Research and future expansion

Ophthalmology is rich with opportunities to bring new treatments to patients and expand research into promising new discoveries that will save, restore and improve people’s vision in nearly miraculous ways. Gavin Herbert Eye Institute already has achieved that for more than a decade under its founding director, the late Dr. Roger Steinert.

Now, under new chair and director Dr. Baruch D. Kuppermann, GHEI plans a new era of both immediate and long-term growth in research, teaching and clinical practice. The vision is no less ambitious than building GHEI into a nationally ranked eye center with a larger international presence.

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“We’re going to embark on a fundraising era to support the research, educational and clinical missions of GHEI,” said Kuppermann, who joined UC Irvine 25 years ago, long before there was a GHEI. As a result, his institutional memory is deep, serving as the foundation for his belief in the heights GHEI can reach. “There will be a tremendous focus on research expansion, where we hope to bring in as many as eight new research labs. I want to double our number of researchers heading laboratories.”

Kuppermann himself is a well known retina researcher who has been involved in numerous clinical trials. As a retina specialist, his work centers on the effect of drugs on the mitochondrial genetics of patients with retinal diseases such as age-related macular degeneration. He has led national trials on treatments for that vision-robbing condition, as well as diabetic retinopathy.

He co-founded the Retina World Congress to create greater international collaboration on retinal disease, and launched UC Irvine’s international and national retina fellowship programs to train a new generation of top researchers and doctors.

Now Kuppermann brings that big-picture vision as he leads GHEI. The medical school already has authorized him to bring aboard a new, high-impact research team headed by a prominent investigator.

Although Kuppermann is calling for a significant expansion of clinical research, he foresees putting an even greater emphasis on basic and translational research. “We want to bring research from the bench to bedside.”

That same idea, to bring GHEI to full strength in all areas, guides the new director’s vision for patient treatment.

“I want to expand the areas in which we offer services to patients,” he said. “For example, we should be adding an ocular tumor specialist. I also want to include retinal degeneration and pediatric retinal work.”

GHEI already covers 95 percent of the treatment field, he said. Those few additions would make it a comprehensive clinical vision center.

Plans also include reaching out to vision researchers at UC Irvine who aren’t part of GHEI, such as neurobiologists doing work on the brain’s role in vision.

The hope is to break down silos and get people talking across departments and developing new collaborations.

GHEI’s vital teaching mission hasn’t been forgotten. Kuppermann would like to expand the residency program to 12 from the current nine residents, and bring in more international fellows.

Of course, more researchers and more services also mean the need for laboratories, medical offices and operating rooms. Kuppermann has his eye on underutilized shell space in the GHEI building, but knows that with continued growth, even that won’t be enough.

“Space is always at a premium,” Kuppermann said, “and so the long-term dream is for a separate research building devoted to vision research.”

But it will be costly if Orange County is to become the home of a nationally and internationally reputed program for eye research and treatment.

“Our fundraising campaign will aim to raise up to $100 million,” he said.

These dreams are something Kuppermann discussed many times with Steinert, who enthusiastically shared them. “My vision is to honor Roger Steinert’s vision and expand on it,” Kuppermann said.
Despite the tremendous advances that the Gavin Herbert Eye Institute has continued to make in 2017, both in patient care and in the laboratory, there’s no getting around it: This has been a sad, sad year. The June death of Dr. Roger Steinert, our founding director, a teacher and supporter of us all, is a terrible loss. He built us — our building and our staff. He shaped us — our leading research, our top-notch surgery, our ongoing care for patients with vision-stealing ailments.

It’s fitting that Roger was committed to maintaining and restoring the vision of others, because he was a man who never lacked vision. It’s not even a slight exaggeration to say that his work on the use of lasers in ophthalmology has transformed the field.

And now, as I write my first message as chair, I’m struck anew by the name of this newsletter, because Roger shined the light for all of us here, both the staff and the people who have entrusted us with their precious ability to see.

I’ve been teaching, seeing patients and conducting research at UC Irvine for 25 years now, and definitely, the best of those years were the ones I spent learning from Roger. He was more than a passionate and creative leader; he was also one of the most humane, a man who was completely devoted to his wife and children, his beloved Australian shepherd and — who could forget? — his Red Sox (despite his season tickets to the Angels).

GHEI will continue to grow. There might be new directions and new visions that I hope will be as big as Roger’s were. One thing is certain: One cannot grow in size or direction without the most solid of foundations. In a mere 13 years, that’s what Roger built here and left for all of us.

