

**Leah Goldman**  
**The Summer Research Experience 2005**

There's nothing more worthwhile than a good experience. And that is exactly what I had this summer, nothing short of a great experience. For me, it was a summer incomparable to any other summer.

Truly, I had no idea what to expect and on the first day when I walked into the laboratory, I felt overwhelmed, a little bit intimidated, and to be honest, a little concerned. Could I spend my summer here? I didn't know yet, but from the looks of the cluttered lab, I got a vague idea that this would be a summer well-spent. I would shortly learn my way around the lab and be introduced to all the researchers (the technicians, the graduate students, the professors, etc.). At first I was intimidated by the fact that all of the other people in the lab were older than me, but I was soon to realize that these unfamiliar faces would be people I could talk to and really get to know.

After meeting Maricel, she gave me a tour and then set me up with Carlos to talk about research, science, and most of all, the lab. From this talk, I learned that Carlos is extremely wise and witty. And then I was introduced to Ana who tried to explain to me about the projects that were simultaneously going on in the laboratory and about BPA (Bisphenol-A). Ana, Carlos, and Maricel are three of the most intelligent and interesting people that I have ever met.

Laura Vandenberg truly was my mentor though. Trying to guide me along with my individual project, Laura also allowed me to tag along with her days work and learn about all the animal work that she does. I watched ovariectomies that Cheryl and Laura performed and I also watched the loading of Estrogen pumps. Tessa also worked closely with me and I got to set-up for procedures and help remove tumors from rats.

All of their research was completely fascinating and I never knew about half of the procedures that there are until I observed them. While I was doing my independent project, I also was able to help in the lab by following the protocol for tissue embedding and washing.

I started out with a rudimentary project that Laura set me up with to test my computer abilities. After I finished the first task, I was set onto my own experiment which wasn't half as complex as the other projects going around in the lab; but I did get to do my own type of research, which I might say was very awesome. First, I created a grid that corresponded to the magnification of a picture of the cell. Incognizant of the different doses that the cells were treated with, I counted the number of times the duct of the mammary gland crossed the grid. I also calculated the ductal area and the size of the lymph node (length and width). The first time I ran this experiment, Laura and I concluded that my results were insignificant and so I tried my experiment again with a different magnification and a different grid system. Even though the first trials' results were skewed, the second trials' results were significant and I got positive feedback from my results. It's hard to determine what my results actually mean, but the fact is that I learned a greater lesson from it. I realized that research isn't all about getting everything correct the first time and that it's okay to make mistakes and to try things again. That's a major point in research.

So overall, my summer concluded on a high note, and I've noticed a positive change in myself from this experience. I came to Tufts not knowing what to expect, and ending with a summer filled with knowledge and growth. This was the best way I could have spent my summer and it was the most rewarding experience I have ever had.