Christopher A. Girkin, MD

Ophthalmology is unique in that much of the work primarily occurs through the microscope, either at the slit lamp or in the operating theater. We often diagnose, monitor, and treat disease at the histologic level, which presents tremendous opportunities but also novel challenges that are different from other physicians'. For example, what would cardiology be like if, instead of auscultation of the heart during routine examinations, the clinician in the trenches could directly inspect the atherosclerotic plaque at the root of the patient's problems? In this way, we are really in vivo histopathologists. This shapes how we approach our patients and aligns us with researchers, both basic and clinical, far more intimately than the physicians in most other fields. It is this characteristic of ophthalmology that attracted me and later drew me into collaborative clinical research on optic nerve imaging and basic research on lamina cribrosa morphometry and biomechanics.

Several factors prompted me to blend a clinical career with research. The opportunity to advance the field and help a greater number of people than is possible as a full-time clinician is compelling. Certainly, my early experiences in residency and in medical school in the South working in county hospitals—seeing firsthand how glaucoma ravages the underserved segments of our population—motivated me to explore the etiologies of health care disparity.

What I value most, however, is the "conversation" of research. I greatly value the richness of the interactions that inevitably develop in a research career, and they are a critical part of why I enjoy going to work every day. I get to collaborate with many brilliant colleagues to improve our understanding of clinical glaucomatous optic neuropathy. The opportunity to participate in this conversation is exciting. It is a dialogue that spans time and space and is built on the past accomplishments of others. It extends globally via diverse collaborations between specialists ranging from epidemiologists to biomechanical engineers.

I was fortunate at the University of Alabama at Birmingham to have the resources to develop a program exploring the underlying biological mechanism associated with the increased risk of glaucoma among individuals of African ancestry. My institution's collaborative African Descent and Glaucoma Evaluation Study (ADAGES) with Linda Zangwill, PhD, at the University of California, San Diego, and Jeffrey Liebmann, MD, at the New York Eye and Ear Infirmary is now entering its seventh year, and this research is providing new imaging and functional biomarkers for glaucoma. Eventually, my fellow investigators and I will be able to correlate the findings from ADAGES with our work using human donor tissue to define differences in scleral and lamina cribrosa morphometry and biomechanics stratified by age and racial group. This information may mediate some of African Americans' elevated risk. It is my hope that these basic collaborations with Crawford Downs, PhD, and Claude Burgoyne, MD, at the Devers Eye Institute will eventually merge with our in vivo imaging work to develop newer methods by which to manage patients.

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I encourage all young clinicians to cultivate their careers as in vivo histologists and to engage in the rewarding conversation that research brings to a career. They have a great deal to offer, and there are far too few of us. ■

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