovery, simulation, inference, and benchmarking workflows.

896 downloads · 1 release · Python <3.14,>=3.11

Latest 0.1.0

ACADEMIC
TRAJECTORY

TIMELINE SNAPSHOT

Education
3 records

Experience
6 records

Research Stays
5 records

Certifications
5 records

Honors
4 records

CAREER DETAILS

RESEARCH STAY

Kiyono Lab

Toyonaka, Japan

Postdoctoral Researcher (International Stay)

Postdoctoral Researcher (International Stay)

2026-10 - 2026-11

Postdoctoral international stay at Kiyono Lab, Graduate School of Engineering Science, The University of Osaka.

2026-10 - 2026-11

GRANT

D2 research stay grant

2026-07 · Universidad de Málaga

Postdoctoral mobility

2026-10 - 2026-11

2026-11-01

RESEARCH STAY

INAB|CERTH

Thermi, Greece

Postdoctoral Researcher (International Stay)

Postdoctoral Researcher (International Stay)

2026-09 - 2026-09

Postdoctoral international stay at the Institute of Applied Biosciences of CERTH.

2026-09 - 2026-09

GRANT

IMMUNO-model COST Action STSM grant

COST Action CA21135 - Modelling immunotherapy response and toxicity in cancer (IMMUNO-model)

Postdoctoral mobility

2026-09 - 2026-09

2026-09-01

RESEARCH STAY

2024-04 - 2026-07

ORKAD

Lille, France

Postdoctoral Researcher (International Stay) <- Predoctoral Researcher (International Stay)

Postdoctoral Researcher (International Stay)

2026-07 - 2026-07

Postdoctoral international stay at the CRISAL centre of the University of Lille focused on quality-diversity evolutionary biclustering and reproducible experimentation for heterogeneous data.

Predoctoral Researcher (International Stay)

2024-04 - 2024-06

Predoctoral international stay at the CRISAL centre of the University of Lille.

GRANT

2026-07-01

ROAR-NET COST Action mobility grant

2026-07 · COST Action CA22137 - Randomised Optimisation Algorithms Research Network (ROAR-NET)

Postdoctoral mobility

2026-07 - 2026-07

RESEARCH STAY

2026-04 - 2026-06

Athena Research Center

Athens, Greece

Postdoctoral Researcher (International Stay)

Postdoctoral Researcher (International Stay)

2026-04 - 2026-06

Postdoctoral international stay at Athena Research Center focused on reproducible benchmark workflows for gene regulatory network discovery and evaluation.

GRANT

2026-06-01

FPU mobility grant

Ministerio de Ciencia e Innovación. Universidades

Postdoctoral mobility

2026-04 - 2026-06

EXPERIENCE

2022-12 - Present

Universidad de Málaga

Málaga, Andalusia, Spain

Postdoctoral researcher - FPU-POP Fellowship <- PhD candidate - FPU Fellowship

Postdoctoral researcher - FPU-POP Fellowship

2025-12 - Present

PhD candidate - FPU Fellowship

2022-12 - 2025-12

- Designed evolutionary algorithms and hybrid artificial intelligence methods for bioinformatics problems.
- Integrated over 25 gene regulatory network inference techniques in reproducible Docker environments and PyPI packages.
- Developed asynchronous and parallel evolutionary algorithms for biologically informed network consensus.
- Implemented multi-objective biclustering algorithms for clinical and genomic data.
- Published results in peer-reviewed journals and presented work at conferences with open-source reproducibility assets.
- Taught 8 undergraduate courses across 4 degree programmes over 4 academic years.
- Supervised 1 Bachelor's thesis and 1 external internship.

EXPERIENCE

2021-07 - Present

Khaos Research

Málaga, Andalusia, Spain

Associate Team Coordinator <- Associate Software Engineer <- Junior Software Engineer

Associate Team Coordinator

2025-12 - Present

Associate Software Engineer

2022-12 - 2025-12

- Developed a workflow orchestration tool in Go with SQLite storage, JSON/YAML component definitions, and Kubernetes and Nomad execution support.
- Administered computational resources using Proxmox and vSphere for deployment, maintenance, and monitoring of virtual machines.
- Processed multisource satellite imagery from Sentinel-2, PlanetScope, and Landsat, including download automation, temporal composites, spectral indices, and band manipulation.
- Developed Gradio interfaces for remote sensing model execution and result visualization.
- Maintained OpenProject installations, upgrades, deployments, and project-management workflows.

