Karla Montserrat Cuéllar Pérez

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EDUCATION

Ph.D. in Complex Biosystems (Integrative Plant Biology)
University of Nebraska-Lincoln, USA | August 2025 – May 2030
Mentor: Dr. James C. Schnable

Bachelor's Degree in Experimental Biology
University of Guanajuato, México | January 2021 – December 2024

High School Diploma
Universidad De La Salle Bajío, México | 2017 – 2020

RESEARCH EXPERIENCE

Professional Internship – Schnable Lab
University of Nebraska-Lincoln, USA | Jul 2024 – Dec 2024

- Comparative analysis of eQTLs regulating orthologous genes in maize and sorghum.
- Gained practical experience with high-throughput genomics and R/Python bioinformatics workflows.

Scientific Summer Internship – Science Clubs Mexico
Guanajuato, México | Jun 2023 – Jul 2023

- Participated in "AI-Powered Drug Discovery" program.
- Applied molecular docking using Python, Google Colab, and databases like DrugBank and ZINC.

Research Project – Origin of Life Studies
University of Guanajuato, México | Jun 2023 – Jul 2023

- Investigated biomorphs as early molecular scaffolds relevant to prebiotic chemistry.

Summer Exchange – Schnable Lab
University of Nebraska-Lincoln, USA | Jul 2023

- Collaborated on RNA-seq gene expression analysis in maize.

Research Assistant – Héctor Mora Medical Mycology Lab
University of Guanajuato, México | Jan 2023 – Jun 2023

- Assisted in PCR, electrophoresis, and fungal virulence assays.

COURSES & CERTIFICATES

Bioinformatics Course – BioAdviser

- Introduction to genetic engineering and protein analysis.

Recombinant Protein Course – BioAdviser

- Focused on protein design, purification, and bioengineering workflows.

Bioinformatics Competence Certificate – Tecnolochicas-Bedu Program

- Awarded for completion of foundational bioinformatics training.

HONORS & AWARDS

- Othmer Fellowship, University of Nebraska–Lincoln (2025)

SKILLS

- **Programming:** Python, R, Bash, Google Colab
- **Bioinformatics Tools:** RNA-seq, SNP analysis, molecular docking
- **Software:** Microsoft Office Suite (Excel, Word, PowerPoint)
- **Languages:** Spanish (C2), English (C1), French (A2)
- **Soft Skills:** Teamwork, adaptability, scientific communication

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PUBLICATIONS

Cuéllar Pérez, K.M. (2023). "The role of minerals in the origin of life on Earth." *Jóvenes en la Ciencia*.

- Discussed the capacity of biomorphs to preserve early biomolecules, with implications for origins-of-life research.

REFERENCES

Dr. James C. Schnable
Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln
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Dr. J. Vladimir Torres-Rodríguez
Research Assistant Professor, University of Nebraska-Lincoln
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Dr. Mayra Cuellar-Cruz
Researcher, Department of Biology, University of Guanajuato
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Lucas Mateo Waldburger
Ph.D. Student, University of California, Berkeley
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