**W**hen Dr. Elad Moisseiev sees an eye, he sees an entire world.

"Even though the eye is very small, there is a whole world in there," says the Tel Aviv native and 2014-2016 APF Fellow at the University of California at Davis. He is a vitreoretinal surgeon, an ophthalmologist specializing in treatment of retinal diseases, both surgical and medical.

Ophthalmology is divided into several sub-specialties. The back of the eye contains the vitreous, the jelly that fills the eye, and the retina, which is the most complicated and important part of the eye. The front part of the eye is designed to focus light on retina, which changes that light into a neural signal that goes back to the brain and the brain interprets that into vision.

"The retina is only about 0.3 millimeters thick, and in intraocular surgery every movement can be critical. I find these are the most complicated and challenging ocular surgeries," Moisseiev says, noting a reason he chose retinal specialization.

But he also reflected further on why he enjoys ophthalmology.

"While there are many diseases that are unique to the eye, ophthalmologists also connect to the body as a whole. Ocular pathology is connected to internal medicine, neurology, rheumatology and more. This specialty allows you to treat medical diseases and do surgeries and I really like the combination."

The 37-year-old came from Tel Aviv with his family – his wife Einav, 35, an organizational psychologist, and two sons – Ariel, 6 years old and Ido, 2 ½ years old.

Moisseiev chose the program at UC/Davis because of its world-wide reputation in general ophthalmology and in vitreoretinal treatment and research. "The volume and diversity I see here is far greater than what I see in Israel, the volume alone is three to four times greater. And researchers come from all over the world to work and study here.

"When you apply for Fellowships, you apply to many places and I was very lucky I was accepted here. I got a very early positive answer and I was very pleased. I didn't look elsewhere because this was above and beyond what I'd ever hoped for."

The senior ophthalmologist at Tel Aviv Medical Center always knew he would become a doctor. His grandfather was a doctor and his father is an ophthalmologist. "They have been great role models for me."

When he returns he will be one of three vitreoretinal surgeons at Tel Aviv Medical Center. He will do some general ophthalmology and cataract surgery, but mostly treat patients with retinal diseases. There will be a lot of work waiting for him, he said.

"I was hooked on ophthalmology in medical school, even though it is a very small portion of the medical school experience." He graduated from the Sackler School of Medicine at Tel Aviv University.

"There are a lot of technically challenging procedures that are done in the office, not technically surgeries, but very high tech, such as with lasers," he said. "And ophthalmology is one of the very most cutting edge specialties; every few years there is a new 'revolution' in ophthalmology."

His internship was at Hillel Yaffe Medical Center in Hadera and his residency at was Tel Aviv Medical Center. "But by the second year of my five-year-residency I knew it was the retina for me."

His residency was in general ophthalmology, but most of his research and additional reading was in the retinal field.

Before the Fellowship he had published about 35 research papers. He hopes to publish about 10 more based on his Fellowship.

Fellowship work is very intense. Surgery is two days a week, 10 hours a day, with from three to seven surgeries a day. Complicated surgeries can last as long as five hours. Clinic is three days a week, 10 hours a day, with as many as 45 patients. This includes performing many in-office procedures.

While his Fellowship is clinical, he is able to do a lot of stem cell research related to the retina in the Center's state-of-the-art facilities. "The research building is right next door and I'm able to start something in the morning and come back later in the day. It's very nice."

Moisseiev says, because of his Fellowship experience, he will be return more confident as a physician and a surgeon. He will have more ways to solve a problems and will be more versatile in his decision-making.

"My mind has been opened to doing things in different ways and I will have more options for my patients in the future."

But right now it is difficult to separate home life from Fellowship life. Moisseiev tries to do his work after the kids are asleep. But when he's on call, "He wears a beeper and just has to go."

"Many of the emergencies are handled by the retinal surgeons, he says. These include, for example, retinal detachments and endophthalmitis, an infection of the inside of the eye.

"Ocular trauma is also under the responsibility of the vitreoretinal surgeon," says the APF Fellow. "It is often caused by accidents. In Israel it sometimes occurs among soldiers.

"These cases are always specifically appealing to me because I was a military doctor for five years and it's a very important skill for me to have trying to save eyes damaged by trauma."

Surgeries can be nerve-wracking, with work done inside the eye through three tiny holes, many of which are half a millimeter long.

"I'm always very conscious, if I just touch the retina inadvertently, that I can destroy all the cells in the area and that can mean irreversible vison loss to the patient. I watch very carefully where both my hands are.

"But it's always exciting too."

Moisseiev says it really is necessary to leave Israel to get this kind of training. "We really don't have an equivalent back home. You get exposure to various techniques and cases in a shorter period of time and the system here is built for specialty training. We just don't currently have a full-fledged fellowship program for a sub-specialty like this in Israel.

This is the best way of doing it, this is taking the extra step to get to the next level."

"Above all, I think vision is the most meaningful sense; if I can improve vision, or restore it, it is very rewarding for me and the patient, of course."

## American Physicians Fellowship for Medicine in Israel