

ANDRÉS ARREDONDO CRUZ

Bachelor's degree in Agrogenomic Sciences. Experience in molecular biology techniques, field collection, microbiology and plant physiology. Experience in bioinformatics analysis, statistical analysis and databases.



EDUCATION

06/2024
|
06/2019

Bachelor's Degree in Agrogenomic Sciences

ENES León, UNAM

📍 Leon, Guanajuato

- Thesis titled "Study of Specialized Metabolism in Metagenomes of Hydrocarbon-Contaminated Oceans", [UNAM Repository, 2024](#).
- Service and internship at the Interdisciplinary Research Laboratory [LII](#) under ISO 9001 2015 standard.
- Professional license [14665861](#).



RESEARCH EXPERIENCE

Present
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02/2025

Research Stay

Center for Genomic Sciences, UNAM

📍 Cuernavaca, Morelos

- Research on signaling metabolites of nitrogen-fixing bacteria in beans for bio-input prospecting.
- Search for metabolite-regulatory entity interactions in bacteria.

01/2025
|
01/2024

Professional Internship

C3

📍 Virtual

- App development for the [Museum of Mathematics](#) on statistical measures of biological diversity.
- Content reviewer for online platforms.

06/2024
|
09/2023

Research Stay

Bioinformatics Laboratory Center for Mathematical Sciences UNAM

📍 Morelia, Michoacan

- Processing of environmental biological samples for the search of degradation genes and metabolite production.
- Tutoring students on bioinformatics tools and server usage.

05/2023
|
05/2022

Environmental Sample Analyst

BetterLab

📍 Agrobiotec Innovation Park

- Processing of raw data from environmental biological samples and implementation of software for metagenomic data.
- DNA extraction and PCR workshops

CONTACT

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🌐 [Website](#)
/github/ [Github](#)
/linkedin/ [linkedin](#)
📞 (+52) 4561140908

SKILLS

Experimental

Molecular Biology, Microbiology and Plant Physiology techniques under ISO 9001:2015 standard

Computational

Statistical analysis, Advanced programming in R and Python, Database management, Neural network training, Scripting

Proficiency: R, Python, Bash

Familiarity: Perl, css, HTML, SQL

Languages

English - B2 (TOEFL iBT 80 pts)

Spanish - Native

INTERESTS

Agriculture - Omics - Plant Sciences
Genome mining - Microbiome - R development - Functional regulation

05/2023
|
05/2023

Research Stay

Institute of Marine Sciences and Limnology

📍 CDMX, México

- Development of an R package for genome mining.

ARTICLES

01/2025

MIBiG 4.0: advancing biosynthetic gene cluster curation through global collaboration

Bioinformatics Laboratory CCM

📍 Morelia, Michoacán

- Curation of the MIBiG 4.0 natural products database. [Google scholar](#).

TALKS AND POSTERS

Current
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04/2025

Symposium: Molecular Study of Plant-Microorganism Interaction

Poster

📍 Cuernavaca, Morelos

- Identification of signaling metabolites in the symbiotic interaction between *Rhizobium phaseoli* and *Phaseolus vulgaris*

06/2023

Annual Bioconductor Conference

Poster

📍 Virtual

- MetaEvoMining: a tool for exploring new biosynthetic pathways applied to metagenomic data from a contaminated ocean.

2023

MetaEvoMining: a tool for the exploration of unknown enzymes in metagenomic data

Teaching assistant and invited speaker

📍 Virtual

- Intersemester Course “Metagenome Analysis” at ICMyL

11/2022

ISCB International Conference on Bioinformatics

Poster

📍 Queretaro, México

- “Study of Specialized Metabolism in Metagenomes of Hydrocarbon-Contaminated Oceans”.

Present
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2024

Volunteer at ISCB Student Council. RSG Mexico

International Society for Computational Biology

📍 Virtual

- Planned monthly academic events (journal clubs), coordinated speakers, and handled communication.
- Networking Committee of the second symposium [SEH2-Bioinfo](#).
- Maintenance of the [RSG Mexico](#) website.

VOLUNTEERING

🏆 AWARDS

6/2024 • **First Place in Wikipedia Contest**
ISMB-ISCB Montreal 2024 📍 Virtual
• For the creation of the article "Genome Mining".

07/2023 • **CAMDA 2023 Hackathon**
Poster 📍 Morelia, Michoacán
• Participated as a member of the winning team in the Antimicrobial Resistance Prediction and Forensics challenge at the [CAMDA-ISCB 2023](#).

11/2022 • **Second Place in Wikipedia Edit-a-thon**
ISCB-LA SolBio BioNetMX 2022 📍 Queretaro, México
• For the article "Amplicon Sequence Variant".

🎓 WORKSHOPS ATTENDED

8/2025 | 08/27/2025 • **Fundamentals of Deep Learning**
IBT UNAM 📍 Cuernavaca, Morelos
• Fundamentals of deep learning, taught by NVIDIA Deep Learning Institute.

1/2025 | 01/20/2025 • **Workshop on Scientific Programming and Biological Data Analysis**
Center for Mathematical Sciences 📍 Morelia, Michoacán
• Update workshop on Git, Illustrator, Python for data analysis.
• Lesson on web design HTML, css, javascript, node.js.

11/2022 • **Pangenomics Workshop**
Center for Mathematical Sciences 📍 Morelia, Michoacán

9/2022 • **First Latin American Workshop on Genome Mining of Natural Products**
CIMAT 📍 Guanajuato, México

6/2022 • **Advanced Metagenome Analysis "Creating Your Analysis Workflows with R/Bioconductor"**
Community of Software Developers in Bioinformatics 📍 Virtual

10/2021 • **Metagenomics Workshop**
Betterlab 📍 León, Guanajuato

WORKSHOPS TAUGHT

- 11/2024 • **“Navigation Commands and How to Access a Server”**
Talk for RSG Mexico Bash course 📍 Virtual

 - Course for beginners in the use of bash commands taught by the student council of ISCB Mexico region.
- 8/2024 • **Second Latin American Workshop on Genome Mining of Natural Products**
CIMAT 📍 Guanajuato, México

 - Lesson reviewer and teaching assistant.
- 08/2024 • **“Introduction to genome mining”**
Bioinformatics Laboratory CCM 📍 The Carpentries

 - Writing of the chapter for the lesson “Genome Mining in Prokaryotes”.
 - Lesson review and maintenance.
- 08/2023 • **“R Package Documentation with roxygen2”**
Workshop 📍 CDSB 2023

 - Workshop on “Creating R/Bioconductor Packages for Single-Cell Transcriptomic Analysis”.
 - Development of chapter 13 of the workshop book.
- 01/2023 • **“Programming Languages: bash, R and Python”**
Department of Continuing Education General Coordination of Graduate Studies UNAM 📍 Virtual

 - Intersemester course “Introduction to Bioinformatics”.
 - Teaching assistant and invited speaker.
- 11/2022 • **“Clustering Protein Sequences”**
Bioinformatics Laboratory CCM 📍 The Carpentries

 - Writing of the chapter for The Carpentries lesson “Pangenome Analysis in Prokaryotes”.

Made with the R package [pagedown](#).

The source code is available at [aarredondoc/CV](#)
and is powered by [nstrayer/cv](#).

Last updated on 2025-12-07.