Two faces of a fight against blindness

While Elaine Cain was slowly losing her vision in the Midwest, Jing Yang, MD, PhD, worked in a laboratory in Denmark, figuring out how to nurture the cells that might offer hope for an eye disease that had no treatment and assured future blindness. As it happened, both women moved to Orange County where the research of one would have a profound effect on the other.

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Patients give thanks on National Doctors’ Day

Gavin Herbert Eye Institute invited patients to send messages to their doctors in recognition of National Doctors’ Day on March 30. Their messages were sincere reflections of the care our doctors provide every day.

To Anand B. Bhatt, MD
“I only wish I could donate more to the institute. You and your colleagues are doing a fantastic job! I’m very fortunate I have you for my doctor.”

To R. Wade Crow, MD
“I wanted to take this moment to thank you for your service to my particular care. You always seemed to display a special sense of attention and care that allowed me to feel truly comfortable. Your demeanor is always professional and your manner is always pleasant.”

To Marjan Farid, MD
“My heart is big for UCI and for you. You saved my vision in my eye when so many other doctors told me it was impossible.”

To Sumit (Sam) Garg, MD
“You were the first ophthalmologist who told me that my eyes are pretty healthy and didn’t make me feel guilty when I could not tell which lens made me see better than the other. Looking forward to my next appointment with you.”

To Baruch Kuppermann, MD, PhD
“Trusting you with my retinas is one of the best decisions I’ve ever made. You are so skilled, thoughtful, generous and funny. My retinas are in great hands and with your effort, in great shape, too!”

To Stephanie Lu, MD
“You did a great job on my eyes, and I very much appreciate your professional service.”

To Mitul Mehta, MD
“Thank you for caring for my eyes and always doing a thorough follow-up.”

To Sameh Mosaed, MD
“I cannot express my gratitude for the wonderful care you have provided me over these few years. Your words of encouragement and thorough treatment give me hope that my vision will remain intact for years to come.”

If you missed Doctors’ Day, you can still make a gift in honor of your doctor. For more information, call Janice Briggs, executive director of development, at 949-824-0091.

Steinert honored at special celebration

Dr. Roger Steinert, chair of the Department of Ophthalmology and director of the Gavin Herbert Eye Institute, was honored at a special event earlier this year, hosted by Dr. Howard Federoff, CEO of UC Irvine Health and vice chancellor of health affairs at University of California, Irvine. The event paid tribute to Dr. Steinert for professional achievements that brought multiple awards and honors in 2015.

Gavin Herbert Eye Institute Director Roger Steinert, MD, and UC Irvine Health CEO and Vice Chancellor of Health Affairs Howard Federoff, MD, PhD.
MESSAGE FROM THE CHAIR

From bench to bedside – and beyond

We recently hosted our annual Bench to Bedside Symposium, an event dedicated to the advances of translational research. It’s always exciting to learn about the methodologies born in the lab, and how they might be used to further medical treatments in the future.

The symposium is a unique environment that brings together researchers, clinicians and scientists. This year we hosted more than 150 attendees, and we are proud to say that for the first time, we were able to showcase 22 poster presentations from post-doc and graduate students. See photo below. The future truly is bright for eye treatment.

That commitment is evident in our cover story about the remarkable research by Dr. Jing Yang, and the impact it is already having on one patient’s life. The human clinical trials, approved by the FDA last year, started as cells in a lab. Now they are restoring vision for people who thought there was no hope.

We want to express our deep appreciation to Josephine Gleis for her new $5 million planned gift to the Gavin Herbert Eye Institute to enable us to expedite our vision research.

We have many supporters who share our passion for excellence and innovation, and we hope you join us in our pursuit for even greater advancements in eye health.

Sincerely,

Roger Steinert, MD
Director, Gavin Herbert Eye Institute
Irving H. Leopold Professor of Ophthalmology

But our commitment to translational research doesn’t stop there. We talk about bringing work from the research bench to the patient’s bedside, but we also live it.

Faculty members

Comprehensive Eye Care
Jennifer Che, OD
Timothy Scott Liegler, OD
Kailey Marshall, OD

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

Cataracts and Glaucoma
Sameh Mosaed, MD
Anand Bhatt, MD

Neuro-Ophthalmology
Chantal Boisvert, MD
R. Wade Crow, MD

Oculoplastics
Jeremiah Tao, MD

Ophthalmic Pathology
Donald S. Minckler, MD

Pediatric Ophthalmology
Chantal Boisvert, MD
Robert W. Lingua, MD
Jennifer Simpson, MD

Retina and Vitreous
Baruch Kuppermann, MD, PhD
Vice Chair, Academic Affairs
Stephanie Lu, MD
Mitul Mehta, MD

Uveitis
Sanjay Kedhar, MD

Research
Bachir BenMohamed, PhD
James V. Jester, PhD
Tibor Juhasz, PhD
M. Cristina Kenney, MD, PhD
Henry Klassen, MD, PhD
Anthony B. Nesburn, MD
Vice Chair, Research

Eric Pearlman, PhD
Steven L. Wechsler, PhD
Jing Yang, MD, PhD
**Jing Yang, MD, PhD**

Dr. Jing Yang was seeing 50 to 100 patients a day at the eye center in China where she first worked as an ophthalmologist. With that kind of patient load, it’s no surprise that she encountered multiple patients with retinitis pigmentosa, a genetic condition that causes cells in the retina to degenerate.

