UCI Health offers the gift of sight to patients with severe eye damage

The UCI Health Gavin Herbert Eye Institute is now the first ophthalmology program west of the Mississippi to offer ocular stem cell transplants for severe eye surface damage.

This life-changing procedure, pioneered by Dr. Edward Holland at the University of Cincinnati, has restored vision for hundreds of individuals with serious damage to their eye surfaces. UCI Health cornea specialist Dr. Marjan Farid is the first ophthalmologist outside the Holland Foundation program to be trained in the complex treatment method.

Severe ocular surface disease can occur at any age, though it tends to impact younger adults. Often it’s caused by a workplace accident, involving contact
with chemicals or extreme heat. A genetic disorder or autoimmune disease can also cause the body to attack eyes and eyelids, resulting in similar damage to eye surfaces.

Traditional therapies, including corneal transplants, don’t work for these patients because the damage is so profound that the cells necessary to support the healing process have been wiped out. To overcome this, Holland devised a treatment that involves transplanting donor limbal stem cells to the patient, then leveraging the best practices kidney transplant protocols to keep the body from rejecting the new tissue.

“The limbal stem cell transplant had been tried before but always failed until Dr. Holland learned to use the best practices kidney transplant team for the eye,” says Farid. “Dr. Holland’s program is the only one in the country that does this procedure well, and now we’re transferring that knowledge to UCI Health to multiply the impact.”

**A complex procedure**

Holland began training Farid in the procedure more than a decade ago, seeing patients and conducting surgeries alongside her at UCI Health. The Holland Foundation for Sight Restoration recently selected the eye institute as the first of five planned centers of excellence in severe ocular disease across the country.

Farid is now working toward increasing the number of patients with corneal blindness whose vision can be treated and restored.

The transplant is just one of many steps and procedures in a process that may take up to a year for each patient and requires the expertise of multiple specialists. First, a stem cell donor must be found. Siblings are usually the best matches. A person with healthy eye tissue can safely donate up to half the limbal stem cells from one of their corneas because they will replenish themselves naturally.

Preparatory surgeries may be required to ready the patient’s damaged eye for a transplant. For example, if a patient’s eyelid has scar tissue attached to the eye’s surface due to injury or disease, an oculoplastic specialist would be needed. After the transplant surgery, patients follow a regimen similar to kidney transplant patients, which includes seeing a nephrologist for immunosuppression therapy and blood monitoring. Finally, the patient may need a glaucoma specialist to manage secondary eye issues.

As an academic medical system, UCI Health is able to bring together all the specialists and researchers needed for successful treatment. Farid plans to add one more critical skill set to the ocular surface disease transplant team to support these patients.

“The catalyst to help us fully establish this team is a nurse transplant coordinator who will manage and coordinate the many different aspects of a patient’s care — getting medications, scheduling monthly or weekly blood checks, calling insurance companies to make sure the medications, surgeries and other procedures are covered, and ensuring that patients are being seen regularly by our team as well as the immunologist,” she says.

**Envisioning the future**

Last July, the Holland Foundation hosted a star-studded fundraiser to support the sight-saving services they provide and to help fund and expand these services at the eye institute.

“It was overwhelming to see the generous donations from our community,” says Farid. “I’m grateful for the support our donors and grateful patients have shown for the eye institute in general, and for our severe ocular surface disease program, specifically. This is just the beginning for us.”

She also hopes to increase the number of UCI Health ophthalmologists who can perform the procedure. “Just as Ed Holland trained me, I want to train our faculty so that we have an entire team of eye surgeons who can care for these patients.”

UCI Health has a waitlist of patients whose vision could be restored by an ocular stem cell transplant. This life-changing surgery also advances the eye institute’s vision of a world without blindness — something close to Farid’s heart because it reflects the legacy of her mentor, the late Roger Steinert, MD, chair of the UCI School of Medicine’s Department of Ophthalmology and founding director of the eye institute who revolutionized laser surgery techniques to prevent blindness and improve vision.

