JOSÉ LAÇO

Bioinformatics Researcher | Microbial Genomics & Data Science | PhD in Microbiology

✉ jose.laco96@gmail.com   🔗 Personal Webpage   GitHub

EDUCATION

University of the Balearic Islands, Spain 🇪🇸
PhD in Environmental and Biomedical Microbiology
Jan 2022 – Mar 2025
- Marie Skłodowska-Curie Fellow – PEST-BIN Program ↗
- **Final Grade:** Summa cum laude (Excel·lent cum laude)

University of Gothenburg & Nanoxis Consulting AB, Sweden 🇸🇪
Visiting researcher - PhD Secondment
Sep 2022 – Jan 2023

University of Coimbra, Portugal 🇵🇹
MSc in Biochemistry
Sep 2018 – Jul 2020

University of Évora, Portugal 🇵🇹
BSc in Biology
Sep 2015 – Jul 2018

AWARDS & ACHIEVEMENTS

- **Summa cum laude**, PhD dissertation, University of the Balearic Islands, 2025
- **Best Oral Presentation**, XX TAXON, Microbiology Society / IJSEM, Salamanca, Spain, 2024
- **Marie Skłodowska-Curie Fellowship**, EU Horizon 2020, 2022–2025

SKILLS AND TOOLS

Programming Languages: Python, R, SQL, Bash see GitHub ↗

Technical skills: DNA extraction, MALDI-TOF MS, PCR, Proteomics, Antibiotic Susceptibility Testing

Languages: Portuguese, English and Spanish

RESEARCH/WORK EXPERIENCE

Early Stage Researcher
University of the Balearic Islands, Spain
Jan 2022 – Mar 2025
- Conducted a comprehensive study characterizing culturable microbiota in hospital sink drains, with further studies on groups of interest (*Pseudomonas, Stenotrophomonas* and *Klebsiella*) using a combination of Whole Genome Sequencing (WGS) and Proteomics.
- Developed computational workflows for bacterial diversity analysis, genome-based taxonomy, antibiotic resistance gene detection and proteomic analysis.
- Mentored one BSc and one MSc student and presented two seminars to master students.

Visiting Researcher
University of Gothenburg & Nanoxis Consulting AB, Sweden
Sep 2022 – Jan 2023
- Learned and applied advanced proteomics techniques and data analysis of both genomics and proteomics data.
- Contributed to ongoing projects to detect potential biomarkers in blood and urine samples.

Junior Outsystems Developer
ITUp, Portugal
Jun 2021 – Dec 2021
- Learned web development fundamentals and worked on the Outsystems low-code platform.
- Designed features such as a notification system and API integration for a company's internal website.

OUTREACH ACTIVITIES & CONFERENCES

Unveiling the Hidden Diversity of the *Stenotrophomonas* Genus Through Phylogenomic Analysis *Sep 2024*
Oral Presentation - XX TAXON, Salamanca, Spain

Improved Identification of *Pseudomonas putida* Group Species and Detection of Antibiotic Resistance Genes Using Proteotyping *Sep 2024*
Poster Presentation - 19th International Biennial Pseudomonas Conference, Copenhagen, Denmark

Bacterial Diversity in Clinical Environments as Potential Reservoirs of Nosocomial Infections *Jun 2023*
Oral Presentation, XXIX Congress of the Spanish Microbiology Society, Burgos, Spain

Small World Initiative *2023*
Mallorca, Spain

- Promoting education and awareness of the antibiotic resistance problem to high school students.
- Contributed to organizing a stand in a science fair (Ciència per a tothom).

European Researchers' Night - Låna en forskare (Borrow a researcher) *Sep 2022*
Gothenburg, Sweden

- Gave a short educational presentation to local high school students.

PUBLICATIONS

Yearlong Analysis of Bacterial Diversity in Hospital Sink Drains: Culturomics, Antibiotic Resistance, and Implications for Infection Control. 2025
Laço, J, Martorell, S., Gallegos M. C. & Gomila, M.
Frontiers in Microbiology. doi: 10.3389/fmicb.2024.1501170 ↗

CTX-M-producing Bacteria Isolated from a Highly Polluted River System in Portugal. 2022
Tacão M., ***Laço, J***, Teixeira P. & Henriques I.
International Journal of Environmental Research and Public Health. doi: 10.3390/ijerph191911858 ↗