Many of these patients were teenagers who would continue to lose vision until they were completely blind. “And that’s what I needed to tell them would happen over the next 20 or 30 years,” Yang said. “That encouraged me to think about whether there was any way to do something about it.”

Some 12 years later, that “something” is a clinical trial involving patients with advanced vision loss from retinitis pigmentosa. In 2015, the project received the U.S. Food and Drug Administration’s go-ahead for human clinical trials. And though the results won’t be published until next year, Yang, now a researcher at the Gavin Herbert Eye Institute and an assistant professor of ophthalmology at UC Irvine Health School of Medicine, hints that the doctors and patients are happy with the results so far.

Yang went to Denmark with an interest in stem cells. In particular, she started working with progenitor cells (destined to become retinal cells) as a safer alternative for therapeutic use. However, growing these particular cells, which have limited regenerative capacity, requires extraordinary care. “I feed them fresh medium every day,” Yang said. “I handle them very gently.” She even gives them vitamin C as an antioxidant.

At her current home, the Sue & Bill Gross Stem Cell Research Center, Yang has conducted extensive safety research trials on animals with conditions similar to retinitis pigmentosa, working alongside Henry Klassen, MD, PhD, an associate professor of ophthalmology, and also her husband. Most of the funding for the clinical trials has come from the California Institute for Regenerative Medicine (CIRM), the agency created by voter approval of Proposition 71 in 2004. Yang and Klassen founded jCyte, a company to commercialize the treatment, which sponsored the clinical trial.

“I feel that maybe this is my life’s mission,” Yang said.

**Elaine Cain**

When Elaine and Al Cain moved to Orange County from Michigan five years ago, their goal was to be close to family. They had no idea the move would also bring them hope for Elaine’s vision for the first time.

Elaine has been losing vision since age 32, when she was diagnosed with Usher syndrome, a congenital condition that causes both hearing loss and retinitis pigmentosa, the degeneration of retinal cells in the eye. She already had been wearing hearing aids since elementary school but had no idea she had the same ailment as her brother, Walter Szczur, diagnosed in 1952. He is now completely blind and lives with the Cains.

Elaine, now 70, first began losing peripheral vision as the rods — the cells responsible for vision in dim light — were affected, a common pattern in retinitis pigmentosa patients. Then she lost some of her color perception as the cones degenerated, until her vision became limited to a tunnel of less vibrant images.

Elaine’s brother heard from an Ann Arbor doctor about Dr. Baruch Kuppermann, MD, PhD, chief of the retina services at UC Irvine Health Gavin Herbert Eye Institute, known as one of the top-ranked retinal specialists in his field. Because he works at the institute, Kuppermann saw that Elaine might be a good candidate for the clinical trial, using retinal cells in an effort to restore some vision to patients in the late stages of this untreatable disease.

“This new approach to treatment offers the chance of really improving the quality of vision and life for people with RP, and it is exciting to be involved in this innovative project, especially since so many of the patients are noticing a difference,” Kuppermann said.
It took a couple of years of waiting before Elaine’s turn arrived. In January, hundreds of thousands of progenitor retinal cells — like stem cells, but at a later stage of development — were injected into her left eye. There was no pain, she said, and she felt no ill effects.

And there wasn’t much waiting afterward. “I was at the dentist’s office a couple of weeks later,” she recalls, “and I saw something out the side of my eye. I didn’t say anything because maybe it was my imagination and I would jinx it.” But it seems there was no denying the reality as weeks passed. She was regaining peripheral vision, which has continued to improve.

Kuppermann has told her that his other patients in the trial have seen similar results.

Al pulls out his smartphone to show off the scans of Elaine’s retina and the transplanted progenitor cells over time, as though they were a brood of growing grandchildren. To the uninitiated, it’s mostly just a dark circle, but with numerous white dots after the treatment.

“When I leave my daughter’s house at dusk, now I can find my own way to the car,” Elaine said, still a little amazed. It’s not known exactly how much of her vision will return and whether she will need more injections. But she’s eager for the clinical trial to end so that she can get an injection in her other eye, to gain a bigger perspective on her new world.
Pediatric Eye Mobile Program steers kids to better vision

Teachers of pre-kindergarten children in Orange County are starting to see some classroom behavior problems suddenly improve. Some youngsters who showed no interest in books are now turning the pages with enthusiasm. What’s the amazing fix that brought this about?

Eyeglasses.

