

# FELLOWS' FOCUS

## CONTINUED LEARNING VITAL FOR CONTINUED GROWTH



Retina experts offer advice and observations for fellows preparing to enter the professional world on their own.

BY KATHERINE TALCOTT, MD

In December, Spark Therapeutics received approval from the US FDA for voretigene neparvovec-rzyl (Luxturna) for the treatment of biallelic *RPE65* mutation–associated retinal dystrophy. This approval marked the first FDA-approved gene therapy for a genetic disease, the first approved adeno-associated virus vector gene therapy, and the first approved pharmacologic treatment for an inherited retinal disease. In March, Jason Comander, MD, PhD, Associate Director, Inherited Retinal Disorders Service, Massachusetts Eye and Ear, became the first provider to inject voretigene after FDA approval.

The approval, though recent, has already revolutionized the way we think about inherited retinal degenerations, and it laid the groundwork for the development of gene therapies to treat other conditions. For those of us who are soon to finish our fellowships

and venture forth into the world of retina practice, this landmark approval can serve as a reminder that, although we have finished our formal training, the world of medicine will continue to change.

### THE WORLD IS OUR OYSTER

As a fellow who will soon be starting a career in retina, it's amazing to think about what other discoveries and innovations will become available in my lifetime. Right now I'm learning directly from innovators in the clinic and in the OR, and I'm involved in clinical trials. After graduation, however, most fellows find themselves in a different situation, where they are the only provider at a clinic or OR.

This prospective change got me thinking: How do we continue to incorporate new technologies and clinical and surgical advances over the course of our careers? We won't all be

inherited retinal degeneration experts injecting voretigene, but how can we move with the times and challenge ourselves to be our best selves? To address these and other questions, I asked several senior retina practitioners for advice on how to stay current in a changing field after we leave our training institutions.

### LIFE AFTER FELLOWSHIP

One of the reasons many ophthalmology trainees today decide to go into the field of retina is because of the constant development of new technologies and other innovations for the clinic and OR in this subspecialty. Julia A. Haller, MD, ophthalmologist-in-chief at Wills Eye Hospital, noted that the practice of retina today is radically different from when she finished her training.

"That's one of the compelling and engaging aspects of our field," she said.

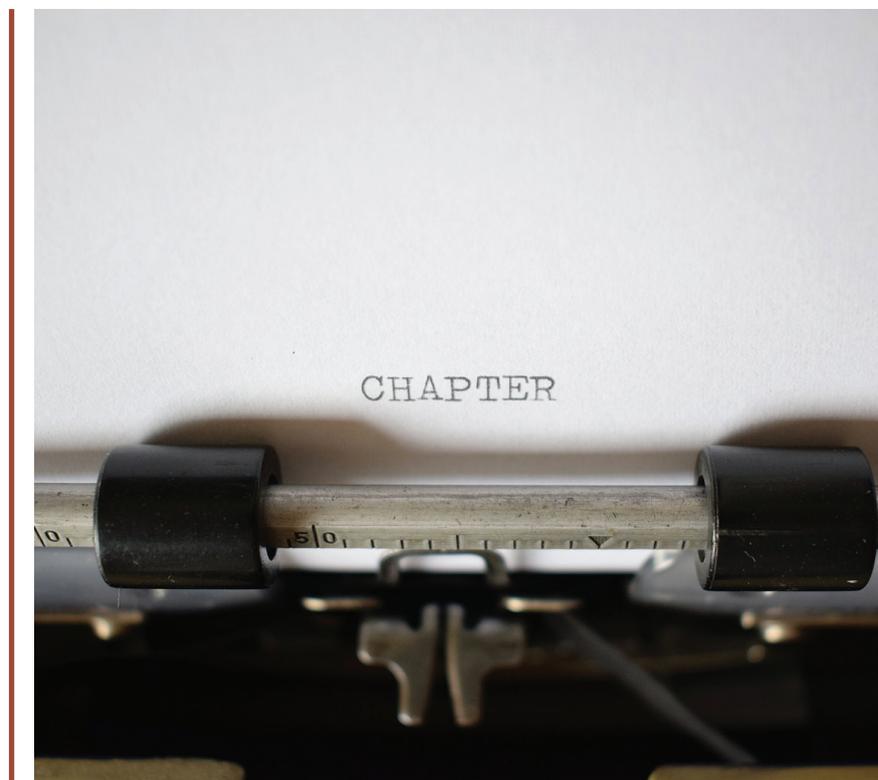
"It's always interesting and challenging and exciting! We have made the jump to small-gauge vitrectomy surgery; to intravitreal pharmacologic therapy for age-related macular degeneration, retinal vein occlusion, and diabetic retinopathy; and to all sorts of new devices and technologies."

