GLEAMS

A publication for the friends & colleagues of Glaucoma Research Foundation.



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UPCOMING EVENT

Glaucoma 360

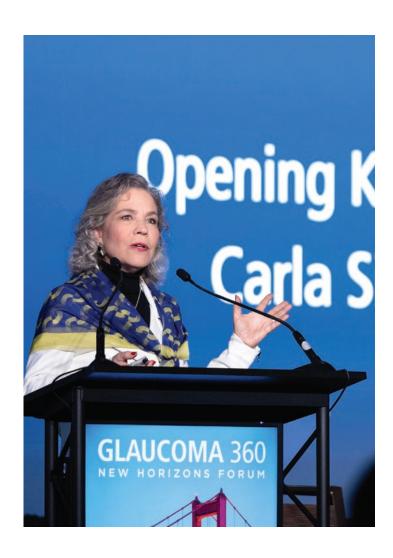
Glaucoma 360 is a series of three days of annual events uniting research, industry, and philanthropy to prevent vision loss from glaucoma and speed the cure.

January 29 - 31, 2026

Westin St. Francis San Francisco, CA

Learn more and register: www.glaucoma360.org





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ON THE COVER: Researchers in the Catalyst for a Cure collaboration dedicated to preventing and curing glaucoma and neurodegeneration

How Can I Find a Glaucoma Specialist?

What is the difference between a general ophthalmologist and a glaucoma specialist?

All glaucoma specialists are ophthalmologists, but not all ophthalmologists are glaucoma specialists. A general ophthalmologist treats many eye conditions, including early glaucoma, but a glaucoma specialist is more experienced in handling advanced or complex glaucoma cases, and often will see only people who have glaucoma. Glaucoma specialists have completed an extra year of training, called a fellowship, focused entirely on glaucoma diagnosis, management, and surgery. They are qualified in advanced surgical techniques to treat all types of glaucoma and have the most up-to-date information on new medical and surgical treatments.

How do I know if I need to see a glaucoma specialist?

Routine comprehensive eye exams with a general ophthalmologist are recommended for adults to facilitate early detection of ocular diseases, including glaucoma, which is asymptomatic early in its course. At your general ophthalmology appointment, you can ask if you need to see a glaucoma specialist. Reasons to seek out care with a glaucoma specialist may include having a known family history of glaucoma, or having a known personal diagnosis of glaucoma with progressing vision loss or other symptoms despite your current management. The glaucoma specialist might assume care of your glaucoma, or they might refer you back for routine follow-up with your general ophthalmologist if your glaucoma is mild or well managed already.

How can I find a glaucoma specialist?

You may ask your general ophthalmologist, optometrist or primary care physician for a referral. Community screening sessions may also make referrals. However, if you would like to find a glaucoma specialist on your own, most large hospitals and academic institutions have a directory of glaucoma specialists that you can search, or an internet search may highlight providers in your area. The Glaucoma Research Foundation has a website, www. glaucoma.org, that provides guidance and information on many glaucoma-related topics. One helpful link on that website is "Find an Eye Doctor." Professional organizations such as the American Glaucoma Society, the American Academy of Ophthalmology, or your state Medical Association are also good resources. You may also contact your medical insurance plan for help in locating a glaucoma specialist.

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CATALYST FOR A CURE

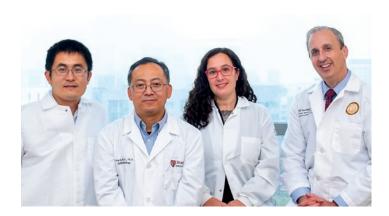
2025 Research Progress Report

Glaucoma Research Foundation is currently funding two multi-year Catalyst for a Cure (CFC) research teams. CFC is an interdisciplinary approach that demonstrates the power of collaboration in scientific research. This research is crucial for patients because Catalyst for a Cure investigators are pioneering new types of treatments for glaucoma.

CFC3: The Catalyst for a Cure Vision Restoration Initiative principal investigators:

XIN DUAN, PHD UC San Francisco YANG HU, MD, PHD Stanford University ANNA LA TORRE, PHD **UC Davis**

DEREK WELSBIE, MD, PHD UC San Diego



By pooling their expertise and resources, the CFC3 investigators explore multiple avenues of research simultaneously, including retinal ganglion cell (RGC) transplantation, neuroprotection, and optic nerve regeneration. Research on RGC transplantation could lead to methods that restore vision by replacing damaged cells, offering hope for patients who have lost vision due to glaucoma. Strategies to protect and regenerate optic nerves could prevent vision loss and potentially restore connectivity between the eye and the brain. The team is testing multiple neuroprotective molecules in combination, which may lead to more effective treatments.

CFC4: The Melza M. and Frank Theodore Barr Foundation Catalyst for a Cure Initiative to Prevent and Cure Neurodegeneration principal investigators:

Mayo Clinic

SANDRO DA MESQUITA, PHD MILICA MARGETA, MD, PHD Mass Eye and Ear

HUMSA VENKATESH. PHD Brigham and Women's Hospital

KARTHIK SHEKHAR, PHD **UC** Berkeley

The CFC4 researchers have identified specific immune cells and molecular pathways that play a role in multiple neurodegenerative diseases —Alzheimer's, glaucoma, and glioma. This discovery opens possibilities for developing new treatments by targeting these cells and pathways. The CFC4 research team plans to continue testing potential therapeutic candidates that might reduce inflammation in the brain and eyes, which could be a new way to treat diseases like Alzheimer's and glaucoma.