Baruch D. Kuppermann, MD, PhD
Director, Gavin Herbert Eye Institute
Chair, Department of Ophthalmology

Faculty members

**Cataracts, Cornea, External Disease and Refractive Surgery**
Marjan Farid, MD
Vice Chair, Ophthalmic Faculty
Sumit (Sam) Garg, MD
Vice Chair, Clinical Ophthalmology
Sanjay Kedhar, MD
Matthew Wade, MD

**Cataracts and Glaucoma**
Sameh Mosaed, MD
Anand Bhatt, MD

**Comprehensive Ophthalmology**
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Eric Pearlman, PhD
Jing Yang, MD, PhD
Q & A with an Ophthalmologist

With his specialization in clinical care, surgery and multidisciplinary research to treat diseases of the retina, Dr. Andrew Browne, was a perfect fit to join the GHEI team. Browne, a clinical assistant professor, arrived in August from the Cleveland Clinic.

Q: What made you decide to make the switch to GHEI?
A: I really like the personality of the institute and the research resources that are available throughout UCI. Everyone is friendly and helpful and open-minded about doing new things to solve medical problems.

Q: What’s your area of specialization?
A: I’m a vitreoretinal surgeon, treating illnesses and conditions affecting the retina inside the back of the eye: diabetes; vein occlusion, which is like a stroke in the eye; macular degeneration, which affects older people; hereditary retinal diseases and inflammatory and infectious disease. I also have an interest in tumors arising inside the eye.

Q: Do you recall any particularly interesting cases?
A: A young man was assembling his lawnmower when a 1-inch shard of metal penetrated into his eye. It rested under the retina about a millimeter from his central vision, and we were able to save his central vision with surgery.

Q: Tell us about your research interests.
A: My PhD research was on something called lab-on-a-chip to perform laboratory tests at the patient’s bedside. This can replace the slow process of getting a vial of blood that’s sent to a lab for tests. With lab-on-a-chip, you need less than a drop of blood which can be processed in microscopic “plumbing” on the chip’s surface. With a microscale environment, tests can be done more quickly and with fewer expensive reagents.

In more recent years, I’ve been very interested in stem cells. They can be coaxied to develop into balls of retinal tissue. We can look at this material using advanced laser microscopes and learn about their function. The resources at the Beckman Laser Institute and UCI Biomedical Engineering are uniquely powerful for this kind of work.
Medical mission to Peru

Two ophthalmologists with the UC Irvine Health Gavin Herbert Eye Institute recently traveled to Pisco, a remote city in Peru, on a medical mission to perform cataract surgery and one bilateral glaucoma surgery on patients who were all but blinded by a condition that is quickly corrected here in the United States. Dr. Sameh Mosaed, professor of ophthalmology, performed most of the surgeries; a day after, the eye patches were removed and the patients received postoperative care from Dr. Mitul C. Mehta, assistant clinical professor.

It was an extraordinary experience for the 30-plus patients whose vision was restored in a mere 24 hours, and for the two doctors and their staff, who quickly came to admire their patients and share in their joy.

Dr. Sameh Mosaed:
I had never done a mission before. I was approached by a nurse affiliated with Women for World Health. They do medical missions throughout the world, but they’d never done an eye mission.

Dr. Mitul C. Mehta:
I’ve been on nonsurgical missions before, but this was my first surgical mission. The town of Pisco was completely leveled in 2008 by a big earthquake...this hospital had to be rebuilt from scratch. They had an operating room, but we brought everything required for the procedures. Dr. Mosaed was in the operating room doing the heavy lifting because she’s an amazing cataract surgeon. She did surgeries with ultrasound that most people would think impossible.

Mosaed:
I would hold fingers up in front of the patients and they couldn’t see how many. I was doing an average of 10 to 12 surgeries a day. There were cases of remarkably dense cataracts, very severe.

There’s one particular story in my memory, a husband and wife who both had cataracts. I operated on them on the same day. They were sitting side by side in the waiting area, holding hands.

Mehta:
It was the husband who took the patch off first. There was a dramatic improvement in his vision... the grin on his face was amazing. He wanted to be the one to see his wife get her eye patch off. She did, and she could see, and she started crying. Then I started crying.

Mosaed:
People in Peru have a very stoic approach to pain and procedures. They didn’t flinch, they didn’t complain, they didn’t receive any sedation. It was really remarkable. The mission was a reminder of how lucky we are here and how we take a lot of things for granted.
DONOR PROFILE

Emergency vision repair

Richard Ruszat has long felt well cared for by the doctors at GHEI. For nine years, Dr. Baruch D. Kuppermann, now the director of GHEI, has watched over the lamellar macular hole in Ruszat’s right eye, which is the broken wall of a cyst in a layer of the retina that causes distorted vision. In addition, Dr. Sumit Garg performed his cataract surgery.

