Henry Zhou, MD

Heed Resident Retreat – Personal Statement

I have no academic physicians in my family. Actually there are no physicians at all. So I never had an early role model for academic medicine. But I believe that my parents, two high school teachers, gave me something just as valuable: a love of learning for learning's sake, and a belief that investments in knowledge today will pay dividends in the future. I believe this to be true on an individual level and on a societal scale. My personal journey through academic medicine has taught me the value of early and continuous investment in knowledge and skills acquisition. As an undergraduate at Penn, I studied biochemistry with the rest of my college peers, but my growing interest in academic research led me to the Vagelos Scholars Program, where I was given the opportunity to sub-matriculate into (a.k.a. to concurrently earn) a Masters degree in Chemistry. In parallel with my coursework, I did bench research in cell and neurobiology throughout all four years of college, culminating in a Master's thesis I defended weeks before college graduation. Though the program was among the most challenging I've ever taken — I took graduate-level genetics classes as a sophomore — it was also the most uniquely valuable experience of my education, and it has informed the direction of my career ever since.

At Columbia, I was initially unhappy with the realities of medical school. I wanted to be in the lab participating in research, but I also had to be honest about the increasing demands of the medical school curriculum and the looming licensing exams. So I turned to translational research; I was awarded a T-35 NIH grant to study biomarkers of epilepsy in patients, using data from EEG probes embedded deep in brain matter. The lab used MatLab for their data processing, which I had never used before, so I had to work twice as hard to both learn to program in MatLab and to learn EEG waveform analysis (not to mention trying to learn clinical neurology at the same time). Though my interests were eventually redirected after I discovered ophthalmology, I found this summer of work to be incredibly valuable as a foundation for future computational work and as proof-of-concept for my ability to quickly learn new methodologies. Once I fell in love with ophthalmology, I naturally fell deep into the academic aspects of the field. My interest in neurobiology translated into an interest in IRD, and a meeting with Dr. Steven Tsang turned into a textbook chapter on clinical endpoints for Luxturna. I started to find mentors in the department, notably Dr. Kazim, whose mentorship and guidance led to several publications on thyroid eye disease. Then from one of his oculoplastics fellows, a former Mass Eye and Ear resident, I learned about the residency program here which made for a seamless transition to Boston.

Here at Mass Eye and Ear, I feel fortunate to have a range of research mentors, from bench research to clinical research. Working with each of them has been an incredible addition to the clinical foundations built in residency. With Dr. Leo Kim, my primary mentor in basic/bench research, I have earned two grants (the internal Gragoudas-Folkman and the national VRSF grants) to conduct research on the use of circular RNA for the treatment of diabetic retinopathy and proliferative vitreoretinopathy. We also wrote a review paper together for Resident's Course 2025 on emerging gene therapies in age-related macular degeneration. I have been blessed with a wealth of clinical research mentors in the Retina Service, and I have been able to push several first-author projects to completion with Dr. Patel (two first author papers) and Dr. Miller (one first author paper). I feel particularly proud of these projects as I was intimately involved in each step from conception, to design, to data collection, and finally to writing and revising the final manuscripts for all of these studies. I have also had the chance to publish case reports with various faculty, a textbook chapter with Dr. Young, and in-progress work with other mentors including Dr. Bleicher, Dr. Eliott, Dr. Pineda, and Dr. Mukai. From my mentors, I see diverse blueprints for successful physician-scientists that are both interested in outstanding clinical/surgical care and in advancing their respective fields of medicine and ophthalmology.

In summary, I believe my unique path to academic medicine and my current body of work, which I have produced concurrent with my medical training and without the benefit of dedicated years off for protected research, reflects the path of a physician-scientist dedicated to the pursuit of academic ophthalmology. However, as I have shared with Dr. Lindsey and my other mentors, I see many unique and viable pathways to achieving that goal, but I have not yet grasped what that path will look like for myself after fellowship training ends. To that end, I feel strongly that the Heed Retreat would be an enormously helpful experience for my personal career development. I think the opportunity to meet peers who are pondering the same questions, and mentors who have tread similar ground, may end up being one of the most valuable experiences of my early career.

Thank you so much for your consideration of my application.