

# Biochem+Me

## Be a CU Boulder Biochemist

### AN INCLUSIVE RESEARCHER

Advancing diversity, equity, and inclusion of historically excluded students in STEM has been a large part of my identity and effort throughout my graduate school journey. As a Chicana, I recognize the barriers imposed upon disadvantaged groups and know that I would not be where I am today without the aid of programs that increase support for diverse students in science. I felt a responsibility to give back to the same community that helped me to succeed as a young researcher. So, I have been involved in various outreach and mentoring programs such as the Society for the Advancement of Chicano and Native Americans in STEM (SACNAS), Peer-2-Peer mentoring, Summer Multicultural Access to Research Training Program (SMART), Longmont High School SMART Program, STEM Routes, and the Uplift Program. I also co-founded and was the former chair of the Biochemistry Department's DEI committee. Outreach work is what can inspire the next generation of scientists and it is critical that we create an inclusive environment for all identities to be able to thrive.

### RESEARCH: BIOCHEMISTRY FOR CREATING NEW TOOLS FOR HUMAN HEALTH

My research focuses on elucidating the role of biomolecular condensates in transcription regulation. Biomolecular condensates are membraneless liquid droplets that possess a high concentration of local proteins and/or nucleic acids. These condensates offer spatiotemporal control of protein function and could be utilized by the cell to regulate processes such as transcription. Specifically, most of my efforts have focused on developing a fluorescent assay to simultaneously visualize in real-time condensate formation and human RNA polymerase II transcription using a defined reconstituted in vitro system. I knew this project was a great fit for my thesis research because it combined researching the regulation of a fundamental process with the development of a new method or tool. Additionally, the implication of biomolecular condensates in coordinating transcription is a relatively new idea and subsequently, there are a lot of available questions that need to be addressed so we can better understand the underlying mechanism. Finally, I also find studying human transcription intriguing. It is a complex orchestration of a multitude of proteins and nucleic acids where the precise timing is critical for proper gene expression.

### MY LIFE'S JOURNEY

Biochemistry truly fascinates me, every organism surrounding us survives because of all these thousands of intricate biochemical interactions. I am inspired by the idea that I could be someone who contributes to understanding how these interactions regulate processes that give rise to life. I chose CU Boulder because it felt like an environment where I could succeed. Graduate students here appeared to be genuinely happy. They were working hard in lab and simultaneously enjoying their weekends hiking or spending time with friends. These students were publishing in top journals and still finding time to enjoy life. That dynamic is exactly what I wanted in a program. Additionally, the research in the biochemistry department and the CU community is astounding and the faculty are easy to talk to despite their impressive backgrounds. Plus, who wouldn't love the Rockies in their backyard?



**MEG  
PALACIO**  
RHODE ISLAND  
UNITED STATES

### Taatjes Lab

#### PhD Candidate 2024/2025: Biochemistry

- 2023: Outstanding Outreach Award, CU Boulder BCHM**
- 2021: National Science Foundation Graduate Research Fellowship (NSF GRFP)**
- 2021: Diversity, Equity, and Inclusion Award, CU Boulder BCHM**
- 2020: NIH Biophysics Training Grant Trainee**

#### BA Biochemistry, Northern Michigan University

*"I hope to secure additional funding for causes important to me and one program, the Longmont High School SMART Program, is an afterschool program in a largely Hispanic community that exposes students to protein structure, function, and modeling."*



Biochemistry

UNIVERSITY OF COLORADO BOULDER

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