

Andrew Boal

Heed Resident Retreat Personal Statement

My academic interests in ophthalmology are rooted in a longstanding fascination with neurodegenerative disease and its profound impact on vision. I am particularly drawn to conditions that lead to irreversible vision loss, which often represent a source of significant frustration for both patients and clinicians due to the limited availability of disease-modifying therapies. This has motivated my interest in better understanding the cellular and molecular mechanisms that underlie neurodegeneration in the retina and optic nerve.

My prior graduate training touched on neuron–glia interactions in glaucoma, where I studied the role of astrocytes in maintaining neuronal homeostasis and how alterations to the extracellular environment in disease states can impact neuron function. Through this work, I developed an appreciation for the dynamic and context-dependent roles of glial cells—both protective and potentially detrimental—in shaping neuronal survival. During residency, I have come to recognize that these fundamental principles extend well beyond glaucoma, with relevance across a wide range of retinal and neuro-ophthalmic diseases. This has broadened my perspective and reinforced my interest in pursuing research that identifies shared mechanisms of neurodegenerative stress across disease processes, with the goal of uncovering therapeutic targets that may have broad applicability.

While I am still exploring fellowship options, I am particularly interested in fields where I can integrate my background in neuroscience with clinical practice, including retina, glaucoma, and neuro-ophthalmology. Ultimately, I envision a career in academic ophthalmology at a major academic center, where I can contribute to a collaborative environment that bridges clinical insight with foundational science. I am especially motivated by the potential to translate observations from patient care into testable scientific questions, and conversely, to bring mechanistic discoveries back to the bedside in meaningful ways.

The Heed Resident Retreat represents a unique opportunity at a pivotal stage in my training. As I refine my career direction, I am eager to learn from early- and mid-career academic ophthalmologists about how they have navigated the transition from residency to fellowship training and then to faculty, particularly in balancing clinical responsibilities with research and identifying sustainable pathways for funding and mentorship. I would greatly value the opportunity to participate in this program and to engage with peers and mentors who share a commitment to advancing academic ophthalmology. I am confident that the perspectives gained through this experience will meaningfully inform my development as a future academic ophthalmologist.