

Chirag Munim, Northport H.S.

This summer I was granted a wonderful opportunity by the Huntington Breast Cancer Action Coalition as an intern at Silent Spring Institute. The HBCAC Students and Scientists internship program allowed me to gain priceless experience and exposure at a renowned research facility. One of the many avenues of breast cancer research that the Silent Spring organization is exploring includes breast cancer risk factors present in the environment. The institute mainly conducts epidemiological research. These epidemiological studies involve looking at factors affecting the health of a certain population which serves as the groundwork for interventions made in the interest of public health and preventive medicine. An example of a study that the organization has undertaken has been the testing of the Cape Cod water supply for certain endocrine disruptors, carcinogens, volatile organic chemical (VOCs), etc.

At the onset of my internship I was taught about many of the risk factors of breast cancer, the biology of the condition, as well as many of the current studies that are ongoing at the institute. With the guidance and advice from my mentor, Janet Ackerman, and the friendly and knowledgeable staff, I was able to conduct research and analyze significant information available to the everyday consumer regarding the unfortunate condition. My peers and I were given a project to work on throughout the course of our internship that would end up being beneficial for us and Silent Spring.

The project we undertook analyzed breast cancer risk in many consumer products through various methods and resources. First we looked at many creditable websites such as mayoclinic.com, komen.org, bcaction.org, etc. and analyzed the different assertions made by these organizations regarding certain controversial topics related to breast cancer risk. Different sites had different conclusions depending on the specific study they choose to reference. We wanted to see if the consumer would be able to obtain sufficient and accurate information about breast cancer risks present in specific products. Throughout our research we saw that many of these popular resources would disagree on many things, such as the extent of disruptions caused by parabens. Parabens are chemical preservatives that mimic naturally occurring estrogen and are believed to be linked to breast cancer. We realized that there was a great amount of speculation and uncertainty when linking breast cancer to the environment, so we approached the issue from a consumer standpoint.

We knew that due to the lack of FDA regulation regarding products such as deodorants, cosmetics, etc. on the market, there is a clear danger for many consumers. The second part of our project pushed us to explore two product-rating websites: cosmeticsdatabase.com run by Environmental Working Group (EWG) and goodguide.com. We were given a certain group of products ranging from skincare to kitty litter that were in current use for a Silent Spring Study and asked to search these products on the two rating systems. EWG rated the products on a scale of 0-10 based on how hazardous the product was. The Good Guide rating system included the product's health rating and manufacturer's environmental and social ratings (equal weight given to the 3 categories). We found it interesting that various parabens didn't impact ratings because they were considered too controversial and some ingredients were unjustly portrayed less hazardous than others merely due to lack of evidence. The data we obtained revealed a moderate correlation between scores given by the two systems with some consensus between the two groups. We also noticed that by percentile, Environmental Working Group's Skin Deep was more likely to rate products between 0-4, or more dangerous while Good Guide was more likely to rate items 4-8, or safer.

This internship was truly an amazing experience and an everlasting memory for me. I not only learned about breast cancer, but I was able to understand how non-profit organizations function and gained insight into the atmosphere of a work-environment setting. Some of the highlights of my internship outside of conducting the project included my attending research meetings concerning the staff which was extremely informative as they shed light on the work Silent Spring Institute undertakes. I believe that these meetings taught me so much about how a research team works together and how tasks are broken down. I also learned how connections to the media are significant because in the end, communicating results to the general public and spurring change in society is a vital goal for most organizations of this nature.

After communicating the results of our project to the staff of the institute in the form of a PowerPoint presentation, we received great feedback and beneficial advice. This advice came from many world renowned professionals in their fields of research, such as executive director Dr. Julia Brody and research scientist Dr. Robin Dodson. Having worked alongside these people of great expertise and communicating results amongst them, I feel that I must continue to connect with the public and instill in them the knowledge I've been fortunate enough to gain regarding breast cancer risk and preventive medicine. We all hope that our research may cause an increase in consumer awareness and their understanding of breast cancer risk factors.