

Miriam Sarahi Lozano Gamboa

CONTACT INFORMATION	Health Institute of the State of Ags Aguascalientes, México	Phone: +524491567736 E-mail: misaloga16@gmail.com Google Scholar: Access here Webpage: miriamsarahilozanogamboa.github.io
EDUCATION	Potosino Institute of Scientific and Technological Research (IPICyT), San Luis Potosi, SLP, México	
	M.S., Molecular biology, December 2020	
	<ul style="list-style-type: none">• Thesis: <i>Diterpenes derived from Jatropha dioica modulate multidrug resistance in cell lines of human breast carcinoma</i>• Advisor: Dr. Elihú Bautista• Area of Study: <i>Molecular biology, Cancer Research</i>	
	Autonomous University of Aguascalientes (UAA), Aguascalientes, AGS, México	
	B.S., Biotechnology, December 2018	
	<ul style="list-style-type: none">• Thesis: <i>Micropropagation and determination of total phenolic compounds in Echinocactus spp</i>• Major: <i>Genetics, and Biotechnology</i>• Advisor: Dr. Yenny Adriana Gómez Aguirre	
WORK EXPERIENCE	Specialist in Molecular Diagnostics and Epidemiology, Health Institute of the State of Aguascalientes 2020 to present	
	Molecular biology department	
	<ul style="list-style-type: none">• Molecular diagnostics and epidemiological research using PCR and NGS.	
	Microbiology Technician , Health Institute of the State of Ags	2019 to 2020
	Department of Microbiology	
	<ul style="list-style-type: none">• Managed bacterial cultures, antibiograms, and biosafety.	
	Research Assistant , Autonomous University of Ags (UAA)	2015 to 2018
	Department of Plant Biotechnology	
	<ul style="list-style-type: none">• Skilled in in-vitro propagation	
AWARDS AND FELLOWSHIPS	<u>GRANTS</u>	
	<ul style="list-style-type: none">• Scholarship for master's degree research stay . PI: Dr Rogelio Pereda-Miranda . Project: Regulation of chemotherapy resistance in human cell lines.• CONACYT State Scholarship for Master's Degree. Fully Funded.• CONACYT Scholarship for Undergraduate Research Project. PI: Dr. Yenny Adriana Gómez Aguirre . Project: Application of Biotechnological Methods for the Propagation and Rational Use of Plants Adapted to Low Water Availability.	

- (I-MMAS), Project funded by Illinois Mexican & Mexican-American Students Initiative . PI: **Dr. Corina-Diana Ceapă** Project: Genomic library for antibiotic-resistant bacteria isolated in Mexico

EXTERNAL AWARDS

- 2024 **Summer scholarship abroad (Germany)** by Vive México and the Erasmus+ program of the European Union
- 2024 **SMBE Assistance** by INTERMET S.A. DE C.V.

TEACHING EXPERIENCE **Molecular Biology Teacher, Cuauhtémoc University , Aguascalientes** 2022-to present
 Molecular Biology

MENTORING SUPERVISION Mentoring an undergraduate student in the thesis project: Genetic variants in *Escherichia coli* isolated in hospitals in central Mexico.

MANUSCRIPTS IN PREPARATION, drafts available on request 1.1 **Lozano Gamboa, M. S.**, Hernández Magro Gil, K. G., Muñoz Gomez, B., Palacios Marmolejo, A., & Ceapă, C. D. (2024). Multi And Pan-Drug-Resistant *Klebsiella Spp.* And *Escherichia Coli* Isolated From Central Mexico Between 2020 And 2023, A Genetic Analysis.

1.2 Alejo, M. A., Hernández Magro Gil, K. G., Villavicencio, P., Muñoz Gomez, B., **Lozano Gamboa, M. S.**, Palacios Marmolejo, A., Figueroa, M., García-Contreras, R., & Ceapă, C. D. Resistome Exploration Of Post-Covid Multi-Drug Resistant *Acinetobacter Baumannii* Isolated From Mexico.

1.3 Ceapă, C. D, **Lozano Gamboa, M. S.**, Hernández Magro Gil, K. G., Muñoz Gomez, B. & Palacios Marmolejo, A., Comparative Genomics of *Pseudomonas aeruginosa* Isolates From Mexico.

PUBLICATIONS IN PEER-REVIEW 2.1 Elihú Bautista, **Sarahí Lozano-Gamboa**, Mabel Fragoso-Serrano, José Rivera-Chávez, Luis A. Salazar-Olivo, Jatrophenediol, a pseudoguaiane sesquiterpenoid from *Jatropha dioica* rhizomes, Tetrahedron Letters, 2022, 154040, ISSN 0040-4039, <https://doi.org/10.1016/j.tetlet.2022.154040>.