“It’s impossible to quantify all that I learned from Dr. Steinert,” she says. “Not only about ophthalmology and corneal surgery, but about how to be a good doctor, to be gracious and humble, to be a leader both academically and in the ophthalmology world. I know that in developing this program, I’m walking in his footsteps.”

A portion of the proceeds from the July event will be directed to University of California, Irvine, benefiting the Severe Ocular Surface Disease Program of Excellence at Gavin Herbert Eye Institute.

The UCI Health Gavin Herbert Eye Institute is now the first ophthalmology program west of the Mississippi to offer ocular stem cell transplants for severe eye surface damage.
As 2022 draws to a close, we can celebrate an amazing year of growth and success for the Gavin Herbert Eye Institute.

From the perspective of patient care, 2022 was our busiest year yet, with more than 72,000 patient visits to the eye institute and more than 4,500 surgeries. This growth has been supported by more exceptional clinicians joining our staff. Over the summer, we welcomed neuro-ophthalmologist Sam Spiegel, MD, as well as pediatric ophthalmologist Stephen Prepas, MD, who also brings his private practice patients to UCI Health. Read more about these fine physicians in this issue of Shine the Light.

In 2023, we plan to hire four more clinicians: a comprehensive ophthalmologist and three specialists in glaucoma, retina/ocular oncology and cornea and cataract surgery. Our patients will soon enjoy greater access to surgery with the recent approval of two operating rooms at the eye institute in Irvine — effectively doubling our surgical capacity.

Our achievements in advancing research this year are among the brightest spots is the expansion of our corneal and ocular surface disease program under the leadership of Marjan Farid, MD. Ocular stem cell transplant treatment for these extraordinarily complex cases was pioneered by Edward Holland, MD, at the Cincinnati Eye Institute. UCI Health has been chosen to be only the second ophthalmology program in the world to offer this complex care for patients at serious risk of losing their sight due to severe ocular surface disease. We eagerly look forward to supporting the program’s success. Learn more about this exceptional program in this issue.

We continue to greet new neighbors. The UCI Health Dermatology Center now sees its patients in our Irvine facility. The Susan Samueli Integrative Health Institute recently opened next door to us, along with its clinical offices and other schools and programs that are part of the UCI Susan & Henry Samueli College of Health Sciences. We’re delighted to welcome them to the neighborhood.

Finally, I’d like to thank Chad Letteris, the CEO of UCI Health, for his phenomenal support in helping to fund the build-out of the eye institute’s second floor and additional operating rooms. Michael Stamos, MD, dean of the UCI School of Medicine, also has been an amazing partner whose support has been essential in expanding our team with additional clinicians and researchers. They have both been instrumental in our growth and continuing success.

None of our extraordinary accomplishments this year would have been possible without the generosity of our donors, grateful patients and industry partners. Thank you for your ongoing support, which moves us closer to realizing our goals and achieving our mission to eradicate blindness worldwide.
Welcoming two new specialists

The Gavin Herbert Eye Institute recently welcomed two new physicians to our faculty: pediatric ophthalmologist Stephen Prepas, MD, and neuro-ophthalmologist Sam Spiegel, MD.

Prepas is no stranger to UC Irvine. He remembers when buffalo roamed along what is now Bison Avenue. After finishing medical school at UCI in 1975, he completed his residency under the guidance of nationally esteemed glaucoma specialist, the late Dr. Irving Leopold, who was then chair of ophthalmology at the UCI School of Medicine. Over the last four decades, Prepas continued the tradition of training new doctors, first as an award-winning ophthalmology professor at UCI from 1980 to 2002, then at George Washington University’s school of medicine.

The work Prepas is most proud of, though, is volunteering with the nonprofit Surgical Eye Expeditions (SEE) International, treating patients and training eye doctors around the world. He has given his time and expertise on dozens of trips to countries that included Namibia, Nepal, Vietnam and Zimbabwe.

