

Essay for Great Neck B.C.C.

A home-bred Persian girl from Great Neck, never permitted to be farther away from home, alone, than my grandparents' house around the corner, I would like to thank the Breast Cancer Coalition, Dr. Ana Soto, Dr. Maricel Maffini, and everyone else in the Tuft's laboratory who opened the doors for me to an opportunity of a lifetime. I got to catch a glimpse of a real-world working environment; to find my own individual ability; and to explore the field of science that I have been interested in for as long as I could remember.

Before interning at the Tufts' Laboratory in Boston, I thought I had cancer pretty much figured out- or just about as figured out as the next high school junior. **[I knew that cancer could be genetic; it could be caused by exposure to the sun; and I knew that I needed to go for a check up every year to make sure that I was healthy.]**

My grandmother was diagnosed with breast cancer six years prior to her death, almost a year ago, and for the past seven years, the dinner conversation was always about some innovative, trivial fact my father had found on the internet about this disease. We would all play doctor, and make premature guesses as to why and how this could have happened to our beautiful, jolly, blue-eyed Maman, as we called her.

When my science research teacher, Mr. Elkins, told me about this scholarship to Tufts Medical Laboratory, I thought this was the chance of a lifetime-- an opportunity to ask the questions that had been itching inside of me for seven years; to get answers; to finally understand what killed my grandmother, thousands of other girls' grandmothers, and serves as an increasing threat to both the female and male population.

After much convincing to my parents, I had a one way ticket to an experience that would change my life, and alter the common misconceptions and limited knowledge I held of breast cancer. My time at the lab was well spent. Everyone who worked there was so patient, kind, and intelligent. I learned more about breast cancer in two weeks than in those seven years of table talk with my family.

When I first arrived, I was warmly welcomed by Dr. Maricel and the entire lab staff. I received an overwhelming lecture by Dr. Ana Soto about the harmful effects of Bisphenol-A, and her belief that exposure to this chemical may cause future offspring to develop breast cancer as adults.

Naively, I accepted this hypothesis, but thought-“When on earth am I ever going to be exposed to Bisphenol-A?”. However, members of the lab assured me that my mother and probably I have already been exposed! It came as a shock to me when I learned that everyday products, such as plastics, water filters, even make up, could contain amounts of Bisphenol-A; and that medicine containing Bisphenol-A was administered to pregnant woman decades ago. But then the larger question still lies within the facts- Why do manufacturers produce products that can be potential carcinogens? Could this just be a mere lack of knowledge? Or has ignorance shadowed the health of human beings? Is this an economic benefit for manufacturers- and if not, then why put innocent human beings in harms way?

I think the work being done between the Breast Cancer Coalition and the Tufts Medical Laboratory is fantastic, informative and very educational. It has inspired me to continue with laboratory work and studies; and apply what I had learned. Now, working at Albert Einstein College of Medicine Structural Biology and Anatomy lab, I can confidently run a PCR; use a spectrometer; and run a gel (electrophoresis). At the Tuft’s lab, I also learned how to do humotoxyn and eosin staining on mammary gland tissue to see proliferation of proteins. The projects given to me at Tufts have really helped me get a hands-on experience at lab work, outside of my Biology and Chemistry classroom.

Although the skills I have acquired are precious and irreplaceable, the most useful thing I learned at the laboratory at Tufts, was dependency. Science is a very competitive field; from classroom exams to the newest form of laboratory and medical technology, students and scientists are striving for the most efficient and most accessible way to conquer a task. However I learned at Tufts that although independence in science is a virtue, dependency is a necessity. The ability to be able to trust the person next to you to not skew their results, which in turn may skew your results; or to be able to rely on your lab partner to finish up a piece of your project because you’re running late to work. Trust, reliability and dependency are all factors that stood out to me in my experience at the Tufts lab. While on the contrary, outside of the lab, I learned the virtues of independence and living without parents to rely on.

Thank you, Laura Weinberg, the BCC staff, Dr. Soto, Dr. Maffini, the Tufts lab staff and everyone involved in granting this scholarship- it was truly an experience of a lifetime that I will never forget; and hopefully, the next two lucky students will enjoy the internship as much as I did.