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Personal Statement

I became interested in science when I entered high school and I had the opportunity to get involved with all the activities related to this field. At school, I was leader of the Recycling Program and of the Science Club; which encouraged me to focus on science when I was growing up. My main reason to decide that I wanted to fully dedicate my career to Environmental and Health Science was, when in high school, I worked in a research studying the water chemistry of the Island of Vieques, Puerto Rico. In this research I was able to analyze the effects of different pollutants, and with that effort I had the opportunity to establish a preliminary relation between contaminants with various skin conditions and health problems which affect the people who live on the Island of Vieques. Since then, I've been looking forward to preparing myself to be able to help my country and the people who live in it.

As I entered the MIE Project at Universidad Metropolitana, I had the tremendous opportunity to start working in research related to the biomedical area, which is so important to a scientist. In the Summer of 2004 I conducted my first research on an internship program outside Puerto Rico. I worked as a Biological Technician at the Laboratory of Molecular Genetics as a part of the Summers of Discovery Program 2004 at the National Institute of Environmental Health Sciences at Research Triangle Park, North Carolina. I collaborated with my mentor, the Post- Doctoral Researcher at Dr. Thomas Kunkel Laboratory, Dr. Scott McCulloch, focusing on DNA polymerase Eta, a highly error prone DNA polymerase that is used by cells to bypass DNA lesions, primarily those caused by UV light. The loss of this protein causes the disease *Xeroderma pigmentosum* - variant, patients of which are extremely sensitive to sunlight- induced skin cancer. This was an extremely valuable experience for my career and helped me broaden my knowledge inside the Laboratory. Since then, I'm looking forward to keeping the sense of adventure open in my life and to never stop learning something new. I was amazed by the information learned, which helped me in current courses, and with the quality work I did with help of my mentors.

I have also worked in the Environmental Sciences area. I had field trip experiences that taught me much. I am working full time in a project which involves going to field trips on the eastern part of Puerto Rico, investigating and making a comparative study of photo-pollution, which affects *Eretmochelys imbricata* (Hawksbill turtle) and *Dermochelys coriacea* (Leatherback turtle) including other organisms. I participated, various weekends in the month, on field trips with Dr. Manuel Acevedo, studying the karst on the cavernary systems in different parts and environments in the island. This kind of research has helped me to prepare myself in rough and high temperatures habitats. Last but not least, my main challenge has been working with the GIS map for the research project "*Study of Arsenic Content in Water Reservoir and the Food Supply in Puerto Rico.*" This map is needed to locate and study water quality on different sources and water supplies throughout the island. Conclusive studies of arsenic are not found in the scientific literature of Puerto Rico and can cause several health problems to our country. I worked on it during the spring of 2005 and will continue in the fall 2006.

With all these experiences as a sophomore, I feel that I've had the tremendous opportunity of working with several groups of people, professionals and specially, to transmit the message of Conservation through-out the island with the Environmental Associations which I'm part of. I've celebrated diversity by traveling to a different country and still, I am able to appreciate the ethnic diversity, making other persons know my culture and "Latino" heritage. Specifically, I work with the Environmental Student Organizations "ATABEX" (which means Mother Earth in the Taíno language from Puerto Rico's long-deceased Indian population). We teach people and groups about the importance of our heritage, participate in beach clean ups and we go on field trips and excursions through mountains.

In addition, I'm working as a volunteer leader in the Caribbean Blue Flag Conservation Project sponsored by the Tourism Company of Puerto Rico. This project consists of teaching and educating people about our beaches. We show them the codes of cleaned up and healthy pollutant-free beaches and we encourage them to keep it visibly beautiful. We have already gained the four flags for our most important beaches and we plan take the project to other levels, including Educational Programs to our sister islands, Vieques and Culebra.

I have chosen the Environmental Sciences career because I want to know, explore and find new places, ecosystems and species so I can help to preserve them. I also want to learn about contamination and destruction of our natural resources. In the laboratory research area, knowledge and improved techniques will give me the opportunities I need to keep enriching my experiences and science skills. At the university, work with the past mentioned projects, is helping me become a better student and prepare myself for the upcoming challenges as a researcher. My motivation is my country on the people I will be able to help with my knowledge. My career goals include the completion of a minor in Education and in Marine Biology, a Master's Degree in Management and Environmental Conservation and a Ph. D. in Environmental Toxicology.