“When I first started, there were no ophthalmology subspecialists in these places, so we would go there to treat patients,” Prepas says. “But over time, we trained local doctors to treat pediatric cases. By the 1990s, we were doing almost as much teaching as doing. It was a great evolution.”

Now, he is orchestrating a different kind of evolution. transitioning patients from his longtime private practice in Newport Beach to the eye institute. He continues to provide their care alongside fellow UCI Health pediatric ophthalmologists Donny Suh, MD, and Charlotte Gore, MD. Prepas is also helping to train a new generation of pediatric ophthalmology fellows at UCI.

Spiegel also hopes to train up-and-coming ophthalmologists and neurologists in his specialty of neuro-ophthalmology, which has a shortage of trained providers. As a board-certified neurologist, Spiegel focuses on treating vision problems that stem from neurologic diseases, such as visual auras caused by migraines or optic nerve inflammation caused by multiple sclerosis. He earned his bachelor’s degree in neuroscience at UCLA, his medical degree at Thomas Jefferson University’s Sidney Kimmel Medical College in Philadelphia, then completed a neurology residency at Stanford University Hospital. He comes to UCI Health and the eye institute after completing a neuro-ophthalmology fellowship at UCLA’s joint Stein and Doheny Eye Institute.

“The Gavin Herbert Eye Institute offers the perfect mix of an outstanding academic health system with excellent training programs in both neurology and ophthalmology, along with a collegial community where I can help further develop interdisciplinary relationships between neurology, ophthalmology and other subspecialties” says Spiegel. “We have exciting opportunities to create unique and collaborative pathways for patients that can really have a tremendous impact on patient care.”

A sister’s gift of sight

Karen Ketchum had just gone through surgery to remove a melanoma followed by immunotherapy when she developed a mysterious new condition: lesions appeared all over her body, including her eyes, which made it hard to see.

Unable to drive or even cook for herself, Ketchum had to leave her job as a senior executive assistant at a local healthcare company and hire a home caregiver. She saw several optometrists and ophthalmologists, who were stumped by Ketchum’s symptoms.

Eventually she was referred to the Gavin Herbert Eye Institute and UCI Health ophthalmologist Marjan Farid, MD. A specialist in cornea surgery and ocular stem cell transplantation, Farid focused on restoring Ketchum’s vision while her colleague, UCI Health dermatologist Sergei Grando, MD, PhD, treated the underlying cause, an extremely rare autoimmune condition called pemphigoid.

The skin-blistering disease had seriously damaged the surface of Ketchum’s corneas, but Farid was able to transplant limbal stem cells from her sister to heal her eyes. UCI Health is only the second location in the world to offer the highly effective transplant procedure pioneered by the Cincinnati Eye Institute’s Edward Holland, MD, who trained Farid and continues to mentor her.

“Dr. Farid is absolutely wonderful,” says Ketchum. “She’s so busy, it’s incredible. But she always takes the time to explain what she’s doing and why.”

In April, Ketchum and her sister both went in on the same day for what she calls a “very simple procedure” to donate limbal stem cells that were then transplanted into Ketchum’s right eye.

“I was thrilled when I could see the numbers on my oven and microwave so I could cook for myself again,” Ketchum says.

Within just a few months, Ketchum was living independently again and even driving. She’s already talking to Farid about having a transplant procedure on her left eye soon.

Ketchum, who turns 80 this year, plans to be like her grandmother, who was going strong until age 94.

“I think everybody should have the opportunity to be at their very best, and sight is a very big part of our lives,” says Ketchum. “You just don’t know how much it matters until it’s not what it should be.”
DONOR SPOTLIGHT

Planning a gift for future generations

Yolanda De La Paz began having trouble with her right eye in 2015. After two procedures to repair a torn retina, she thought she was on the road to recovery. Then one morning she awakened to see that lines no longer appeared straight.