It’s long been established that eyesight issues can be a major contributor to classroom problems, but not all families have insurance or money for checkups. That’s where the Pediatric Eye Mobile Program provided by UC Irvine Health Gavin Herbert Eye Institute, is making a difference.

Since January, the Pediatric Eye Mobile Program team has been making visits to preschools, transitional kindergarten programs, and community health sites, catching vision problems before they become academic problems. Any child who doesn’t pass an initial screening is invited aboard the mobile vision unit, affectionately named Seymour, for an in-depth eye exam with a pediatric optometrist.

Seymour’s motto is, “Seymour today, see more tomorrow!”

Seymour comes right to the school, so children and parents can easily attend the appointment. If the optometrist determines the child needs glasses, she will write a prescription and fit the child for eyeglass frames. All of the services and eyeglasses are free.

The program was the brainchild of Dr. Robert Lingua, a pediatric ophthalmologist with the UC Irvine Health Gavin Herbert Eye Institute. Lingua worked to secure a $1.5 million First Five grant — money from state cigarette taxes that funds programs for children through age 5 — for the first three years of operation. The eyeglasses are funded through a gift from the Lon V. Smith Foundation, and the program receives additional support from The Nicholas Endowment.

Since January 2016, the team has screened the vision of more than 1500 children in Orange County, and performed complete eye exams on 280. Of those, 220 were provided with glasses. The examinations also find children with amblyopia, commonly called lazy eye, in which one eye has reduced vision. If it’s discovered after about age 8, it can be impossible to correct and vision worsens over time.

“Adequate vision is critical to a child’s success both in school and in life,” said program director Iliana Molina. “By helping their vision improve, we are not only ensuring they can learn to read and write but also ensuring their cognitive ability reaches new heights. It’s more than just wearing glasses, it’s ensuring that the child never falls behind.”

The pediatric eye mobile program must secure matching funds to remain in operation. If the van can continue rolling to students, it is expected to brighten the future of thousands of young children with vision problems.

To learn more about how you can support the Pediatric Eye Mobile Program, contact Janice Briggs, executive director of development, at 949-824-0091 or jbriggs@uci.edu. Call today to meet Seymour and take a tour!
Discovery Eye Foundation gives $2 million to establish cornea and retina centers

The Gavin Herbert Eye Institute has received $2 million from the Discovery Eye Foundation to house the National Keratoconus Foundation and Macular Degeneration Partnership outreach programs. The programs provide information about causes, treatments and potential cures for keratoconus, macular degeneration and other sight-threatening diseases.

The outreach programs will be overseen by Mary Prudden, executive program director for the Discovery Center for Eye Research at GHEI.

GHEI receives Research to Prevent Blindness grant

Gavin Herbert Eye Institute received a prestigious grant from Research to Prevent Blindness. The grant, $115,000 a year for five years, will be used to fund research, equipment, supplies, travel and faculty salary. The unrestricted grant allows more flexibility in the type of costs not typically covered by government grants. Grants are awarded based on factors such as research performance, publications and plans for future research.

Save the Date! 20/20 Society appreciation event on Sept. 15

Supporters of the 20/20 Society are invited to join us for a special evening in appreciation of you. Learn how you are making a difference through our latest project to improve vision health in the community and beyond. Mark your calendar for Sept. 15, 2016. Be sure to look for your invitation in the mail. Not a 20/20 member? Contact Janice Briggs at 949-824-0091 or jbriggs@uci.edu to learn more.
EVENTS

2016 Community Lecture Series

Gavin Herbert Eye Institute offers free lectures about eye health. No registration is required, but seating is limited. Join us!

Third Thursday of each month | 5:30 to 6:30 p.m.
Gavin Herbert Eye Institute, third floor conference room
850 Health Sciences Road, Irvine, CA 92697. Parking is complimentary.

July 12: “A nurse’s perspective: What to expect pre- and post-surgery” with Ruby Mae Bishop, RN, BSN

Aug. 18: “Cataracts” with Dr. Marjan Farid

For more information about the Gavin Herbert Eye Institute Lecture Series, please contact Jan Slavin at jslavin@uci.edu

Other events

Sept. 26: “Age-related Macular Degeneration.” Join ophthalmologist Dr. Baruch Kuppermann for an in-depth discussion about the leading cause for vision loss in Americans 65 and older.

7 to 8 p.m. Newport Beach Public Library
1000 Avocado Ave., Newport Beach, CA 92660.
Event is free and seating is first come, first served. Doors open at 6:30 p.m.

Make an appointment

Gavin Herbert Eye Institute
850 Health Sciences Road
Irvine, CA 92697
Appointments: 949-824-2020
Optical Shop: 949-824-3260

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

Make a donation

To learn more about how you can support us, contact Janice Briggs, executive director of development, at 949-824-0091 or jbriggs@uci.edu

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ucirvinehealth.org/eye
www.eye.uci.edu
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