Junior Software Engineer

2021-07 - 2022-12

- Developed Progressive Web Applications with Next.js and MongoDB for crop sample data recording and analysis.
- Encapsulated Python, Java, and R scripts into Docker containers for EnBiC2-Lab components.
- Developed an evolutionary algorithm with JMetal and EPANET simulations to predict irrigation connector properties.
- Contributed to Angular interfaces for scientific workflow execution.
- Managed project tasks and coordination through OpenProject.

EDUCATION

2025-12-01

Ph.D. in Computer Science

2022-10 - 2025-12 · Universidad de Málaga

Outstanding (Cum Laude) with International Mention

Grants: Predoctoral grant (FPU).

CERTIFICATION

2025-07-18

Jornadas de Formación, Mejora e Investigación Docente

Universidad de Málaga · 10 hours

CERTIFICATION

2025-06-01

IMFAHE International Mentor Program Student Certificate (2024-2025)

IMFAHE

GRANT

2024-06-01

FPU mobility grant

2024-03 · Ministerio de Ciencia e Innovación. Universidades

Postdoctoral mobility

2024-06

CERTIFICATION

2023-12-21

Introduction to the Use of Generative Artificial Intelligence in University Teaching

Universidad de Málaga · 12 hours

HONOR

2023-07-01

Master's End-of-Program Extraordinary Award Profesor José María Troya Linero

2023-07 · Universidad de Málaga

Award for the top academic record in the Master's in Software Engineering and Artificial Intelligence.

GRANT**2022-12-01****Predoctoral grant (FPU)**

2022-12 · Ministry of Science, Innovation and Universities

Predoctoral research funding

2022-12 - Present

HONOR**2022-07-01****Bachelor's End-of-Program Extraordinary Award Profesor José María Troya Linero**

2022-07 · Universidad de Málaga

Award for the best academic record in the Bachelor's in Health Engineering program, considering both specializations.

EDUCATION**2022-07-01****Master's degree in Software Engineering and Artificial Intelligence**2021-10 - 2022-07 · [Universidad de Málaga](#)

9.67/10 (With Honors in 6 subjects)

HONOR**2021-11-01****Destacad@s Awards 2021**

2021-11 · BBVA, Diario Sur

Recognition as one of the top three academic records at the School of Computer Engineering for the graduating class of 2020/2021.

EDUCATION**2021-07-01****Bachelor's Degree in Health Engineering with a specialization in Bioinformatics**2017-10 - 2021-07 · [Universidad de Málaga](#)

8.89/10 (With Honors in 17 subjects)

EXPERIENCE**2021-03 - 2021-06****CIMES**

Málaga, Andalusia, Spain

Student Trainee

Student Trainee

2021-03 - 2021-06

- Developed an automated NGS analysis pipeline for tumor samples on the Picasso supercomputer.
- Programmed Bash and R scripts with GNU Parallel for large-scale sample processing.
- Integrated FastQC, MultiQC, Qualimap, and vcftoolz compare for quality control and visualization.
- Evaluated multiple aligners and variant callers to reduce false positives.
- Annotated variants using ANNOVAR, OpenCRAVAT, MyVariant, and biomedical databases.
- Detected copy number alterations and gene fusions with unified R reporting.

CERTIFICATION**2017-09-01****Boost Your Future - Professional Development Workshop**[ESESA](#)**HONOR****2017-06-01****Award for the Best High School Academic Record**

2017-06 · Málaga City Council, Education Department

9th City of Málaga Education Awards.

CERTIFICATION

2015-07-01

Cambridge English: Preliminary (PET) - Level B1
[University of Cambridge](#)

RESEARCH AND
TEACHING
INNOVATION
PROJECTS

● Working team member

● Research team member

● PI / Co-PI

RESEARCH PROJECT 2025-09-01 - Present

KOSMOS: Potenciando los Ecosistemas de Compartición de Datos Federados con un Enfoque Multidimensional

[Universidad de Málaga](#)

- Code: PID2024-155363OB-C41
- Funders: Plan Nacional de Proyectos de Generación de Conocimiento
- Participation: Working team member
- Principal investigators: José Francisco Aldana Montes, José Manuel García Nieto
- Total amount: 197500 EUR

