5Q With James C. Major Jr, MD, PhD

James C. Major Jr, MD, PhD, is a Retina Specialist at Retina Consultants of Houston.

1. You have your PhD in biology. How has your work in that field affected the way you view your subspecialty?

Since I was a young child, I have been an avid birder. Birding involves identifying species by GISS, or general impression of size and shape. Labeling retinal pathology is no different. Birding and retina both involve pattern recognition. And the more patterns—that is, GISS—or pathologies you know, the better able you will be to identify what you are seeing. The second time you see a pizza pie fundus, for example, you just know that it is cytomegalovirus retinitis. The challenge in birding and retina, of course, is that the eyes don't see what the mind doesn't know. Experience and exposure make the difference between someone good and someone great. So get back in the clinic, see some patients, and get your GISS on!

2. Which of the skills you honed as an assistant professor at the University of Texas at Austin have translated to the retina world?

Definitely the art and passion of teaching. As a beginning graduate student I was strongly encouraged (I would even say forced) to teach a human embryology course. Well, I loved it. In it, I learned the difference between providing information to a student and truly teaching that student so he or she can retain the information. Combine a true passion for a discipline with a great disseminator of information and you have a perfect teacher.

Giving a scientific talk at a retina meeting, talking in the clinic with a resident, and educating a patient about his or her eye condition are basically the same thing. Teaching is more than passing along information; you must get your audience to care about the topic as you do. Infuse them with your passion.

3. Tell our readers more about your interest in the intersection between ornithology and ophthalmology.

As *Seinfeld* reminds us, you generally do not want to allow your worlds (eg, partners and friends, work and nonwork friends, family members and in-laws, etc.) to collide. As a resident and fellow at the Bascom Palmer Eye Institute, I bucked this advice and combined my personal and professional ambitions.

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I've always had a passion for birds, and my graduate degree is in ornithology. Knowing that birds have some of the sharpest vision of any animal, it made sense that I would try to find common ground. My team was the first to image live raptor retinae with a prototype spectral-domain optical coherence tomography (OCT) device. (The birds were tame because they had been in captivity due to untreatable or undiagnosed injuries and would therefore sit quietly at the OCT in dim light.) The images we captured were amazing: two foveae, deeper choroid, strange vitreoretinal interfaces, and a chronic retinal detachment with subretinal fluid that rendered a hawk monocular. I easily reattached him with a quick scleral buckle and vitrectomy! My interest in the avian eye still burns deep within me, and I hope to continue further down this path again some day.

4. What is the most interesting surgical case you have encountered?

A 10-year-old boy presented with some remote questionable trauma. There were no obvious signs of an open globe, and CT scan showed no intraocular foreign bodies. We had no view to the posterior pole, and the lens was opacified.

As he underwent exploration, buckle, lensectomy, and vitrectomy, I gradually cleared the vitreous hemorrhage. The detached retina was filled with holes and

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little white chalky pieces that looked like rice grains. As I laboriously removed them, experimenting with a variety of instruments, they crumbled to pieces; they were the consistency of cottage cheese. The vitrector was useless in removing them, and the more I removed, the further I was from accomplishing anything productive.

It was unbelievably frustrating. Eventually the retina was as flat as possible, and I finished the surgery. Pathology revealed "vegetable matter." When the patient was confronted, further history revealed that the child had fashioned a homemade potato gun, with which he was shot in the face. How those little pieces got inside so delicately and silently, I'll never know. There's probably more to the story. Sadly, the patient developed a gram-negative endophthalmitis and lost his eye.

This experience taught me that you always fight the good fight. When your head hits the pillow at night, even after failure, you need be convinced you did everything you possibly could for your patient. That's the most important thing. Fight to the last man, always.

5. If you had not been drawn toward ophthalmology, in which medical specialty do you think you would have landed?

Despite my wife's efforts to lure me into geriatrics—by the way, I saw more 100-year-old patients last week than she did—I held fast to my childhood dream. Both my father and grandfather were ophthalmologists. I had a positive family history, and I never wavered in my interest to follow in their footsteps.

Upon arriving at Bascom Palmer, mentors such as Carmen Puliafito, MD; Harry W. Flynn Jr, MD; and William Smiddy, MD, led me to the dark side of ophthalmology: retina. There was no turning back.

One thing is for sure: I did not consider obstetrics as a specialty. The miracle of life is too messy for me. I want my patients dilated, but not *that* kind of dilated! ■