

## Personal Statement

Today, as a young Hispanic woman, I have opportunities that were inconceivable to my grandmothers when they emigrated from Nicaragua to raise their children in the US. Growing up in a primarily Hispanic community in South Texas, I was dismayed to witness how a career in science was still inconceivable to many of my female peers. With the encouragement of strong female role models both at home and in school, I decided to pursue a career as a research scientist. While I initially pursued graduate research at the prospect of diving on tropical reefs around the world, I quickly realized that fieldwork would not be the aspect that sustains me through the many years of graduate studies and beyond. In studying a quickly degrading ecosystem, coral reef scientists recognize how imperative the sharing of scientific knowledge is to the field if we hope to reach conservation goals. The personal and professional relationships I developed through research and outreach have been invaluable exchanges of scientific and cultural knowledge that motivate my efforts to expand our understanding of the natural world and to engage with diverse audiences to mutual benefit.

My outreach and academic experiences at home and abroad are of the utmost importance to ensure that my work can increase access to and participation in science for diverse communities. As an undergraduate, I worked closely with local families and leadership in Ecuador and Honduras on biodiversity monitoring and eco-tourism projects to preserve both their way of life and their region's natural resources. In Nicaragua, I served as a communication liaison between engineers at my university and a rural community to facilitate the exchange of technological knowledge to implement a sustainable water distribution system. In Houston, Texas, I led interactive workshops using 2-D reef replicas of corals to teach people of all ages to quantify metrics of reef change, such as percent coral cover. As a PhD student in Oregon, I became a science communication fellow with the Oregon Museum of Science and Industry. In addition to learning techniques in communicating with diverse audiences, I developed outreach material to present the complex scientific concepts of my dissertation in an engaging and informative activity for use at "Meet a Scientist" days at the museum. I also shared my activity and communication strategies with my peers at the Education Session which I co-organized at the International

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Symbiosis Society Congress. I have participated in diversity and inclusion trainings at OSU as well as the Implicit Bias session at the University of Washington's Biostatistics Summer Institute and the Gordon Research Conference Power Hour in Hong Kong addressing the challenges women face in science.

I feel a strong responsibility and desire to use my experiences and skills in creating support networks to increase and sustain the representation of women and underrepresented students like myself in STEM fields. While I have participated in several community outreach initiatives with local schools, art centers, and radio, I quickly realized that a commitment to empowering women and girls in science is not one size fits all. Instead, I have found satisfying and productive activities that empower the women around me by maximizing my own personal skillset. As the first coral reef thesis student at my undergraduate institution, I began mentoring younger female scientists interested in marine biology and graduate research. I advise female students on applying to graduate school, selecting the right graduate project and mentor, applying to external fellowships, and managing a healthy work-life balance. Consequently, I have been mentoring some students for more than 5 years. At OSU, I continue to give and receive support from other talented graduate researchers by serving as an officer in the Microbiology Graduate Student Association and as a member of the Women of Color Caucus. As a recipient of the NSF Graduate Research Fellowship, each year I edit numerous fellowship applications for close friends and strangers who found my credentials online. I also have a strong affinity for statistics and biocomputing, although I received no formal training. I often struggled to self-teach these subjects that were so fascinating yet foreign to me. Therefore, I have made my data analysis pipelines reproducible on the open-access platform, Github. Rather than starting from scratch, other students can work through my pipelines at their own pace and contact me for guidance. In fact, researchers around the world have personally communicated the usefulness of my biocomputing scripts. My most meaningful moments in graduate school occur when I get to use my enthusiasm for statistical analysis to help my friends and collaborators discover new depths to their data and to their abilities as scientists.