TEACHING INNOVATION PROJECT 2023-01-01 - 2024-12-31

Grupos Permanentes de Innovación Educativa en el Desarrollo de Nuevas Competencias Orientadas a la Mejora de la Empleabilidad del Alumnado en el Ámbito Universitario

[Universidad de Málaga](#)

- Code: PIE22-114
- Funders: Universidad de Málaga
- Participation: Working team member

RESEARCH PROJECT 2021-01-01 - 2024-12-31

Aether: Una aproximación holística de smart data para el análisis de datos guiado por el contexto: explotación de semántica y contexto

[Universidad de Málaga](#)

- Code: PID2020-112540RB-C41
- Funders: Agencia Estatal de Investigación
- Participation: Working team member
- Principal investigators: José Francisco Aldana Montes, Ismael Navas Delgado
- Total amount: 201102 EUR

RESEARCH PROJECT 2019-01-01 - 2023-06-30

EnBiC2-Lab: Environmental and Biodiversity Climate Change Lab

[Universidad de Málaga](#)

- Code: LifeWatch-2019-11-UMA-01
- Funders: FEDER
- Participation: Working team member
- Principal investigators: Juan Teodomiro López Navarrete
- Total amount: 11298828.13 EUR

RESEARCH PROJECT

Andalucía ISI2A2: Infraestructura y Servicios de Integración e Inteligencia de Datos en el sector de la Agroalimentación en Andalucía

[Universidad de Málaga](#)

- Code: DGP_PIDI_2024_01174
- Funders: Plan Andaluz de Investigación
- Participation: Working team member
- Principal investigators: José Francisco Aldana Montes, José Manuel García Nieto
- Total amount: 132000 EUR

CLASSES AND
SUPERVISION

180 Classroom hours

4 Academic years

8 Courses

4 Degree programmes

2 Supervisions

1 Teaching innovation projects

CLASSROOM HOURS BY ACADEMIC YEAR

2022/2023	36 h
2023/2024	56.1 h
2024/2025	60 h
2025/2026	27.9 h

CLASSROOM HOURS BY DEGREE PROGRAMME

Grado en Ingeniería de la Salud	90.8 h
Grado en Ingeniería Informática	72 h
Grado en Biología	11.2 h
Grado en Ingeniería del Software	6 h

TEACHING TIMELINE SNAPSHOT

UNIVERSITY CLASS2025-09-09 - 2025-12-19 Análisis y Diseño de Algoritmos Grado en Ingeniería Informática 2025/2026 Lenguajes y Ciencias de la Computación (LCC) 18.0 hours	UNIVERSITY CLASS2025-09-09 - 2025-12-19 Biología de Sistemas Grado en Ingeniería de la Salud 2025/2026 Lenguajes y Ciencias de la Computación (LCC) 9.9 hours
EXTERNAL INTERNSHIP TUTORING2025-10 External extracurricular internship tutoring Grado en Bioquímica External internship tutor 300.0 hours	FINAL DEGREE PROJECT SUPERVISION2025-06 Optimización multi-objetivo para biclustering en datos de expresión génica Grado en Ingeniería de la Salud Co-supervisor Repository
UNIVERSITY CLASS2024-09-10 - 2024-12-20 Análisis y Diseño de Algoritmos Grado en Ingeniería del Software 2024/2025 Lenguajes y Ciencias de la Computación (LCC) 6.0 hours	UNIVERSITY CLASS2024-09-10 - 2024-12-20 Análisis y Diseño de Algoritmos Grado en Ingeniería Informática 2024/2025 Lenguajes y Ciencias de la Computación (LCC) 36.0 hours
UNIVERSITY CLASS2024-09-10 - 2024-12-20 Diseño y Explotación de Almacenes de Datos Grado en Ingeniería Informática 2024/2025 Lenguajes y Ciencias de la Computación (LCC) 18.0 hours	UNIVERSITY CLASS2023-09-12 - 2023-12-22 Estándares de Datos Grado en Ingeniería de la Salud 2023/2024 Lenguajes y Ciencias de la Computación (LCC) 44.9 hours
UNIVERSITY CLASS2023-09-11 - 2023-12-22 Informática Grado en Biología 2023/2024 Lenguajes y Ciencias de la Computación (LCC) 11.2 hours	UNIVERSITY CLASS2023-01-30 - 2023-05-22 Bases de Datos Grado en Ingeniería de la Salud 2022/2023 Lenguajes y Ciencias de la Computación (LCC) 36.0 hours

