

David Moyano Palazuelo

PhD | Computational Biology & Bioinformatics

Passionate about science, technology & solving complex problems with code

✉ moyanopalazuelo@gmail.com
📞 0000-0002-5400-3659

🌐 /d-moyano-palazuelo
👤 dmoypal

🌐 dmoypal.github.io
🐦 moyanopalazuelo

Computational biologist with expertise in **essential gene analysis** and **evolutionary bioinformatics**. Author of high-impact publications and creator of innovative web resources for the scientific community. Proven track record in international research collaborations and algorithm development.

📄 publications/

- [1] Rivas-Marin E.[#], **Moyano-Palazuelo D.[#]**, et al. (2023). Essential gene complement of *P. limnophila*. **Nature Communications** 14, 7224
- [2] Henriques V., **Moyano-Palazuelo D.**, et al. (2025). *Verrucomicrobium spinosum* essential genome and the divergence of cell division in the PVC superphylum. **iScience** 28(8), 113037

Both authors contributed equally

🔬 research_experience/

- 2025–2026 **Postdoctoral Researcher**
CABD, Sevilla - UNAM, México
Conducting independent research in computational biology and bacterial genomics. Developing bioinformatics tools and databases for the scientific community.
- Jun–Sep 2024 **Visiting Researcher – MobLilex Program**
Institute Pasteur de Lille, France
International collaboration on bacterial genomics within the European research framework.
- 2022–2023 **Research Fellow – REFRACT Project**
UNAM, México
Developed ultrafast tandem repeat detection algorithm for large-scale genomic analysis.
- 2022–2025 **Predoctoral Researcher**
CABD, Sevilla
Leading research on PVC gene evolution and essential gene complement analysis.

🏆 awards_and_grants/

- [2024] MobLilex Doctoral Fellowship – Institut Pasteur de Lille, France
- [2022–2023] REFRACT Project Fellowship – MSCA RISE European Project, UNAM, México
- [2022–2026] Predoctoral Contract – Junta de Andalucía Fellowship, CABD, Sevilla
- [2021–2022] CSIC JAE Intro Fellowship – Research Training Program, CABD, Sevilla
- [2019] Research Initiation Grant – Universidad Pablo de Olavide, CABD, Sevilla

👥 conferences/

- [2024] VI PVC Meeting – Lille, France | Oral: "Orthologous groups in the superphylum PVC"
- [2023] Workshop "Computational Methods for Tandem Repeat Proteins" – Montpellier, France | Oral: "T-REx algorithm for tandem repeat detection"
- [2023] ISMB/ECCB 2023 – Lyon, France | Poster: "T-REx. A Tandem Repeat Explorer algorithm"
- [2023] 19th ISCB Student Council Symposium – Lyon, France
- [2022] REFRACT Hackathon – Padova, Italy | Code session
- [2022] V PVC Meeting – Bergen, Norway | Oral: "Essential gene complement of *P. limnophila*"

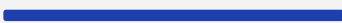


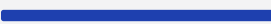









</> key_projects/

Current	PVC_Database/ biocomputo.ibt.unam.mx:8083 Comprehensive web platform for exploring Planctomycetota-Verrucomicrobiota-Chlamydiota superphylum data. Stack: Python, JavaScript, Web Dev
2023	TraDIS_P.limnophila/ GitHub: dmoypal/TraDIS_in_P.limnophila Automated pipeline for processing transposon insertion sequencing data and predicting essential genes. Languages: Python, R
2024	TraDIS_V.spinosum/ GitHub: dmoypal/TraDIS_in_V.spinosum Complete analytical workflow for essential gene prediction using TraDis methodology. Languages: Python, R

🎓 education/

2021–2025	PhD in Microbiology & Bioinformatics Universidad Pablo de Olavide Thesis: "Analysis of the evolutionary history of PVC genes"
2019–2021	Master's in Biomedical Engineering Universidad de Sevilla Digital Health specialization
2015–2019	Bachelor's in Biotechnology Universidad Pablo de Olavide Graduated with honors

</> tech_stack/

Programming Languages			
 Python		Proficient	
 R		Advanced	
 JavaScript		Intermediate	
 Bash		Advanced	
Bioinformatics & Analysis			
 Phylogenetics		Proficient	
 Omics		Proficient	
 Comparative Genomics		Advanced	
 Essential Gene Analysis		Proficient	
Development & Infrastructure			
 Git/GitHub		Advanced	
 Docker		Intermediate	
 HPC/SLURM		Advanced	
 Web APIs		Intermediate	
Databases & Resources			
NCBI Suite			AlphaFold DB
UniProt			KEGG

🌐 languages

 Spanish Native	 English Professional (B2+)
---	---