Tara Rao

Clinical Research Training Program Fellow
National Cancer Institute
4th year medical student at New York University School of Medicine
B.S.-Biology, Biomedical Engineering
Hometown: Potomac, Maryland

My name is Tara Rao, and I participated in the Clinical Research Training Program (CRTP) during 2006-2007. I completed my undergraduate studies at Massachusetts Institute of Technology where I received a major in Biology, minor in Biomedical Engineering, and concentration in Spanish. I went on to attend New York University School of Medicine. After finishing my third year, I came to the National Institutes of Health (NIH) for the CRTP.

My experience in research began in high school, when I received a fellowship from the Department of Defense for research at Walter Reed Army Institute of Research in Washington, DC. My project examined the immune response to Staphylococcal enterotoxin B in mice. I continued to do research in college with projects in biology and biomedical engineering. I even came to the NIH for a summer through the Summer Internship Program. I joined a lab in the National Institutes of Child Health and Human Development that focused on signal transduction. For my project, I examined the effects of a newly discovered substance secreted by marine sponges on intracellular calcium signaling in mouse glial cells.

In medical school, I found the deans highly encouraging of graduation in five years, with the extra year dedicated to research. In fact, I met several residents during my third year who had done just that. Although they had participated in different year-off programs, they were unanimous in their satisfaction with their experiences. Passionate about medicine and science, and having participated in several interesting, but short-term, research projects myself, I became very curious about what I could do given an entire year dedicated to research.

I came across CRTP while looking for year-long programs available to medical students. Indeed, I was the first student from my medical school to be selected. CRTP's emphasis on clinical research, bi-weekly journal clubs, and monthly clinical bedside rounds really appealed to me. I knew I would not stray too far from the clinical skills I had built up in

medical school. Without a doubt, just being at NIH would be an unparalleled educational experience.

I joined Dr. Kenneth Kraemer's Lab in the National Cancer Institute, where I was very lucky to find amazing mentorship and support. My project focused on two rare disorders of genomic instability, Xeroderma Pigmentosum (XP) and Trichothiodystrophy (TTD). In fact my mentors, Dr. Kraemer and Dr. John DiGiovanna, are the world's leaders in the field. I was able to meet and examine XP and TTD patients and their families at the Clinical Center of the NIH. I also got to see other interesting patients at the NIH Dermatology Grand Rounds. I even had the privilege to present at these rounds several times throughout the year.
My year was very productive. I attended several major conferences, where I presented my work and met the leading scientists and clinicians in the field. In fact, my abstract was one of only five selected for oral presentation for a special group at the meeting of the Society of Investigative Dermatology in Los Angeles, California.

When I was not working in the lab or seeing patients in the clinic, there was always an educational activity happening at NIH. I would often attend Wednesday Grand Rounds at the NIH Clinical Center with my mentors. Outside of NIH, I was able to reconnect with some of my extracurricular hobbies, like sports and music.

Overall, I learned a lot, gained perspective, and grew personally this year. Whereas a year off is a requirement in some schools, I chose to take the year off, and I would do it again in a heartbeat. No doubt, I hope to continue in academic medicine and to keep research a part of my career. I think this year at the NIH with the CRTP has helped steer me in that direction.