



The Discovery Eye Foundation supports cutting-edge research related to sight-threatening eye diseases and their treatments.

Thanksgiving 2024

Eye Toward the Future

As we mark the 54th year of Discovery Eye Foundation, our eyes are firmly focused on our future.

Our work to eradicate age-related vision loss and other eye disease in the United States and beyond continues, leaning heavily on the mitochondrial connections brought to light by Dr. Cristina Kenney. Her ground-breaking research will carry on through our — and your — efforts.

We'll be counting on the generosity of our loyal donors who are making important decisions about what legacies they want to support with donations from their estates.

Legacy gifts to DEF to fund our sight-saving research may help save the vision of family, friends and even descendants long into the future.

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“As DEF refocuses our energy and fundraising efforts for our next 50 years, I want to assure our supporters that their — and my — legacy commitment to DEF will be used to promote patient-oriented, vision-saving research for those suffering from AMD, glaucoma, diabetic retinopathy and keratoconus,” DEF Medical Director Dr. Anthony Nesburn says. “Invest in the future of eyesight. Your legacy will change lives.”

For more information about joining the DEF Legacy Society, please visit www.discoveryeye.mylegacygift.org.

Supporting vision-saving research at the University of California, Irvine's Gavin Herbert Eye Institute since 2002.

★★★★ DEF has earned a 4-star, 100% rating on Charity Navigator.



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The information published in the DEF newsletter is intended to help you better understand various eye diseases and available treatment options. DEF does not sell or endorse products, treatments or procedures. Every effort has been made to ensure the accuracy of the information presented. It is not intended to be a substitute for the advice and recommendations of your professional eye-care providers.

UCI's 10th Annual Bench-to-

DEF board chair Jack Schoellerman wanted to break down the silos that tend to form around individual researchers, as well as between the research and clinical arms of medical schools.

“Researchers are working in their own laboratories — different benches, as they call them — and they don’t know what other people are doing at the university,” Schoellerman says. “I wanted to tap into that richness and introduce discovery.”

Schoellerman enlisted DEF’s then–research director, Dr. M. Cristina Kenney, to help, and together, they produced UCI’s first Bench-to-Bedside Symposium in 2014.

“The first year, we didn’t invite anyone from outside the university or look at any subjects that were not on the university landscape,” Schoellerman says. “It was a revelation how much amazing research was going on just at UCI.

“From day one, this has fostered better communication among the researchers and, in some cases, resulted in collaborations and joint applications for research grants.”

In the ensuing decade, invitations were accepted by academics at other eye institutes and medical schools.

“The symposium is a bridge,” Schoellerman says. “Not to break down the silos necessarily, but to overarch them so the researchers communicate. Wouldn’t it be nice if doctors were sharing information, and it would get to patients sooner? That’s the genesis of the title ‘Bench to Bedside’ — taking it from the research bench and putting it in the hands of the physician at the bedside to offer it to the patient.”

This year’s event welcomed more than 150 attendees from across Southern California. It included a tribute to Dr. Kenney, who died in December 2023, by Baruch D. Kuppermann, MD, PhD, chair of the UCI department of ophthalmology and director of UCI Gavin Herbert Eye Institute. Deborah Ferrington, PhD, chief scientific officer of the UCLA Doheny Eye Institute, a mitochondrial expert and collaborator of Kenney, presented the first annual M. Cristina Kenney Memorial Lecture.

Bedside Symposium Breaks Down Silos



ABOVE: Dr. Deborah Ferrington presented the first annual **M. Cristina Kenney Memorial Lecture**. Her lecture, "Mitochondria: the retina's Achilles' heel in age-related macular degeneration," was also a tribute to Dr. Kenney's world-renowned research on mitochondria.



ABOVE: Honoring Dr. Kenney, from L to R, were: Jack Schoellerman, Cassie De Young, Consuelo Althouse, Dr. Ferrington, Dr. Anthony Nesburn, Dr. Baruch D. Kuppermann, Dr. Stephanie Lu, Dr. Kristin Nesburn and Dr. Vladimir Kefalov.



ABOVE: Speakers included, from L to R: Dr. Vladimir Kefalov of UCI Gavin Herbert Eye Institute, Dr. Kyle Marra of UCSD Shiley Eye Institute, Dr. Cherlyn Ng of UCI School of Social Sciences, and Dr. Kimberly Jameson of UCI Institute for Mathematical Behavioral Sciences.

To watch recordings of lectures from the 2024 symposium, please visit www.bit.ly/UCIB2B.

To view the tribute to Dr. Kenney, please visit www.bit.ly/MCKvideo.



ABOVE: The symposium included a poster presentation and competition.

DEF Research May Play Key Role in Treating Glaucoma

Glaucoma is a major cause of permanent vision loss worldwide. It is caused by intraocular pressure (IOP) inside the eye. But no matter how well you control the IOP, some patients will lose vision when the retinal ganglion cells (RGC) die from the disease.

Many research programs around the world are looking at ways of protecting those RGCs, but nobody has found the answer yet to preventing vision loss due to glaucoma.

The groundbreaking mitochondria work conducted by DEF's former research director, Dr. M. Cristina Kenney, may hold a key to slowing vision loss from glaucoma.

"Cris' cybrid systems have been shown to preserve mitochondria in patients with age-related macular degeneration — AMD," says DEF Medical Director Dr. Anthony Nesburn. "We presume glaucoma patients' cybrids would be very helpful. The cybrid system

allows researchers to look at whether mitochondria from individual patients with glaucoma will respond to current drugs or nutraceuticals. That's a very powerful way to look for new treatments to prevent vision loss from glaucoma.

"We've got to go do the research to determine if this mode of treatment for mitochondrial dysfunction works for glaucoma patients. If it does, it could change everything for them."

Third-Gen Ophthalmologist Joins DEF Board

Contrary to popular belief, Dr. Kristin Nesburn did have a choice about her career path. She always knew she wanted to be a doctor, but while in medical school, she thought she might want to pursue endocrinology. Her father, DEF Medical Director Dr. Anthony Nesburn, had other ideas. He took Kristin to lunch, urging her to reconsider what is, quite literally, the family business. After all, he told her, in addition to being able to combine surgery and medicine, ophthalmology would allow her to "build long-standing relationships with patients who don't die on you."



Kristin is quick to point out that it wasn't a hard sell, as she saw firsthand how much her father and grandfather enjoyed ophthalmology, so she took a second look — and never looked back.

Now in her 25th year in the practice started by her grandfather, Dr. Henry Nesburn, she has

no regrets. Following college and medical school on the East Coast, she trained at UC San Francisco, then returned home to join American Eye Institute in Los Angeles. She works side-by-side with her father in the office where she was a file clerk during high school.

Kristin has been an active donor to DEF for 20 years. She was invited to join the DEF board of directors in August 2024. "I'm at a point in my life where my kids are older, and I'm looking at making a larger contribution beyond treating patients," she says. "I want to leave more of a lasting impact.

"DEF is part of my family legacy, and Cris' (Dr. Cristina Kenney, DEF's former research director) passing really spurred my involvement. I believe so much in the research she was doing and how devoted she was. I want to do all I can to continue her research and achieve her goals."