DISSEMINATION AND MEDIA

TOTAL DISSEMINATION ITEMS 49	ITEMS BY TYPE Scientific articles2 Presentations2 Press items27 Social media items17 TV media items1
BY RESEARCH OUTPUT Deciphering the Influence of Gut Microbiome Disruption on Human Health Through Multi-Algorithm Approaches 5 Press items	Multi-Objective Consensus Optimization for Gene Regulatory Networks Inference: A Preference-Based Approach 1 Scientific articles6 Press items1 Social media items

Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks

1 Scientific articles 1 Presentations
4 Press items 7 Social media items
1 TV media items

Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data

1 Scientific articles 5 Press items
3 Social media items

Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks

1 Scientific articles 1 Presentations
4 Press items 4 Social media items

Exploiting medical-expert knowledge via a novel memetic algorithm for the inference of gene regulatory networks

1 Scientific articles 2 Presentations
1 Social media items

GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks

1 Scientific articles 1 Presentations
3 Press items 1 Social media items

DISSEMINATION ITEMS

PRESS 2026-07-29

Un mapa para leer los virus del intestino
iDescubre

Spanish
Spain

Publications: [Deciphering the Influence of Gut Microbiome Disruption on Human Health Through Multi-Algorithm Approaches](#)

PRESS 2026-07-29

Una inteligencia artificial desarrollada en Málaga analiza los virus del intestino y detecta posibles desequilibrios

La Opinión de Málaga

Spanish
Spain

Publications: [Deciphering the Influence of Gut Microbiome Disruption on Human Health Through Multi-Algorithm Approaches](#)

PRESS 2026-07-29

Desarrollan un "mapa inteligente" para identificar virus asociados a la salud digestiva

20 Minutos

Spanish
Spain

Publications: [Deciphering the Influence of Gut Microbiome Disruption on Human Health Through Multi-Algorithm Approaches](#)

PRESS 2026-07-29

Desarrollan un 'mapa inteligente' para identificar virus asociados a la salud digestiva

Fundación Descubre

Spanish
Spain

Publications: [Deciphering the Influence of Gut Microbiome Disruption on Human Health Through Multi-Algorithm Approaches](#)

PRESS 2026-07-29

Crean el mapa de los virus del estómago que ayuda a detectar desequilibrios en la salud digestiva

Nova Ciencia

Spanish
Spain

Publications: [Deciphering the Influence of Gut Microbiome Disruption on Human Health Through Multi-Algorithm Approaches](#)

PRESS 2026-05-26

PBEvoGen, una nueva metodología que permite al investigador orientar el proceso computacional y reducir el tiempo de cálculo

La Noción

Spanish
Spain

Publications: [Multi-Objective Consensus Optimization for Gene Regulatory Networks Inference: A Preference-Based Approach](#)

PRESS

2026-05-26

La metodología que reduce el tiempo de cálculo en las investigaciones científicas

Nova Ciencia

Spanish

Spain

Publications: [Multi-Objective Consensus Optimization for Gene Regulatory Networks](#)
[Inference: A Preference-Based Approach](#)

PRESS

2026-05-26

'PBEvoGen', una nueva metodología que permite al investigador orientar el proceso computacional y reducir el tiempo de cálculo

Europa Press

Spanish

Spain

Publications: [Multi-Objective Consensus Optimization for Gene Regulatory Networks](#)
[Inference: A Preference-Based Approach](#)

PRESS

2026-05-26

Cómo combinar inteligencia artificial y conocimiento experto para inferir redes genéticas

UMA Divulga

Spanish

Spain

Publications: [Multi-Objective Consensus Optimization for Gene Regulatory Networks](#)
[Inference: A Preference-Based Approach](#)

PRESS

2026-05-26

'PBEvoGen', una nueva metodología que permite al investigador orientar el proceso computacional y reducir el tiempo de cálculo

Universidad de Málaga

Spanish

Spain

Publications: [Multi-Objective Consensus Optimization for Gene Regulatory Networks](#)
[Inference: A Preference-Based Approach](#)

