MISSION CRITICAL:

How quick action and teamwork combine to preserve the sight of Wilmer’s youngest patients
In the Wilmer lab of Mandeep Singh, M.B.B.S., M.D., Ph.D., a broad variety of researchers — from senior scientists to technicians to medical students — collaborate in an effort to address blinding eye diseases.

Singh, the Andreas C. Dracopoulos Professor of Ophthalmology and co-founder of the Wilmer Genetic Eye Disease Center (at center in this photo), and his team are working to take healthy photoreceptors derived from stem cells and transplant them into patients’ retinas to replace photoreceptors lost to blinding diseases that include Stargardt disease, macular degeneration and retinitis pigmentosa.

The lab is one of a few worldwide that focuses on the cone photoreceptor-rich region of the macula, which enables high-acuity vision for tasks such as facial recognition and reading. “That’s where our most important visual capabilities as human beings come from,” says Singh.

Thus far, the team has developed stem cells with the capacity to regenerate the retina and has tested them in preclinical models. They have also developed novel instrumentation for ultra-precise delivery of the stem cells to patients with hereditary eye disease.

“Patients with these eye diseases have very delicate eye tissues, and these conditions also affect very young children, so we need next-generation surgery instruments to accomplish next generation procedures, like regeneration,” Singh says.
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As I See It ...

Dear Friends,

A WOMAN SUDDENLY LOSES VISION FOLLOWING ROUTINE CATARACT SURGERY.

PARENTS OF A NEWBORN KNOW SOMETHING IS DIFFERENT ABOUT THEIR BABY’S EYES.

THE FAMILY OF A YOUNG BOY WITH LIMITED VISION WANTS TO UNDERSTAND HOW TO HELP HIM MOVE FORWARD.

These three scenarios, and the people they affect, are real. They represent some of the many complex cases that come to Wilmer each year. Here, patients and families find the specialists and specialty teams with the training and experience to address critical problems, where collaboration with world-class experts from Johns Hopkins means they will receive the best, most comprehensive care available anywhere. Here, they find the support they need to understand their conditions and their treatment options so they can go on to live their best lives.

In this issue of Wilmer, we share their stories, along with the stories of how philanthropic support from patients, families, private foundations and government organizations are helping to further our understanding and treatment of diseases of the eye. We look at how endowed professorships at Wilmer are supporting vital research that is advancing the field of ophthalmology, and we hear from two grateful alumni of the Johns Hopkins University School of Medicine whose generosity and vision for addressing blindness will have an enduring impact on the work we do and the lives it stands to benefit.

Every time we can help a patient, we are both gratified and inspired to push the boundaries of research further. We hope these stories inspire you as well.

PETER J. McDONNELL, Director
Di Meglio Wins JHM Clinical Excellence Award

Laura Di Meglio, O.D., won the annual Clinical Excellence Award for Non-Physicians. The Office of Johns Hopkins Physicians established the award in 2015 to honor clinicians who embody the best in clinical care.

Susan Bressler Honored with Founders Award

Susan Bressler, M.D., was the recipient of a Founders Award from the Atlantic Coast Retina Club. Bressler was honored for her exceptional career dedicated to combating diabetic retinopathy and age-related macular degeneration through her involvement in several prospective trials, specifically in the areas of anti-vascular endothelial growth factor therapy and biosimilars.

Neil Bressler Offers Inaugural Lecture

Neil Bressler, M.D., was awarded the inaugural Dennis Lam Lecture at the 16th Congress of the Asia-Pacific Vitreo- Retina Society. The lecture honors individuals who have made significant contributions to vitreoretinal training and education for residents, fellows and postgraduate students. Bressler spoke on “Evolution of Managing Diabetic Macular Edema in the 21st Century.”

A Rare Sight

April’s total solar eclipse elicited much excitement around the country. Assistant Professor of Ophthalmology Michael Carper, M.D., captured the sense of awe with this stunning image. Carper used a neutral density filter — a polarized filter used in clinic for pupil exams — to help reduce glare and clarify the eclipse. He shot the photo with his phone heavily zoomed in and pointed through the filter, held an arm’s length away.
Dedication of Diabetic Eye Clinic
In 2007, longtime faculty member Dan Finkelstein, M.D., who died in 2022, founded a diabetic eye clinic in Washington, D.C., dedicated to providing care to those who otherwise might go without it. On Jan. 6, a ribbon-cutting ceremony was held to celebrate the grand opening of the new Dr. Dan Finkelstein Diabetic Eye Clinic located at 3620 15th Street NE.