But even Ruszat, a longtime fan of and donor to the eye institute, was astonished and impressed by the emergency care he received when his vision, again in the right eye, suddenly seemed to go bad in early September. He knew what to do because Kuppermann had warned him repeatedly that if he saw flashing lights or had other vision problems, he should not wait to see if things cleared up or figure it could be taken care of in a couple of days. He would have to seek help immediately because it might be a detached retina.

But this was a Saturday, and GHEI was closed.

No matter. Ruszat called, and Dr. Angeline Wang, vitreoretinal surgery fellow, opened the doors right away in order to see him. It was indeed a detached retina, and Wang spent several hours repairing it.

“Then Dr. Wang opened up for me the next day, Sunday, to check on me and make sure everything was going in a good direction,” Ruszat recalls. His vision has been fine ever since.

“As an artist, Michael Egan is a man who really uses his eyes.

Personalized care

That’s why it’s been important to him to get the most observant medical care for what Egan calls “the trifecta of eye problems”: cataracts, glaucoma and macular degeneration. He counts himself lucky that when he spoke about a pain in his eye with a neighbor in Corona del Mar, she recommended retina specialist Dr. Baruch D. Kuppermann, now the new chair of the Gavin Herbert Eye Institute. Kuppermann has been guiding Egan toward a diet rich in lutein to help combat macular degeneration, and discussing promising new research involving stem cells. For his other problems, Egan sees Dr. Sameh Mosaed, a specialist in cataracts and glaucoma. So far, he has needed no surgery.

The care Egan received shows that top eye treatment isn’t always about the leading-edge procedures for which GHEI is famous. Many times, it simply involves careful management of common eye problems — for which Egan is so thankful that he penned a note to GHEI.

“For the light you sustain in me and others as well,” he wrote, “and for your gentle care and practices skill, may you be blessed in all aspects of your lives.”

“The Gavin Herbert Eye Institute is one of those very special places in Orange County,” said Ruszat, a longtime Newport Beach resident who, along with his wife Cheryll, runs Montessori Schools of Irvine, which includes a childcare facility and school on the UC Irvine campus. “Not only are they very caring and very professional, I feel comfortable and confident with these people.”
Thank you to our donors

**Gifts of $25,000 and above received since July 1, 2015, to the general fund of the Gavin Herbert Eye Institute:**
Carol and Budge Collins
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$3,625,500 of the $5,000,000 goal has been raised to date. To make a donation toward this endowed chair, contact Janice Briggs, senior executive director of development, at 949-824-0091 or jbriggs@uci.edu

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**NEWS IN BRIEF**

On October 13, 2017, Gavin Herbert Eye Institute hosted its 11th Annual Colloquium. Attendees spent two interactive days hearing from three guest speakers as well as faculty presenters on the latest technologies and options in vision care and research.

Guest Speakers: Dr. Alfredo Sadun (Doheny Eye Institute), Dr. Sumit Garg, and Dr. Francis Mah (Scripps Clinic)

The 4th Annual 20/20 Society event welcomed our donors who continue to passionately support the work and research of the Gavin Herbert Eye Institute, and also introduced Dr. Baruch D. Kuppermann, the new department chair. The 20/20 Society funds innovative research for cures and therapies related to eye disease and injury. To join the 20/20 Society, email jbriggs@uci.edu, or call 949-824-0091.

Dr. Mitul Mehta with Yolanda and Dennis De La Paz
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For your convenience, we have extended our hours:
Monday–Friday: 7:30 a.m.–6 p.m.
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Proceeds from our optical shop fund sight-saving research and procedures in the Department of Ophthalmology.

EVENTS

All events are at the Gavin Herbert Eye Institute in the Cavanaugh Room on the third floor.
To register and attend, call 949-824-7243 or email ghei@health.uci.edu

LASIK Surgery Seminars
Free, informational seminar to learn about LASIK surgery and whether you might be a candidate.
Thursday, Feb. 15, 2018 | 6:30–7:30 p.m.

Community Lecture
Diabetes:
The Impact of Diabetes on Your Vision, and What Really Matters When you Disrupt your Routine
Baruch D. Kuppermann, MD, PhD
Ping Wang, MD
Monday, Jan. 29, 2018 | 7 p.m.

Aging Eyes
Cataracts and Glaucoma
What You Need to Know NOW
Anand Bhatt, MD
I Can't See Like I Used To: Identifying Age-related Macular Degeneration
Mitul Mehta, MD
Monday, March 19, 2018 | 6–7 p.m.

Make an appointment
Gavin Herbert Eye Institute
850 Health Sciences Road, Irvine, CA 92697
Appointments: 949-824-2020
Optical Shop: 949-824-7690

UC Irvine Medical Center
101 The City Drive South, Pavilion 2, Orange, CA 92868
Appointments: 714-456-7183

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