

The first meters were often easy and pleasant. I would dive and glide gracefully through the water. By halfway, the air became short, my body fought to sustain the technique, and my mind battled to push aside the oxygen-wasting thoughts of ‘are we there yet?’ Throughout my childhood, and later on as an international athlete, I always saw life as an endless pool. Deciding what to burn valuable oxygen on, and to stay resilient, have been constants in my life.

While growing up I would spend my days swimming and visiting my grandparents. Although I was early inspired by my grandfather’s scientific journey and career, my own high school lab experiences were limited to observing cow organs under a magnifying glass. As a result of my school’s lack of resources, my education was primarily theoretical. I learned to turn to books and dissect their complex information. This did not make science less exciting; the biology, chemistry and mathematics subjects were by far my favorites.

I emigrated from my birth country, Venezuela, because of two coinciding events: I had received a full swimming scholarship to the University of Puerto Rico, Rio Piedras Campus (UPR-RP), and my country was politically unstable. When I started my freshman year, I let that same childhood curiosity guide my academics. Remembering the excitement I felt in my high school classes, I was quick to enroll in a general biology course. During this course and for the first time, I handled a microscope to measure my own mouth epithelial cells and bacteria. The large drawings from books did not compare with the smallness I now had under my eyes. At that moment, thoughts of microbes and their interactions with our own cells kept my mind churning long past the hours of classes and during the afterward swimming practices. The long workout sets soon became my everyday moment for introspection, where I wondered about everything from how my muscles healed after the exhausting exercises, to how other swimmers rehabilitating recovered from knee and nerve injuries. Thus, in the summer of 2016, I joined Dr. José García-Arrarás’ laboratory. I knew his lab integrated two of my favorite things: aquatic animals and regeneration.

During my junior year, I upheld classes, swimming practices, and research jointly, and built basic research skills. Yet, I had never devoted full time to research and I craved the whole experience. After spending a summer doing full time research at Brown University, I returned convinced I wanted to pursue a scientific career. Thus, I successfully applied to the Maximizing Access to Research Careers (MARC) Program and gave up my swimming scholarship to pursue science. As a MARC Scholar, I received the training to rapidly improve my scientific competence. Through my own experience, I became truly aware of how skills develop at different rates, depending on aspects such as earlier access to educational resources and exposure to science. Thus, I became an active member of the Student Chapter of Microbiology, an organization that promotes intellectual curiosity through activities related to Microbiology, especially to middle school students from disadvantaged backgrounds. I co-taught interactive workshops on lab equipment and hand washing. We had students press their hands onto Petri dishes after washing, and three days later, we showed them their dish and the evidence of poor washing: many colonies of bacteria. This awakened their enthusiasm for science and shaped my own goal to be a scientist and a teacher.

Obtaining a Ph.D. allows me to answer new and exciting biological questions and advances my goal of becoming a professor and PI. Most importantly, an academic career places me in a position to emulate my grandfather and inspire the next generation of scientific minds. I am both protagonist and witness to how multiple cultures can contribute to the scientific community; I grew up lacking scientific resources, but I was fortunate to receive motivation and guidance early in my life. That is why during graduate school and subsequently, I will continue the timely awakening of underrepresented young minds to pursue science, as they represent the future responsible for our society’s advancement.