Her doctor diagnosed her with a macular hole on a Friday and gave her the weekend to consider her treatment options. De La Paz had recently received the Gavin Herbert Eye Institute’s newsletter, *Shine the Light*. After she and her husband, Dennis, perused the newsletter and the UCI Health website for information about the eye institute’s ophthalmologists, she called retina specialist Mitul Mehta, MD, first thing on Monday morning.

“We lucked out and were able to get an appointment that Thursday,” she says. “Dr. Mehta’s examination took almost an hour. When he finished, he looked at me and my husband and said, ‘You don’t have options, you have to have surgery.’”

That surgery was successful, but her right eye needed additional treatment. She was referred to Marjan Farid, MD, for cataract surgery; then had specially shaped toric lenses implanted so she no longer needs corrective eyeglasses. Recently she also had surgery to remove a benign growth on the white of her eye and she sees ophthalmologist Sameh Mosaed, MD, a UCI Health glaucoma specialist, to control her eye pressure.

“I’m particularly grateful that at the eye institute, you have specialists in retina, cornea, macular degeneration, glaucoma, inflammation — everything all in one place,” says Dennis De La Paz.

Impressed with his wife’s experience, he also started seeing the institute’s ophthalmologists. Mehta removed calcium deposits called asteroid hyalosis from his eyes, giving him better vision clarity. Farid implanted toric lenses in him too, so that he no longer needs corrective glasses either.

The couple is so delighted with their ophthalmology care that they have switched to UCI Health for their primary and some specialty care needs. The longtime Corona del Mar residents appreciate the easy drive to the UCI campus in Irvine for the eye institute, Gottschalk Medical Plaza and soon, the new hospital, which is under construction.

“Every time you turn around, there’s some new advancement,” Dennis De La Paz says. “We want to help make sure that the research, surgeries, doctors and techniques all continue to improve.”

To that end, the couple has made the institute a beneficiary of two of their trusts. With this type of planned gift, the couple is leaving a legacy that will ensure future patients benefit from the institute’s life-changing vision research and clinical care, just as they have.

“When doing your estate planning, you can always take care of your family,” says Yolanda De La Paz. “But we also wanted to look to the institutions and organizations that make a difference. By supporting the Gavin Herbert Eye Institute, you’re supporting the entire Orange County community.”

Celebrating innovation

More than 70 friends, patients, donors and community leaders gathered Oct. 25, 2022, for the Gavin Herbert Eye Institute’s Vision Research Salon 2022 to learn first-hand about the innovative work underway within the UCI Department of Ophthalmology. Guests toured labs in Hewitt Hall and the Center for Translational Vision Research in Gillespie Hall, as well as mingled with clinicians and scientists at a reception led by UCI College of Health Sciences Vice Chancellor Steve Goldstein, MD, and Ophthalmology Chair Barry Kuppermann, MD, PhD.
Thank you to our donors

A heartfelt thank you to our supporters. We are incredibly grateful for your generosity, confidence and partnership. Gifts listed below were received from July 1, 2021–Oct. 25, 2022.

$1,000,000+
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$500,000–$999,999
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Jing Yang, MD, PhD, and Henry Klassen, MD, PhD

To learn more about how you can support the Gavin Herbert Eye Institute, please contact Robin Gibbin, executive director of development at rgibbin@hs.uci.edu or Amber Hamess, director of development, at ahamess@uci.edu

Keeping your eyes healthy as you age

What can you do to protect your vision as you age? The Age-Related Eye Disease Studies (AREDS), major clinical trials sponsored by the National Eye Institute, have shown that adding certain vitamins and supplements to your diet can help slow the progression of intermediate to advanced age-related macular degeneration.

“These studies underscore the value of supplements that can protect your eyes as you age,” said UCI Health Gavin Herbert Eye Institute Director Baruch Kuppermann, MD, PhD, the Steinert Endowed Professor and chair of the UCI School of Medicine’s Department of Ophthalmology. “Adding these recommended antioxidants and other beneficial compounds to your daily routine can slow or reverse vision loss over time.”

