

## **From being scared to success: The diverse paths of my research experiences**

As a science student, I started my research journey later than I would have liked. My first two years at TRU were more academic-focused; I had no idea research was an option. I believe that already in my third year, when this idea of research was introduced to me, nervousness set in. There were questions like "I don't know where to begin," "am I good enough," and "what if I mess up." These questions were holding me back from getting started, yet something inside me forced me to seek answers.

Towards the end of the first semester of my third year, I discovered something unexpected in my BIOL 3000 Biometrics class, the application of statistics in biology. While many people don't find it particularly interesting, I was surprisingly drawn to the puzzle-like nature of coding in R. Motivated by this new interest, I knocked on Dr. Emily Studd's door to ask if there was a possibility to get involved in research. Together, Dr. Emily and I planned what my research would look like, and I ultimately focused on investigating how the size of wildlife management areas might influence hunting pressure on moose in British Columbia for the Taku River Tlingit First Nation. I learned how to create a research proposal, including an introduction and hypothesis, and I tackled R head-on, even when I didn't fully understand the code. I spent hours creating graphs and trying to interpret them, while also using ArcGIS and government websites to gather the data needed to answer my research question.

One of my favorite aspects of the experience was being part of her lab group. We met weekly with other students conducting research under her guidance, providing each other with constructive feedback. Presenting our progress and posters in that supportive environment helped me improve my work. By the end of my project, I created a final report aimed at guiding the First Nation community in the next steps for moose management. The experience wouldn't have been complete without sharing my findings publicly. I presented a poster at the Undergraduate Poster Exhibition of Research (SUPER) for Directed Studies students. If you had told first-year me that I'd be presenting research alongside science researchers, I would've said, "Are you crazy?" My introverted self was terrified before poster day, but once I started talking, everything flowed naturally. I was genuinely excited to share my work, and the curiosity of my peers made me think, "Wow, people actually want to hear what I have to say."

As this project came to an end, I found myself craving more, I wanted another opportunity to dive into research. I was fortunate to be selected for a research project called BIOMAPETS, which took place from May to July of 2024 at EAFIT University in Medellín, Colombia. That's when imposter syndrome really hit me. I had been accepted through an interview with a team of scientists who chose me to help launch their project, and although I was excited, I couldn't shake the feeling of "Why me?"

Working alongside Dr. Laura Sierra Zapata, I helped kickstart BIOMAPETS, a study focused on identifying beneficial and harmful gut microbes in canines and understanding how they affect overall canine health. This project was a fresh take on

research for me, not only did it involve lab work, but it also aimed to develop a product, a home-kit for pet owners to test their pets' gut microbiome. Coming from a Canadian research background, I had been used to the cycle of forming a hypothesis, conducting research, and publishing results. Dr. Laura's mindset, however, opened my eyes to the importance of lasting community impact through research. Throughout my time there, I learned that research is fundamentally about teamwork. You can't succeed trying to do everything alone. This experience left an everlasting impression on me, especially because the entire research team was composed of women. As a young woman in science, I've often felt like my voice wasn't heard, but this team encouraged me to embrace the value of my ideas and reminded me that what I bring to the table truly matters.

One of my main responsibilities was creating the project's database. Even though I was the sole person in charge of this part, the team was always there to answer my questions, provide resources, and, most importantly, ask if I needed help. I also got hands-on lab experience beyond what I had learned in a classroom setting. I collected dog samples, extracted DNA, and analyzed microbial presence. This was both challenging and exciting, I was not expecting how much work it takes to carry out a successful experiment. I vividly remember waking up at 6 a.m. to be in the lab by 7 a.m. one day. The experiment involved DNA extraction, which took about 1–2 hours, followed by PCR (amplifying the DNA), which lasted another five hours. After all that work, when we finally got the results, the DNA yield was very low, too low to send for sequencing

and further analysis. It was frustrating to realize we had to redo the entire experiment. But surprisingly, that challenge also brought an exciting aspect, it forced us to think in ways to improve our lab procedures to get a better yield. That moment of finally getting it right after all the effort was incredibly rewarding.

This project expanded my understanding of how vast and important global biological research can be. I attended biotech conferences, presenting our project to researchers with years of experience and across the region. I even took the lead in organizing meetings to introduce product design ideas. These opportunities pushed me beyond my comfort zone and gave me the confidence to explore new things despite my imposter syndrome. I realized that fear often disguises itself as self-doubt, but others can see your potential even when you can't. This experience helped me recognize the skills I have to take on vet school and the researcher I am becoming.

**Word count (994)**