PRESS

2026-05-26

Cómo combinar inteligencia artificial y conocimiento experto para inferir redes genéticas

IBIMA

Spanish

Spain

Publications: [Multi-Objective Consensus Optimization for Gene Regulatory Networks](#)
[Inference: A Preference-Based Approach](#)

ARTICLE

2026-04-13

MOEBA-BIO: An Open and Extensible Framework for Evolutionary Biclustering in Biomedicine

ERICM News

Issue 144

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

Software packages: MOEBA-BIO

INSTAGRAM

2026-03-25

Instagram item

@salud_ahora_, @ibima, @adriansegura.99

9200 views

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

INSTAGRAM

2026-03-19

Instagram item

@adriansegura.99

1500 views

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

TV MEDIA

2026-03-18

Salud Ahora

Canal Málaga

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

ARTICLE

2026-01-30

Context-Guided Evolutionary Algorithms for Consensus Inference of Gene Regulatory Networks

ERCIM News

Issue 143

Publications: [GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks](#), [Exploiting medical-expert knowledge via a novel memetic algorithm for the inference of gene regulatory networks](#), [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#), [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#), [Multi-Objective Consensus Optimization for Gene Regulatory Networks Inference: A Preference-Based Approach](#)

Software packages: GENECI

LINKEDIN

2025-12-19

LinkedIn post announcing the PBEvoGen article in Computational Biology and Chemistry.

adrian-segura-ortiz

LinkedIn post announcing the PBEvoGen article in Computational Biology and Chemistry.

Publications: [Multi-Objective Consensus Optimization for Gene Regulatory Networks Inference: A Preference-Based Approach](#)

PRESS

2025-07-27

Así funciona el sistema inteligente que analiza los genes implicados en la fatiga crónica

Nova Ciencia

Spanish

Spain

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

PRESS

2025-07-27

Un nuevo sistema 'inteligente' analiza los genes implicados en la fatiga crónica

Salud a Diario

Spanish

Spain

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

X

2025-07-26

X post by Sombradoble about BIO-INSIGHT and AI-based gene analysis in fibromyalgia and ME/CFS.

sombradoble

X post by Sombradoble about BIO-INSIGHT and AI-based gene analysis in fibromyalgia and ME/CFS.

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

PRESS

2025-07-25

Inteligencia artificial para dar 'voz genética' a la fibromialgia y a la fatiga crónica

iDescubre

Spanish

Spain

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

PRESS

2025-07-25

Desarrollan un sistema "inteligente" que analiza los genes implicados en enfermedades como la fatiga crónica

Europa Press

Spanish

Spain

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

LINKEDIN

2025-07-25

LinkedIn post about BIO-INSIGHT as an AI-based system for analyzing gene interactions in complex diseases.

Consejería Universidad, Investigación e Innovación

LinkedIn post about BIO-INSIGHT as an AI-based system for analyzing gene interactions in complex diseases.

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

LINKEDIN

2025-07-25

LinkedIn post by Fundación Descubre about BIO-INSIGHT and gene analysis in chronic fatigue-related diseases.

Fundación Descubre

LinkedIn post by Fundación Descubre about BIO-INSIGHT and gene analysis in chronic fatigue-related diseases.

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

INSTAGRAM

2025-07-25

Instagram item

@universidadand, @fundaciondescubre, @adriansegura.99

13400 views

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

LINKEDIN

2025-07-15

LinkedIn post announcing the BIO-INSIGHT article in Computers in Biology and Medicine.

adrian-segura-ortiz

LinkedIn post announcing the BIO-INSIGHT article in Computers in Biology and Medicine.

Publications: [Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

LINKEDIN

2025-07-10

LinkedIn post by ITIS UMA sharing news about MOEBA-BIO as open-source software for biomedical data analysis.

ITIS UMA

LinkedIn post by ITIS UMA sharing news about MOEBA-BIO as open-source software for biomedical data analysis.

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

X

2025-07-10

X post by ITIS UMA sharing the UMA news item about MOEBA-BIO.

itis_uma

X post by ITIS UMA sharing the UMA news item about MOEBA-BIO.

