

SEBASTIAN CORREA-GALLEGO

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Research Interests

Evolution and ecology are not subfields of biology — they are its organizing logic, present from the emergence of cellular complexity to the structure of communities in extreme environments. My research interests sit at this intersection: I am drawn to microbial systems as tractable windows into how life assembles, persists, and transforms under ecological and energetic constraint. This includes questions about community organization along environmental gradients, the physiological and molecular strategies — including cellular resource allocation — that underlie ecological success, and the eco-evolutionary dynamics that connect cellular function to community-level patterns. I am also interested in the quantitative and computational frameworks that make these questions formally tractable, and in connecting field-based inquiry with analytical rigor across biological scales.

Education

Universidad EAFIT, B.Sc. in Biology 2022–2026
GPA: 4.44 / 5.00

Research Experience

Visiting Student Intern *Aug 2025–Jan 2026*
ECISO Lab, Department of Biological Sciences, Purdue University

- Studied proteome allocation strategies in osmotrophic yeasts under carbon limitation.

Undergraduate Thesis Researcher 2024–2026
Universidad EAFIT, Advisor: Prof. Nicolás Pinel Peláez, Ph.D.

Thesis: *Cultivable Microbial Community Structure Along a Light Gradient in a Tropical Volcaniclastic Cave*

- Used cultivable approaches to characterize microbial community structure across a light-defined environmental gradient.

Academic Service

Student Director, Research Group on Microbiology and Astrobiology (SIAB) *Oct 2023–May 2025*
Universidad EAFIT, affiliated with the Research Group on Geosciences and Biodiversity (GEBI)

Conferences and Presentations

Research Proposal Presentation 2024
2nd Symposium of Biology, Universidad EAFIT. Awarded Second Place.

Oral Presentation 2024
XXIII Encuentro Departamental de Semilleros de Investigación, RedCOLSI, Antioquia, Colombia

Honors and Recognition

Fully Funded Visiting Internship, Fundación Fraternidad Medellín — UREP-C Program 2025

Undergraduate Scholarship, Comfama and Fundación Fraternidad Medellín 2022

References

Nicolás Pinel Peláez, Ph.D.

Professor, Natural Systems and Sustainability

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Valeska Villegas-Escobar, Ph.D.

Professor, Fundamental Sciences

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