

Kayla Lieb

North Shore Hebrew Academy High School

Great Neck Breast Cancer Coalition Student Research Internship

University of Massachusetts Amherst, Vandenberg Lab

This past summer, I had the opportunity to stay at the University of Massachusetts in Amherst for four weeks to intern at a research lab. Not only was the lab interesting and eye-opening, but the campus is beautiful and the experience of dorming at a college is unforgettable. As for a social life, I made a group of friends quickly and loved all the activities that our counselors organized for us. This kept me occupied after the lab every day, mixed with sports, music, and of course, frequent trips to the dining halls; the very same dining halls, in fact, that have been named #2 in the entire country. However, out of all of the amazing experiences I was lucky enough to take part in for the past month; the lab was the most incredible.

The lab is headed by Dr. Laura Vandenberg, an environmental health scientist. In her lab, she works to research and test the effects of different chemicals, specifically “endocrine-disrupting chemicals”, on the development of individuals, along with diseases that appear later in life. Her work shows how exposure to these chemicals during critical times in one’s life predisposes a person to illness later, such as obesity, infertility, and cancer. These include chemicals that are used in many plastics, and because of their chemical structures they can be mistaken by the body for different hormones such as estrogen. Thus, they are called EDCs, or endocrine-disrupting chemicals.

I was lucky enough to room with a senior from my school. We also made a bunch of other friends and found a group that we love and keep in touch with. My roommate and I were placed in the same lab, so every day we walked to the building to perform the research there. I loved being in a lab setting. Because I love biology and chemistry, I had a huge interest in all of the procedures done in the lab. Not only did I conduct experiments, but I also learned so much about chemicals found in the world. This includes the effects of disruptive chemicals such as BPA and BPS, the terrible wave of DES and the path of destruction it left for thousands of people, and just how little the public knows about all of this. Each and every day, we are exposed to hundreds of harmful chemicals all around us. Although we can’t completely eradicate all of these, we can tone down how much exposure we have to some of the worst ones. This is the purpose of the research done in Dr. Vandenberg’s lab - to see just how much of an effect chemicals have on the mammary glands of mice.

When I talk about how eye-opening this research is, I’m not joking. Before the internship, to be honest, I didn’t even really know anything on this topic. It was so crazy to see how all of these chemicals actually have an effect on us whether we realize it or not. Now, I’ve learned so much about our exposure to EDCs. I’m definitely grateful to the Great Neck Breast Cancer Coalition for giving me the chance to gain lab experience and especially in such a growing area of science.

Not only did I enjoy the scientific part of the month, but I also enjoyed the college vibe just as much. Staying by myself on a college campus really showed me the responsibilities I'll be burdened with in just 2 years. Thankfully, I loved spending time independently so much that I didn't mind doing laundry and other "chores". I made a bunch of new friends who I went out with, stayed in with, and basically lived with for the time there. They helped me put together an amazing month, dorm-wise as well as internship-wise.

Overall, I loved my month at Dr. Vandenberg's laboratory at UMass which was eye-opening and so interesting. I am happy to say I've gained more knowledge than I had planned on. Once the lab ended, I went back to a dorm and social life that I enjoyed more than anything. There was a balance there that I am so happy with and it really was a once-in-a-lifetime opportunity. To conclude, thank you GNBCC for this amazing summer.