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Internship at Dr. Gross Laboratory at RPI

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When I first got the call for my internship, I was overjoyed, excited and proud. It would be my first time leaving and actually being on my own. As the days got closer to my internship, I became a little overwhelmed. I had no idea what I would be working on or the knowledge and skills I would need. This was an experience beyond the classroom. However, once I entered campus and became acquainted with my fellow interns and mentor, it became an encounter I would never forget.

I arrived on campus, initially thinking I would have time to relax and meet our mentors. Instead, I was met with a camp of enthusiastic teenagers, who were part of a different program, but were staying in the same dorm. We were rushed into icebreakers games, where I really got to know some of the other interns and students. It was beginning to feel like a summer camp. At least that was until the next day when we actually met our mentors for the first time.

We were gathered up in a college classroom. It was slightly nerve wracking, waiting for them, thinking about how experienced, knowledgeable and brilliant they would be. These were the people who would teach and guide us. They were Dr. Richard Gross' very own graduates who were working on their own remarkable research projects that we, high schoolers, were given an opportunity to participate in. We were actually going to contribute to science and breast cancer research. There were eight interns and four mentors, which meant we'd have to pair up and choose. I was already ready to work with my research partner Noah Ahmed. The both of us

were amazed by all the graduates and their individual projects, but in the end, we chose to work with Yi Zou. I was ready to just be bombarded with information, and just be expected to know things. It was intimidating, however, Yi was very humble, patient and helpful. I had the utmost respect and admiration for her, as she helped us learn how to use lab equipment and provided us with background research. It turned out that she was actually an undergraduate student who was working with our actual mentor, An Su.

Our first meeting with An was on the second day of our internship, in the bio-tech building. It was brightly lit, with a high glass ceiling, with long hallways and a confusing maze-like layout. We didn't even know how to find An, until he found us first. Upon our meeting, he introduced himself and his project. He was aware that we were just high school students and did not expect us to memorize years of biology and organic chemistry in just a few days. We were taught to learn as we go and to mainly focus on the experiment itself, to my relief.

In the beginning, our project focused on Cutinase, a hydrolytic enzyme, produced by fungi and bacteria, that could break down polymers. Our goal was to find the optimal pH value and temperature, respectively, in which F_sC cutinase worked most effectively and efficiently. Near the end of our project, we moved our focus to on the F_sC Cutinase enzyme's ability to break down dimethyl phthalate. Dimethyl Phthalate is a plasticizer found in plastic, found in everyday products, such as cosmetic, toys and shampoo. In some studies, it had been associated with causing early breast development which raised the risk of developing breast cancer. The project was very time consuming and at times, we would have to sit in the lab for hours working on it. We would also be expected to analyze sample data, the next day, while we were working on a new trial, so work was often split up. I learned that it was far more important to ask questions than to be unsure and risk making a mistake.

While the lab work was strenuous at times, I was able to make new friends, hang out and what it was like being on your own and having a roommate. It was a little exhausting and infuriating being supervised 24/7, but it was still enjoyable. We got to go to the Farmer's market, see a horse race and even went to Six Flags' Great Escape. The internship itself was such an incredible learning opportunity, that I would never have gotten the chance to experience if it wasn't for the Great Neck Breast Cancer Coalition. I'm eternally grateful to the coalition for providing us with such a rewarding program that not only teaches you skills and gives you experiences that could never be attained in the classroom, but gives you a chance to give back to the community.