McDonnell Elected Ophthalmology Foundation Officer
Wilmer director Peter J. McDonnell, M.D., has been named secretary-treasurer of the Ophthalmology Foundation. The organization trains ophthalmologists who are sent to high-need areas, including Ukraine, to care for patients with eye trauma.

Handa Presents W. Richard Green Lecture
James Handa, M.D., delivered the W. Richard Green Lecture on “The Transition from Physiological to Pathological Oxidative Stress in AMD Pathobiology” during the 47th Annual Meeting of the Macula Society. The lectureship is awarded to an individual whose work has helped elucidate the pathogenesis of diseases of the retina. W. Richard Green, one of the world’s foremost ophthalmic pathologists, was a highly respected member of the Wilmer faculty for nearly 40 years.

Kaleem Is President of Maryland Society of Eye Physicians and Surgeons
Mona Kaleem, M.D., began a two-year term as president of the Maryland Society of Eye Physicians and Surgeons.
Woreta Receives Straatsma Award

Fasika Woreta, M.D., M.P.H., received the Straatsma Award for Excellence in Resident Education at the meeting of the Association of University Professors of Ophthalmology. The award honors an outstanding program director, recognizes the critical role of the program director and celebrates the contributions of the awardee.

Ocular Immunology Team Wins Clarkson Award

A project by Meghan Berkenstock, M.D.; Bryn Burkholder, M.D.; and Jennifer Thorne, M.D., Ph.D., titled “Effectiveness of Difluprednate for the Treatment of Anterior Scleritis,” was selected for the 2023 Clarkson Quality Improvement Award. The award celebrates the passion and professionalism exemplified by American Board of Ophthalmology diplomates.

Repka Named 2025 AAO President

Michael Repka, M.D., has been named the 2024 president-elect and the 2025 president of the American Academy of Ophthalmology (AAO). Repka will be the 14th Wilmer alumnus to serve as AAO president.

FACULTY PROMOTIONS

Andrew Carey, M.D.
Associate Professor

Malia Edwards, Ph.D.
Associate Professor

Katharine Funari, O.D., M.P.H.
Assistant Professor

Anthony Gonzales, O.D.
Assistant Professor

Thomas V. Johnson, III, M.D., Ph.D.
Associate Professor

Amir Kashani, M.D., Ph.D.
Professor

Courtney Kraus, M.D.
Associate Professor

Fatemeh Rajaii, M.D., Ph.D.
Associate Professor
Instead, Perrine woke up the day after surgery on her right eye unable “to read even the biggest ‘E’ on the eye chart.” A local specialist agreed to see her immediately and, worried by the sudden and unexplained vision loss in the affected eye, promptly referred Perrine to Wilmer Eye Institute, Johns Hopkins Medicine in Baltimore. “Within a week, I was with Dr. Henderson,” Perrine says.

Amanda Dean Henderson, M.D., chief of Wilmer’s Division of Neuro-Ophthalmology, is trained to tease out obscure connections between the eye and the brain. “We think of the visual system as a whole, not just the eyeball,” says Henderson, who in December succeeded her Wilmer mentor, Neil R. Miller, M.D., as the second Frank B. Walsh Professor of Neuro-Ophthalmology.

When she first saw Perrine, Henderson says she was concerned about the possibility of stroke or “some form of irreversible vision loss” and, after a thorough exam, scheduled Perrine for an MRI. The scan revealed a benign brain tumor called a meningioma enveloping the optic nerve behind her right eye. “It was a scary diagnosis for her at first,” says Henderson, who turned next to a key collaborator, Risheng Xu, M.D., Ph.D., assistant professor of neurosurgery and assistant director of the neurosurgery...
residency program. Xu specializes in the extremely delicate procedure of debulking (or removing) skull base tumors, and Perrine’s tumor was located at the base of her skull.

