Angela A. Chang, M.D.

Clinical Research Training Program Fellow 2003-2004
National Institute on Deafness and Other Communication Disorders (NIDCD), National Institutes of Health (NIH)
Resident, Otolaryngology-Head and Neck Surgery program, University of California, San Diego Medical Center
M.D., David Geffen School of Medicine at UCLA
B.A.-Music, B.S.-Physiological Science, University of California, Los Angeles
Hometown: Brea, CA

My name is Angela Chang, and I participated in the Clinical Research Training Program (CRTP) in 2003-2004. I was born and raised in southern California, and completed my undergraduate studies at the University of California, Los Angeles (UCLA). Shortly after earning a B.A. in Music and a B.S. in Physiological Science, I began medical school at the David Geffen School of Medicine at UCLA in 2000.

I first learned about the research training programs offered at the NIH at an exhibit presented at the American Medical Student Association meeting. I was immediately fascinated with the wide range of clinical projects that CRTP fellows pursued, as well as the opportunity to explore clinical research through didactic sessions and discussions. Eager to conduct patient-oriented clinical research, I kept this opportunity in mind as I began my clinical clerkships.

On the wards during my third year, I witnessed the link between clinical research and patient care, and became particularly fascinated with the challenges in treating head and neck cancers and the strides to improve their therapies. The experience fueled my curiosity and motivation to become involved in the translation of research from the bench to bedside.

As a CRTP fellow, I had the opportunity to work closely with one of the most important scientists in the field of head and neck cancer research, Dr. Carter Van Waes. His laboratory is interested in defining the activation of signal pathways that may serve as translational targets for the prevention and therapy of squamous cell carcinoma. With his guidance, I conducted clinical and laboratory research on a phase I clinical trial studying bortezomib, a proteasome inhibitor, with concurrent radiation in the treatment of recurrent head and neck cancer.

During a typical week, I spent Monday mornings in the head and neck clinic, where I participated in the care of patients enrolled in several clinical trials. In the afternoons, I attended Tumor Board, a multidisciplinary conference in which head and neck surgeons, radiation oncologists, medical oncologists, dentists, nurses, and social workers discussed each patient's pathology and treatment plan. On occasion, I would also assist in surgical cases and participate in morning rounds with my mentor. I devoted the remainder of the week in the laboratory, performing experiments designed to study the biologic effects of this treatment regimen in cancer cell lines and in patient tumor specimens.

In working on this project, I not only had the opportunity to participate in the implementation of an important clinical study, but I also learned how to approach a scientific question, design

experiments, analyze results, and read the literature critically. I also had the honor of sharing my findings in platform oral presentations at two scientific meetings.

Outside of my experience in the Van Waes group, however, there were many other opportunities to learn and explore. Immersed in the intellectual community at the NIH, every day I was able to indulge in an infinite array of resources and research expertise and to delve into lively lectures and discussions with the most respected clinicians and scientists in the world. It was amazing to be constantly stimulated and inspired by those around me.

Perhaps most rewarding, however, were the relationships I developed with physician-scientists who were so eager to teach and advise me. My mentor Dr. Van Waes gave me a great deal of independence, but he also spent a considerable amount of time mentoring me. I met with him regularly to discuss my goals for the upcoming week, and to share with him any new findings or difficulties that had developed. He and others in his laboratory created a comfortable place to learn, to be challenged, and to conduct sound, scientific research. Dr. Lee Helman, my tutor (a tutor is a senior physician-scientist assigned to every CRTP fellow upon acceptance) was another source of great mentorship. We met monthly to discuss journal articles, analyze laboratory techniques, refine presentations, and chat about my CRTP experience. Both have helped me define goals for myself, and continue to serve as great role models.

Aside from the intellectual stimulus of the NIH, however, my year was also enhanced by a diversity of experiences in the Bethesda/D.C. area. Throughout my year, I enjoyed exploring downtown Bethesda's eclectic array of cuisines, Washington D.C.'s amazing monuments and museums, music performances at the Kennedy Center, and Georgetown's cute shops and cafes.

Without a doubt, my year at the NIH was one of most enriching years of my life both personally and professionally. It enabled me to live in another part of the country and to foster new friendships, while also solidifying my research interests and career goals. With my new skills and continued passion for research, I plan to continue to study and see patients with head and neck cancer throughout my career and perhaps someday I will return to the NIH for additional training!