Here’s a shopping list of the most essential supplements:

**Zinc and copper**
Zinc has been found to be the most effective ingredient for preventing the progression of age-related eye disease. Take 50–80 mg of zinc daily, however, since zinc can deplete copper, it is recommended that it be taken with 2 mg of copper per day.

**Lutein and zeaxanthin**
Eat your greens! Lutein and zeaxanthin, powerful antioxidants found in dark, leafy vegetables, slowed the progression of macular degeneration in the AREDS trials. One serving a day of spinach, kale, Swiss chard, collard greens or Chinese broccoli can help guard against macular degeneration.

If you’re using supplements, take 6–20 milligrams of a lutein-zeaxanthin supplement (about 2 capsules).

**Omega-3 fatty acids**
You’ve heard about the benefits of fish and omega-3 fatty acids to stay healthy. The same is true for your eyes. The AREDS study showed that eating fish two to three times a week can be beneficial. You may also want to consider a daily fish oil supplement.

**Multivitamin**
Consider taking a multivitamin — look for formulations that contain 2 mg of copper to offset depletion from zinc.

**Other things you can do to protect your eyes:**

**Blue-blocker sunglasses**
The blue light waves in sunlight can be harmful to the macula, a round area at the back of the eye, so consider wearing sunglasses with yellow, orange or brown-tinted lenses. Brown is preferred for maximum protection.

**Amsler grid**
Check your eyes daily using an Amsler grid, a grid pattern tool eye doctors use to detect possible vision distortion. This can help you monitor possible distortion or missing fields of vision.
VISIT THE OPTICAL SHOP

Call 949-824-7690 to schedule your appointment.

Monday–Friday: 8 a.m.–4:30 p.m.
Closed for lunch: 11:30 a.m.–1 p.m.

Proceeds from our optical shop support sight-saving research and help patients diagnosed with keratoconus pay for specialty lenses not covered by insurance.

EVENTS

2023 Community Lectures

All lectures are virtual and registration is easy. Access the registration form using this QR Code or register at: www.eye.uci.edu/lectureRSVP.html
Call 949-824-7243 for more information.

Thyroid Eye Disease
Jan. 24, 2023, 7–8 p.m.
Eye Problems related to thyroid eye disease: bulgy eyes, double vision and dry eye
Lilangi S. Edirivickrema, MD
Olivia L. Lee, MD
Vivek R. Patel, MD

Dry Eyes
Feb. 7, 2023, 7–8 p.m.
Latest treatment updates in dry eye management
Marjan Farid, MD

AMD
Mar. 7, 2023, 7–8 p.m.
Macular degeneration and latest updates in stem cell therapies for retinal disease
Stephanie Y. Lu, MD
Mitul C. Mehta, MD

Low Vision
April 11, 2023, 7–8 p.m.
How to improve your independence and quality of life
Karen C. Lin, OD
Nilima Tanna, OT

Cataracts
May 2, 2023, 7–8 p.m.
When do I need cataract surgery? What are the latest updates in cataract surgery technology?
Sanjay R. Kedhar, MD
Matthew W. Wade, MD

Glaucoma
Jun. 6, 2023, 7–8 p.m.
Latest treatment updates in glaucoma management
Austin R. Fox, MD

Lasik Surgery Seminars
6:30–7:30 pm
Thursday Feb. 9
Thursday, Mar. 9
Thursday, Apr. 13
RSVP: 949-824-7243
ghei@hs.uci.edu
To book a consultation: 949-824-9970

Clinical Trials
Patients can gain access to innovative care while helping researchers study the prevention, diagnosis and treatment of eye conditions.
To participate in a clinical trial, scan the QR code or email CCREnrollment@hs.uci.edu

CLINIC LOCATIONS

Irvine
850 Health Sciences Road
Irvine, CA 92617
To make an appointment, call 949-824-2020

Orange
101 The City Drive South, Pav. 2, Bldg. 30A
Orange, CA 92868