The immediate goal of the surgery was to prevent further vision loss, but the team was also hopeful that they could restore some vision. “The optic nerve has an extremely limited ability to recover,” says Xu, “and a tumor that grows unchecked in this area will eventually cross over to compress the other optic nerve, and the patient will end up totally blind in both eyes.”

So everyone was thrilled when the vision in Perrine’s right eye was completely restored. “At my first follow-up appointment with Dr. Henderson, I had 20/20 vision in that eye,” she says. “God was really holding my hand.”

Xu says Perrine’s case is cause for celebrating the “very, very close working relationship between the Department of Neurosurgery and Wilmer’s Division of Neuro-Ophthalmology. Collaboration is one of Hopkins’ great strengths, and it’s the key to great health care.”

It’s also the very heart of neuro-ophtalmology, Henderson says. “We are able to collaborate not only with great neurosurgeons like Dr. Xu but with endocrinologists who work with pituitary tumors and neurologists who might work with neuroinflammatory conditions, like multiple sclerosis.”

Wilmer is one of the few places in the world that supports a robust neuro-ophthalmology division. “The current medicine model of having to move patients through so quickly is not conducive to these complicated cases that require a bit more thought and time, so I think we are fortunate to have been able to develop a practice at Hopkins where we’re able to provide patients with this service that involves support not only from our colleagues at Wilmer but also from all of our colleagues at Johns Hopkins Medicine,” Henderson says.

As the new Frank B. Walsh Professor of Neuro-Ophthalmology, Henderson is heir to a tradition she cherishes. Not only is Walsh remembered as the father of neuro-ophthalmology, he was also a mentor to her own mentor, the legendary Miller, who recently retired after serving on the Wilmer faculty since 1976.

“It’s clearly a huge honor and an incredible opportunity because it’s an endowed professorship that will support our work,” Henderson says. “It means more funding for some of our projects.”

Henderson is passionate about education, and the professorship also provides her more dedicated time to mentor young researchers. “Neuro-ophthalmologists tend to be thinkers, and most of us like to interact with learners and teach them the intricacies of how we think through these problems to get to the bottom of a patient’s issue,” she says.

“But on the more sentimental side of things, it means a great deal to me, both because of Dr. Frank B. Walsh’s legacy here at Wilmer and because Dr. Neil Miller is such an incredible mentor and role model.”
Building Careers Together

“W e have a Division of Neuro-Ophthalmology that’s the envy of the rest of the world, and we are here today to celebrate it,” said Wilmer Director Peter J. McDonnell, M.D., the William Holland Wilmer Professor of Ophthalmology, on Dec. 11, 2023.

By Joan Cramer

The occasion was the dedication of the new Neil R. Miller, M.D., Rising Professorship in Ophthalmology and the installation of its inaugural recipient — Andrew R. Carey, M.D., assistant professor of ophthalmology. At the same time, Division of Neuro-Ophthalmology supporters celebrated the reinstallation (meaning she is the second recipient) of the division’s chief — Amanda Dean Henderson, M.D. — as the Frank B. Walsh Professor of Neuro-Ophthalmology.

[See “A Cause for Celebration,” p. 6.]

“Fun fact: Andrew and I started at Wilmer just one week apart eight years ago,” Henderson says, “so we have really had the pleasure of building our careers together.”

Rising professorships are an innovation established at Wilmer in 2021 under McDonnell’s leadership to develop future leaders in ophthalmology. “Of course Dr. Carey is already a leader,” Henderson says, “but this provides support for young faculty to more quickly achieve their professional goals. It’s an investment in the future.”

Henderson calls Carey “an incredible colleague and collaborator, and the perfect inaugural recipient for this honor.” He is dually trained as a neuro-ophthalmologist and retina specialist, “so that makes him unique.”

He is also an outstanding clinician, one of the first physicians at Johns Hopkins to be promoted along its recently established clinical excellence track, which rewards faculty members for their skill with and empathy for patients.

