

## Personal Statement

My aspiration to become a physician-scientist originated during my master's training in China, where I was privileged to study at the largest ophthalmic tertiary center in southern China, home to the State Key Laboratory of Ophthalmology. Alongside my clinical responsibilities, I joined a basic research laboratory investigating the efficacy and immunogenicity of novel biomaterials for conjunctival reconstruction. As the project progressed, I became increasingly fascinated by the translational nature of research—its capacity to bridge scientific discovery and patient care. This motivated me to pursue advanced research training in the United States, where I could engage with cutting-edge innovation and deepen my commitment to vision science.

I subsequently completed predoctoral training in the Department of Ophthalmology, Visual and Anatomical Sciences at Wayne State University. This experience immersed me in the rigor of scientific inquiry and equipped me with a broad range of experimental techniques. The idea of becoming a physician-scientist prompted me to choose Dr. David N. Zacks, a physician-scientist at Kellogg Eye Center, University of Michigan, as my postdoctoral mentor. Under his mentorship, I observed how a clinically relevant question—how to prolong photoreceptor survival following retinal detachment—could be translated into bench research, where he discovered autophagy and apoptosis are key modulators of photoreceptor cell fate after retinal detachment. His work ultimately led to the founding of ONL Therapeutics, exemplifying the full trajectory from bedside to bench, and then bench to bedside. Witnessing this process provided me with a concrete model of how to integrate clinical insight with scientific innovation.

After establishing my family in the United States, I made the deliberate decision to re-enter clinical training through the ophthalmology residency match. As an international medical graduate, I was acutely aware of the challenges inherent in this path. Nevertheless, I pursued a two-year pre-residency fellowship at the Kresge Eye Institute, Wayne State University, which ultimately led to a successful residency match. Throughout both my pre-residency and residency training, I have remained actively engaged in translational research. Under the mentorship of Dr. Gary Abrams and Dr. Xihui Lin, I collaborated with the chemistry department to characterize microscopic calcification deposits on acrylic intraocular lenses. Through collaborations with the pathology department at Karmanos Cancer Institute and the Advanced Genomics Core at the University of Michigan, I have generated preliminary data investigating anti-fibrotic pathways in proliferative vitreoretinopathy, with plans for a grant submission.

I am now preparing to pursue a surgical vitreoretinal fellowship. I intend to join a leading academic institution that fosters both rigorous clinical training and impactful translational research. The Heed Fellowship represents a critical step in this trajectory, providing the support necessary to advance my research and position me for future career development awards. Ultimately, I aspire to establish an independent laboratory dedicated to developing novel therapies that improve outcomes for patients with vision-threatening diseases.