2.2 Muñoz Gomez, B., **Lozano Gamboa, M. S.**, Ceapa, C. D., & Palacios Marmolejo, A. (2024). Mortality Associated Sars-Cov2 Genomic Variants From Patients Hospitalized For Severe Pneumonia In Aguascalientes, Mexico From 2020 To 2023. Biorxiv, 2024.03.05.583594. DOI: <https://doi.org/10.1101/2024.03.05.583594>. Under revision at The molecular phylogenetics and evolution journal.

OTHER PUBLICATIONS 3.1 **Lozano Gamboa, M. S.** (2024). Terpenes of Plant Origin and Their Modulating Activity on Multidrug Resistance in Human Breast Cancer Cell Lines: A Review Article. *Zenodo*. DOI: [10.5281/zenodo.11513941](https://doi.org/10.5281/zenodo.11513941).

CONFERENCE
TALKS AND
POSTERS

- 4.1 **Lozano Gamboa, M. S.**, Hernández Magro Gil, K. G., Muñoz Gomez, B., Palacios Marmolejo, A., & Ceapă, C. D. (2024) Genomic Insights into the Evolutionary Trajectory of Antibiotic Resistance in *Klebsiella* spp. and *Escherichia coli*: A Study from Central Mexico (2020-2023) . SMBE Society for Molecular Biology and Evolution International Annual Meeting, Jalisco, Mexico. ([Watch poster here](#)).
- 4.2 **Lozano Gamboa, M. S.**, Muñoz Gomez, B., Ceapa, C. D., & Palacios Marmolejo, A. (2024). Mortality Associated Sars-Cov2 Genomic Variants. XLVIII National Congress of Infectology and Clinical Microbiology , Puebla, Mexico. ([Watch poster here](#)).
- 4.3 **Lozano Gamboa, M. S.**, Pérez Molphe Balch E. M., Gómez Aguirre. Y. A. Micropropagation and determination of total phenolic compounds in *Echinocactus spp* (2017) 34th IOS Congress, Querétaro, Mexico .

ADDITIONAL
SKILLS AND
COURSES

Relevant Courses

Bioinformatics and Computational Analysis:

- Data Science with R and RStudio (Udemy, 2024)
- Machine Learning and Data Science: Complete Course with Python (Udemy, 2023)
- LINUX and PYTHON in Bioinformatics (Pharmaceutical and Biotechnological Innovation-Services SAS de CV, 2022)

Technical Skills:

- Update on Nucleic Acid Extraction, qPCR Design, and Standardization (ITRASIG, 2023)

Cancer and Molecular Biology:

- Epigenetic Control of Gene Expression, The University of Melbourne (Coursera, 2024)
- Cancer Biology Specialization, Johns Hopkins University (Coursera, 2024)
- Molecular Immunology (Autonomous University of Aguascalientes UAA, 2023)

Data Analysis and Research:

- Excel for Intermediate and Advanced Students (Cuauhtémoc University, 2023)
- Scientific Writing (UNAM, 2023)

Technical Skills:

- **PCR Techniques:** Experienced on PCR design, and standardization
- **Next-Generation Sequencing:** Expertise in Illumina platforms, including Covid-seq, RPIP, DNA Prep, RNA Prep with Enrichment, TruSeq RNA, and 16S Metagenomic Sequencing
- **Cell Culture and Western Blotting:** Skilled in cell culture techniques and Western blotting

LANGUAGES	<ul style="list-style-type: none"> • Spanish (native) • English (TOEFL IBT score 96 2023)
MEDIA	For more details please visit: https://miriamsarahilozanogamboa.github.io/mmsarahilzgamboa/
REFERENCES	<ul style="list-style-type: none"> • Dr. Francisco Elihú Bautista Redonda, <i>Molecular Biology Division IPICYT</i> , Email: francisco.bautista@ipicyt.edu.mx ; Phone: (444) 834 20 00; Relationship: Mentor and Major Advisor in MS. • Dr. Mabel Clara Fragoso Serrano , <i>Institute of Chemistry UNAM</i> , Email: mabel-fragoso@unam.mx ; Phone: 5622-5288; Relationship: Mentor and Major Advisor in MS research stay. • Dr. Corina-Diana Ceapă, <i>Institute of Chemistry UNAM</i>, Email: corina.ceapa@iquimica.unam.mx ; Phone: : +525549070766 ; Relationship: Research collaborator .