For his part, Carey says he feels a lot more comfortable talking about his mentor, Neil R. Miller, M.D., and the great honor...
of being appointed to a professorship bearing his name than talking about himself. “I still struggle to find the words,” he says. “Dr. Miller is such a luminary in the field, and his work over the last 30 years has been so extraordinary in helping to propel the field forward. He is lauded as a researcher and an educator and just a wonderful clinician. His patients can never stop saying enough how wonderful he is. So this professorship is just a huge honor.”

Miller recently retired, though Henderson says he has agreed to continue teaching and supervising research projects, “just out of the goodness of his heart — luckily for us and everyone at Hopkins.”

In fact, most of the donors to the Neil R. Miller, M.D., Rising Professorship in Ophthalmology are grateful physicians who trained under him at Wilmer. Among them is Jonathan Talamo, M.D., an ophthalmic surgeon in Massachusetts who serves on the Wilmer Board of Governors and who studied under Miller as a medical student and then as a resident in the 1980s.

At the December event, Talamo paid tribute to his mentor “on behalf of the hundreds of med students and fellows who have had the privilege of training with you over the last 40-plus years.” Miller, who is famous for his encyclopedic knowledge and engaging teaching style, inspired his students to think creatively “beyond their specialty,” Talamo said, “and his influence will guide us for decades to come.”
Stem Cell Solutions for Corneal Transplants

Amer Riazuddin’s research is at the forefront of regenerative medicine.

By Jessica Wilson
Most people know the cornea is the outermost tissue of the eye — the part that you touch when you put in contact lenses. What people may not know is that the cornea has five layers, the innermost of which is the endothelium. When the function of the corneal endothelium is compromised either due to disease or trauma, the cornea loses its transparency, which results in vision loss.

Transplant surgery using human donor tissue is the only treatment available for corneal endothelial dysfunction. Unfortunately, corneal transplants using donor corneas are expensive and, owing to the shortage of transplantable-grade corneal tissue, are out of reach for many people, particularly those in underresourced nations.

Wilmer’s Amer Riazuddin, Ph.D., a rising star in ocular regenerative medicine, is focused on developing stem cell solutions to improve outcomes for people around the world who need these transplants.

One reason for the shortage of transplantable-grade corneal tissue in many parts of the world is the lack of eye banking. As an example, Riazuddin cites China, the world’s most populous country, where there is neither a national eye bank association nor eye bank union, according to a report in the journal PLOS ONE in 2020. “Most, if not all, of the donor tissue for transplant surgeries in China comes from the eye banks of America,” he says.

Riazuddin’s team has found a way to increase the supply of the cells needed to treat corneal endothelial dysfunction. They take pluripotent stem cells, which have the potential to differentiate into most cell types of the human body, as the beginning material and differentiate them into corneal endothelial cells.

In tests using preclinical models, the results of which were published in the journal Stem Cell Reports in 2021, Riazuddin’s laboratory confirmed that settlement of the cells on the back of the cornea leads to the regeneration of a functional corneal endothelium and the restoration of the corneal transparency essential for optimal vision.

The overall goal of Riazuddin’s team is to make these cells accessible to patients around the globe. The shelf life and stability of the cells during shipment are critical to achieving this goal. Riazuddin’s...
laboratory has validated a 40-day shelf life for the cells, which compares favorably to the two-week shelf life of donor tissue. Additionally, the laboratory has examined the stability of these pluripotent stem cells during shipment. “The results of this ongoing study are very promising,” says Riazuddin. Both of these features will facilitate a commercialization process for the treatment should the FDA approve it. Riazuddin is in the midst of applying for FDA approval.

To support this innovative research, Riazuddin was named Wilmer’s newest Boone Pickens Professor of Ophthalmology in November 2023. Riazuddin’s research and goal of commercializing stem cells led to his receiving a unique endowed professorship partially funded by philanthropy and partially by the state of Maryland. The Maryland E-Nnovation Initiative Fund, administered by the Maryland Department of Commerce, offers a state match to private funds raised in support of endowed chairs at Maryland’s higher education institutions. The purpose is to retain top university researchers within Maryland and encourage collaboration with a focus on entrepreneurial activity.

The philanthropy comes from T. Boone Pickens, the late Texas entrepreneur and philanthropist. With a $20 million bequest from the T. Boone Pickens Foundation, