I'd always assumed that science, while fascinating, was nothing more than a class. Of course, I'd seen research results in the news, but given how we're told coffee both causes and prevents cancer, I didn't think much of it. Having taken science research classes in school on a whim, though, I realized that science is about curiosity and discovery, and was committed to doing real research over the summer. The GNBCC's Students and Scientists research program fit my interests perfectly: I would be doing meaningful, impactful research in a world-class institution, and concerning a compelling topic.

Even as it was a dream of mine, stepping onto a top national university's campus was an intimidating experience. Great brick buildings rose on one side, with vaulting steel and glass structures towering on the other. PhDs mingled with leading researchers. Labs with thousand-dollar equipment were just one of many.

But this program went above and beyond not to accommodate me, but to involve me. Dr. Gross's lab allowed me to ease into the routine, teaching me techniques and background information while I was getting used to my new environment and new schedule, I was allowed to ease into the techniques and background information. And when I had firmly planted my roots, I wasn't prohibited from anything; the lab's resources were available to me as if I was another researcher. The GNBCC additionally checked in on my progress, ensuring that even a hundred miles away from home at RPI, I wouldn't fall behind.

Yet I didn't worry about falling behind on progress, as the research was simply fascinating. With the guidance of Dr. Gross and my mentor, Kening Lang, I developed a project in Kening's area of expertise. Tissue engineering, sometimes known as regenerative medicine, is an extraordinary—and quite honestly, futuristic—field in which new tissue, or even new organs,

can be grown. I modified a biodegradable polymer, poly(glycerol sebacate) or PGS, for use as a "scaffold" for the cells in engineered tissue. PGS shows much promise as a better alternative to other scaffold materials or even other biodegradable polymers: it already has elastic properties, allowing it to be used for "soft" tissues like skin or heart tissue, is nontoxic as it's synthesized from compounds found in the human body, it's very cheap, and may be dissolved in methanol instead of carcinogenic organic solvents. The modification done improves upon PGS's properties but also incorporate green chemistry principles, and the new polymer shows potential for a multitude of applications: in this case, the potential for regeneration of organs is particularly exciting for use in breast reconstruction, as it may be able to recreate fully functioning organs after mastectomy!

The Students and Scientists research program made for a truly invaluable summer. I was able to participate in cutting-edge and futuristic research, while college-style living helped grow my maturity and responsibility. I was exposed to new environments, new people of various backgrounds, and new experiences that grew my horizons. I learned from the GNBCC that anyone can fight cancer. I'm grateful for the experience of doing so, but it's also true that everyone with an understanding of environmental impacts, can fight cancer as well. I want to thank Laura Weinberg, Lisa Levine, and the GNBCC for running this amazing program that has facilitated life-changing experiences for dozens of students like me.