

Aubrey Hargrave

Temp - Non-Exempt, Ophthalmology Research/Clinical Trials

Bio

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My research interests are centered on ocular immunology and neuroinflammation. My long-standing interest in eye research stems from personal experience with eye disease, which has led me to explore vision research and underlies my passion for disease-centric research in order to improve quality of life for patients.

I am fascinated by the immune response and inflammation, in part because of its broad applicability to many human diseases. To this end, I am interested in developing an understanding of the interplay between the immune and nervous systems in the ocular microenvironment and my past research has allowed me to explore this interplay within diverse areas of the eye. As an undergraduate, I conducted research with Dr. Rima McLeod to study patients with toxoplasmosis, a disease affecting both ocular and neural tissue. We created a patient database and investigated whether genotype influences the inflammatory response to the *t.gondii* parasite. As a predoctoral student with Dr. Alan Burns, my research focused on ocular inflammation in two cases; first, in acute inflammation following a corneal abrasion and second, in the context of systemic inflammation caused by early metabolic syndrome. I analyzed the immune response in both cases and developed methods to determine the effect on corneal nerves.

During my postdoctoral training with Dr. Alfredo Dubra, I am continuing to build on my previous training in vision science, inflammation, and neurodegeneration by using adaptive optics imaging, in conjunction with standard clinical measurements, to explore potential biomarkers in diseases such as multiple sclerosis, glaucoma, and retinal degeneration. With high-resolution in vivo adaptive optics imaging we are able to monitor changes in retinal tissues at the cellular level over time, as well as to observe minute changes in the retina with treatment during clinical trials.

HONORS AND AWARDS

- T32 Vision Training Grant, Stanford University (02/2021-03/022)
- ARVO Student Travel Fellowship, Knights Templar Eye Foundation (2017)
- T32 Houston Area Vision Training Grant, University of Houston (05/2015-04/2017)
- ARVO Student Travel Fellowship, American Academy of Optometry (2014)
- Outstanding Teaching Assistant Award, University of Houston (2014)
- Presidential Fellowship, University of Houston (2011-2013)

LINKS

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