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

PRESS

2025-07-09

La Universidad de Málaga desarrolla un software de código abierto para descubrir estructuras ocultas en datos biomédicos

Europa Press

Spanish

Spain

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

PRESS

2025-07-09

Una herramienta revolucionaria para descubrir estructuras ocultas en datos médicos

Nova Ciencia

Spanish

Spain

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

PRESS

2025-07-09

'MOEBA-BIO', una nueva herramienta desarrollada en la UMA para descubrir estructuras ocultas en datos biomédicos

Cadena SER

Spanish

Spain

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

PRESS

2025-07-09

'MOEBA-BIO', una herramienta para descubrir estructuras ocultas en datos biomédicos

Universidad de Málaga

Spanish

Spain

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

PRESS

2025-07-09

Un investigador de la UMA desarrolla una herramienta para descubrir estructuras ocultas en datos biomédicos

UMA Divulga

Spanish

Spain

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

LINKEDIN

2025-06-03

LinkedIn post announcing the MOEBA-BIO journal article and its collaboration with the University of Lille.

adrian-segura-ortiz

LinkedIn post announcing the MOEBA-BIO journal article and its collaboration with the University of Lille.

Publications: [Exhaustive biclustering driven by self-learning evolutionary approach for biomedical data](#)

REGIONAL CONGRESS PRESENTATION 2025-05-12 - 2025-05-14

Optimización del Consenso de Múltiples Técnicas de Inferencia de Redes de Regulación Génica Desde una Perspectiva Holística Guiada por el Contexto Biológico de los Datos

Jornadas Andaluzas de Bioinformática (JABI 2025)

Málaga, Spain

Adrián Segura Ortiz

Publications: [GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks, Exploiting medical-expert knowledge via a novel memetic algorithm for the inference of gene regulatory networks, Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks, Multifaceted evolution focused on maximal exploitation of domain knowledge for the consensus inference of Gene Regulatory Networks](#)

Software packages: GENECI

X

2024-09-03

X post by ITIS UMA sharing a video about the MO-GENECI algorithm.

itis_uma

X post by ITIS UMA sharing a video about the MO-GENECI algorithm.

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

INSTAGRAM

2024-09-02

Instagram item

@_ibima, @adriansegura.99

5500 views

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

INSTAGRAM

2024-09-02

Instagram item

@nath.biohack, @adriansegura.99

38700 views

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

PRESS

2024-08-29

Desarrollan un algoritmo útil para la comprensión de los procesos celulares implicados en distintas enfermedades

Europa Press

Spanish

Spain

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

PRESS

2024-08-29

Investigadores de Málaga crean un algoritmo para entender los procesos celulares implicados en distintas enfermedades

La Opinión de Málaga

Spanish

Spain

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

PRESS

2024-08-29

Nuevo algoritmo útil para la comprensión de los procesos celulares

Salud a Diario

Spanish

Spain

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

PRESS

2024-08-29

Investigadores de IBIMA Plataforma BIONAND y la UMA desarrollan un algoritmo útil para la comprensión de los procesos celulares implicados en distintas enfermedades

IBIMA

Spanish

Spain

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

LINKEDIN

2024-07-15

LinkedIn post announcing the MO-GENECI article in Computers in Biology and Medicine.

adrian-segura-ortiz

LinkedIn post announcing the MO-GENECI article in Computers in Biology and Medicine.

Publications: [Multi-objective context-guided consensus of a massive array of techniques for the inference of Gene Regulatory Networks](#)

LINKEDIN

2024-07-03

LinkedIn post announcing the ICCS 2024 paper on a memetic algorithm for gene regulatory network inference.

adrian-segura-ortiz

LinkedIn post announcing the ICCS 2024 paper on a memetic algorithm for gene regulatory network inference.

Publications: [Exploiting medical-expert knowledge via a novel memetic algorithm for the inference of gene regulatory networks](#)

CONFERENCE
PRESENTATION

2024-07-02 - 2024-07-04

Exploiting medical-expert knowledge via a novel memetic algorithm for the inference of gene regulatory networks

International Conference on Computational Science (ICCS 2024)

Málaga, Andalucía, Spain

Adrián Segura Ortiz, José Manuel García Nieto, José Francisco Aldana Montes

Publications: [Exploiting medical-expert knowledge via a novel memetic algorithm for the inference of gene regulatory networks](#)

Software packages: GENECl

PRESS

2023-08-21

Investigadores del IBIMA emplean una nueva estrategia para comprender cómo interactúan los genes