There are multiple ways to continue to learn and to incorporate innovations after fellowship. For those of us who will work in academic centers or with training fellows, that environment can naturally foster such learning. Allen C. Ho, MD, director of retina research at Wills Eye Hospital, said, "I have had the privilege of working with a very talented group of Wills retina fellows who are constantly evolving my surgical thinking; they cross-pollinate ideas from my excellent partners and challenge the status quo."

Becoming involved in research and development of new technologies is another route to consider. Dr. Ho, for example, has worked with the surgical industry to help refine and evolve vitreoretinal hardware and instrumentation. Key examples in his career have included the evolution of integrated surgical systems such as Alcon's Accurus Surgical System and Constellation Vision System, minimally invasive vitrectomy surgery, and 3D digitally assisted surgery, which he called "an area in which we have just scratched the surface."

"I learn new techniques from my colleagues and also by design collaboration," Dr. Ho added, "such as our new suprachoroidal approach to the subretinal space. This was born of failure from a transvitreal approach to that space in a cell therapy trial."

Multiple types of input can help busy clinicians stay up to date, Dr. Haller said. "Working in a busy academic center helps, of course, and I have really enjoyed my involvement in the research leading to many of these advances. I would also work to go to meetings and listen to talks



and read."

Experience and innovation in the OR is another source of continued learning, said Bobeck S. Modjtahedi, MD, director of the electrophysiology and retinal degeneration service at Southern California Permanente Medical Group. "It is critically important to avoid becoming complacent in your surgical practice—it takes a very conscious effort to force yourself to continue to grow and to evolve as a surgeon," he said. "Most of the academic peer-reviewed literature is geared toward clinical management, so staying up to date on surgical advances can take a little more effort. We are fortunate to have a wealth of high-quality surgical videos to learn from, and many of the leaders in surgical innovation who post these videos are often very receptive at answering emails about their new techniques."

You can really only learn by doing, Dr. Modjtahedi said, but you can start by incorporating one new step

at a time. "Ultimately, surgery is a hands-on endeavor, and there is only so much you can learn without actually operating," he said. "Many physicians continue to use cadaveric eyes to try new techniques. I think it is valuable to roll out new techniques in an incremental fashion. Start slow by mastering individual steps or more basic versions of a technique and then let yourself grow from there. Try not to tackle too much at once, and give yourself the best chance to succeed to avoid discouraging setbacks."

### STAY CONNECTED

Once fellowship training is over, many of us will find ourselves leaving the large academic and private practice groups where we trained. Maintaining a network of peers and trusted mentors is important when we find ourselves alone in the clinic or the OR. Dr. Modjtahedi offered the following advice: "It is

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important to find a trusted balance of people you can go to for advice early in your career. Attendings from fellowship remain an important resource even after graduation." Peers who recently graduated can offer the perspective of having experience but remembering what it was like to be in your position, he added. "Sometimes the best and most practical advice comes from your friends who are only a year or 2 ahead of you. They usually have the freshest perspectives on navigating those early career bumps and challenges."

Overall, the end of fellowship and the beginning of one's career is an exciting time. "The end of fellowship is just the beginning of a career of learning and improvement for a retina specialist," Dr. Ho said, "but that's what makes retina the most fascinating. We have a lot of work to do to be better for patients." While you are doing that work, make sure you have multiple mentors and trusted peers you can call on. ■

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- Financial disclosure: None