Aphakic Glaucoma

or Secondary Glaucoma Following Cataract Surgery

What is Aphakia?

It is a condition in which the natural lens of the eye is absent. The most common cause for aphakia is cataract surgery. In adults undergoing cataract surgery, the natural lens is replaced with an artificial intraocular lens (IOL) – this is called pseudophakia. However, in children who are born with cataracts (congenital cataract) and undergo cataract surgery, an IOL may or may not be placed.

What is Aphakic Glaucoma?

It is a form of secondary glaucoma that frequently follows cataract surgery in infants and children. The cause is thought to be related to changes to the drainage system where fluid exits the eye. Eyes that have either aphakia or pseudophakia can develop glaucoma following cataract surgery in children. Therefore, the name of this condition has been changed from Aphakic Glaucoma to Secondary Glaucoma Following Cataract Surgery (SGFC).

SGFC is characterized by high pressure in the eye which can lead to irreversible optic nerve damage. Many studies report that about two thirds of eyes with this type of glaucoma develop visual impairment. However, early treatment can prevent vision loss and even improve the appearance of the optic nerve.

What increases the risk of SGFC?

Early cataract surgery has been associated with a higher risk of developing SGFC. However, a case-by-case evaluation aimed at preventing permanent vision loss from the cataract as well as from SGFC is necessary to decide on the ideal timing of cataract surgery for infants.

How often does SGFC occur?

Approximately 6% of children who undergo surgery to remove congenital cataracts develop SGFC, and on average, glaucoma develops 4-6 years after surgery. Advancements in surgical techniques for cataract removal have improved outcomes. Despite this, regular examinations of children who have undergone cataract surgery are crucial for timely diagnosis and treatment of SGFC.

How is SGFC treated?

Inital management of SGFC is typically eye drops but surgery is often required to control the glaucoma. Multiple surgeries may be necessary over the patient's lifetime and regular, lifelong, follow-up is very important. With timely diagnosis and continuous care by a physician experienced in the management of these disorders, many children will retain good vision and lead a normal life.

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In Appreciation

We are incredibly grateful for the generous and loyal support from all of our donors. Following is a listing of recent contributions and pledges at the \$1,000 level and above. Please note these are new contributions and pledge payments between **March 1, 2025** and **June 30, 2025** and will not reflect a donor's cumulative giving for the year.

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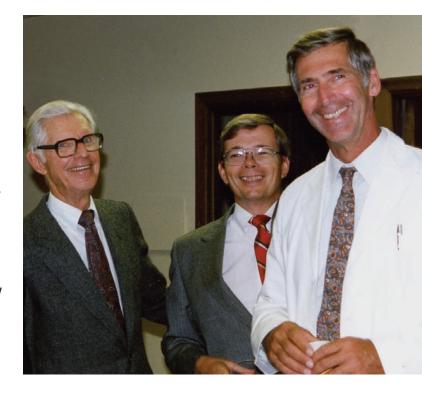
A Legacy of Innovation in Glaucoma Care

In 1978, three visionary heroes launched an enterprise that has gone on to change the course of glaucoma care. Dr. Robert N. Shaffer, Dr. John Hetherington, Jr., and Dr. Dunbar Hoskins, Jr., were partners specializing in glaucoma when they started Glaucoma Research Foundation with a legacy gift of \$1 million from a generous patient. With the passing of Dr. Shaffer in 2007, Dr. Hetherington in 2020, and Dr. Hoskins in 2024, all three founders and former board members are now legends.

"Bob, Dunbar, and Jack were like the Three Musketeers," recalls Thomas Brunner, president of GRF. "They were unique individuals, each with his own strengths, but there was a special synergy among them, and they brought that to every aspect of their work."

Part old-school doctor and part intrepid scientist, Dr. Shaffer was the magnet that drew the three together when Drs. Hoskins and Hetherington joined his San Francisco practice as fellows. Dr. Andrew Iwach, executive director for Glaucoma Center of San Francisco and chair of the GRF board, was another fellow who knew all three founders. "Dr. Shaffer placed a high value on a balanced life," Dr. Iwach recalls. "If you worked in his practice, you had to play tennis, and if you didn't play, Bob would make sure you had lessons."

Drs. Hoskins and Hetherington shared Dr. Shaffer's passion for cultivating the next generation of specialists, a tradition carried on in today's Shaffer Grants. All three put the patient's needs at the center of everything they did. And all three believed that science is essential to a cure for glaucoma. Dr. Hoskins, who became a leader for the American Academy of Ophthalmology, is remembered as an incredible strategist and organizer. Dr. Hetherington's accomplishments include innovations in childhood glaucoma, detection, and diagnosis.



Honored during their lifetimes with awards from GRF and other accolades, all three would be proud that, thanks to donor support, the foundation they started is now on the brink of vision restoration breakthroughs and a cure for glaucoma. "As clinicians and scientists, they made a huge difference in many so lives, and through the foundation they created, they continue to have impact," says Dr. Iwach. "They laid the groundwork, and we get to stand on their shoulders."

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