

# CINTHYA SARAVIA HEYMAN

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## EDUCATION

**University of Houston**, Houston, TX

- B.S. Biochemical and Biophysical Sciences

**The Jackson Laboratory**, Bar Harbor, ME

- Undergraduate cancer genomic course

**Lone Star College**, Spring, TX

- A.S. Chemistry

## RESEARCH EXPERIENCE

**Undergraduate Researcher with Dr. Bernhard Rappenglueck**

**2023 – Present**

- Literature search over Kinetic Isotope Effect (KIE) of carbon in biotic and abiotic systems; emission sources of CO<sub>2</sub> and CH<sub>4</sub>; metabolism processes, in C3-, C4-, and CAM plants and other biological environments; significance of CO<sub>2</sub> and CH<sub>4</sub> for climate change.
- Characterization of biogenic and anthropogenic CO<sub>2</sub> emission sources in Houston based on C isotopes.
- Characterization of biogenic and anthropogenic CH<sub>4</sub> emission sources in Houston based on C isotopes.

**Undergraduate Researcher with Dr. Sean-Patrick Scott**

**2022 – Present**

- Used data entry, database, and word processing programs to track behavior and relationships of genes.
- Evaluated analytical methods and procedures to decide the need for result improvements.
- Extracted and entered relevant scientific data and information into computational programs such as CiiDER.
- Manipulated raw data to enhance interpretation and correlation of the genes in the epithelial cell line MCF10a and will be compared to the MCF7 cancerous cell line, after studying its development and metastatic progression.

## SKILLS AND TECHNIQUES

- Characterize measurements of isotopic  $\delta^{13}\text{C}$  in CH<sub>4</sub> and CO<sub>2</sub> using PICARRO G2201-i.
- Proficient in statistical analysis in R-studio.
- Proficient in Ciiider, Panther, GO Enrichment Analysis and GSEA.
- Cloning by PCR.
- Protein purification.
- CRISPR-Cas9 Applications.
- Statistical analysis of microarray data.

- Fluorescence microscopy.
- Fluent in English, Spanish (conversation, writing and reading) and Portuguese (basic).

## LEADERSHIP EXPERIENCE

**Student mentor and tutor grade 9-11**

**2023 – Present**

- Evaluate students' level of comprehension and adapt to their learning style.
- Catered to their needs and produced differences examples to master their comprehension on subjects such as English, algebra I, II, geometry, chemistry, biology, and physics.
- Meet in-person or online to keep up with their progress, challenges, and success.

## PRESENTATIONS

- “Identifying anthropogenic methane and carbon dioxide sources in Houston, Texas” poster presentation delivered at the **30th Annual Milton B. Dobrin Lecture**. February 18<sup>th</sup>, 2024. It was also presented at the **25th Annual Robert E. Sheriff Lecture**. November 13, 2023.
- “Predicted circadian related transcription factor in human breast cell lines - a key to understanding breast cancer cell pathology?” poster presentation delivered at the Annual **San Antonio Breast Cancer Symposium (SABCS)**. December 5-9<sup>th</sup>, 2023.

## REFERENCES

**Bernhard Rappenglueck, Ph.D.**

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