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Great Neck Breast Cancer Coalition Student Research Internship

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This past summer, I spent six weeks conducting breast cancer prevention research at the Rensselaer Polytechnic Institute. Throughout these six weeks, my partner Raymond and I were given the opportunity to research a biocompatible alternative to commonly used food packaging films. To add on, I was able to explore the labs of RPI and was able to see what college was like, while also making relationships that would last beyond the end of the internship. These six weeks spent researching at RPI were by far the six most interesting weeks of my life, as I was able to learn about and experiment with things that I have never even heard before.

In the beginning of the program, I was introduced to Missy and Noah, two college students that would be working on the project with Raymond and I would be mentoring us throughout the whole experience. Without the help of Missy and Noah, I would not have been able to get nearly as much work done as I did. They were with me at every step of the process, and they always helped me with smiles on their faces. Every day, Raymond and I would take the bus from the Russell Sage College to RPI, and from there we would walk to the labs. Taking the bus to and from the labs every day taught me the ins and outs of the transportation system, an asset that I now appreciate greatly. At the lab, Raymond and I would be working on the implementation of the sophorolipid butyl-ester for droplet stability within water and oil emulsions. Basically, Raymond and I would test different concentrations of the sophorolipid butyl-ester in different emulsions

to see how effective each concentration is. The reason why we tested the sophorolipid butyl-ester in different emulsions for food packaging films is because in many of the food packaging films we have today, there are substances such as BPA and PFOA that are linked to many diseases, one of them being breast cancer. On the other hand, sophorolipid butyl-ester, which is normally biocompatible and readily digestible, can function in place of BPA or PFOA while not exhibiting adverse health effects.

In pursuit to find the optimal concentration of sophorolipid butyl-ester, I had to use many instruments that I have never seen before. My favorite was the Dynamic Light Scattering Machine. With the help of my mentors, I would use this machine to see how well the sophorolipid butyl-ester was working in the emulsions that I created. The experience of being able to see and use complex machinery was simply amazing.

Every Friday, Raymond and I would present our work of the week to Dr. Gross and the other students interning at RPI. We would show them the progress that we made and the data that we collected. These presentations made me a better speaker, as I was able to look at the mistakes I made during the presentations and build upon them.

In conclusion, the research that I conducted at Rensselaer Polytechnic Institute is one that I will never forget. With the help of my mentors, I was able to learn the connection between sophorolipid butyl-ester and breast cancer prevention and was actually able to act upon it. I would like to thank the Great Neck Breast Cancer Coalition for giving me such an amazing way to spend my summer.