ConSalud

Spanish

Spain

Publications: [GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks](#)

PRESS

2023-08-19

Investigadores del IBIMA Plataforma Bionand avanzan en la comprensión de la enfermedad a nivel molecular

Europa Press

Spanish

Spain

Publications: [GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks](#)

PRESS

2023-08-19

Investigadores del IBIMA Plataforma Bionand avanzan en la comprensión de la enfermedad a nivel molecular

Diario Sur

Spanish

Spain

Publications: [GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks](#)

LINKEDIN

2023-02-15

LinkedIn post announcing the GENECl article in Computers in Biology and Medicine.

adrian-segura-ortiz

LinkedIn post announcing the GENECl article in Computers in Biology and Medicine.

Publications: [GENECI: A novel evolutionary machine learning consensus-based approach for the inference of gene regulatory networks](#)

ORGANIZATIONS

19 Linked organizations 5 Countries 7 Cities

France

LILLE

UNIVERSITY

Lille

UNIVERSITÉ DE LILLE

ULille

4 Research Stays0.5 Publications

RESEARCH LABORATORY

Lille

CRISTAL

Centre de Recherche en Informatique, Signal et Automatique de Lille

ULille > CRISTAL

4 Research Stays0.25 Publications

RESEARCH TEAM

Lille

ORKAD

Operational Research, Knowledge And Data

ULille > CRISTAL > ORKAD

4 Research Stays0.25 Publications

RESEARCH UNIT

Lille

INFINITE

Institute for Translational Research in Inflammation

ULille > INFINITE

0.25 Publications

Greece

MAROUSI

RESEARCH CENTER

Marousi

ATHENA RESEARCH CENTER

Athena Research and Innovation Center in Information, Communication and Knowledge Technologies

Athena RC

3 Research Stays

THERMI

RESEARCH CENTER

Thermi

CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS

CERTH

1 Research Stays

RESEARCH INSTITUTE

Thermi

INAB|CERTH

Institute of Applied Biosciences

CERTH > INAB

1 Research Stays

Japan

TOYONAKA

UNIVERSITY

Toyonaka

THE UNIVERSITY OF OSAKA

UOsaka

2 Research Stays

GRADUATE SCHOOL

Toyonaka

GRADUATE SCHOOL OF ENGINEERING SCIENCE

School / Graduate School of Engineering Science

UOsaka > GSES

2 Research Stays

RESEARCH GROUP

Toyonaka

KIYONO LAB

Kiyono Laboratory, Biophysics and Data Science Group

UOsaka > GSES > Kiyono Lab

2 Research Stays

Spain

MÁLAGA

RESEARCH INSTITUTE

Málaga

INSTITUTO DE INGENIERÍA OCEÁNICA

IIO

0.25 Publications

VALENCIA

UNIVERSITY

Valencia

UNIVERSIDAD CATÓLICA DE VALENCIA

SAN VICENTE MÁRTIR

UCV

0.33 Publications

UNIVERSITY

Málaga

UNIVERSIDAD DE MÁLAGA

UMA

95 Education

116 Experience

5.67 Publications

35 Teaching

BIOMEDICAL RESEARCH CENTER

Málaga

CIMES

Centro de Investigaciones Médico-Sanitarias

UMA > CIMES

4 Experience

LABORATORY

Málaga

LABORATORIO DE BIOLOGÍA MOLECULAR DEL CÁNCER

UMA > CIMES > LBMC

4 Experience

HEALTH RESEARCH INSTITUTE

Málaga

IBIMA PLATAFORMA BIONAND

Instituto de Investigación Biomédica de Málaga y Plataforma en Nanomedicina

UMA > IBIMA

2.83 Publications

RESEARCH INSTITUTE

Málaga

ITIS

Instituto de Tecnología e Ingeniería del Software "José María Troya Linero"

UMA > ITIS

65 Experience

2.83 Publications

RESEARCH GROUP

Málaga

KHAOS RESEARCH

Khaos Research Group

UMA > ITIS > Khaos Research

65 Experience

2.83 Publications

Ukraine

KYIV

UNIVERSITY

Kyiv

NATIONAL TECHNICAL UNIVERSITY OF
UKRAINE "IGOR SIKORSKY KYIV
POLYTECHNIC INSTITUTE"

KPI

0.25 Publications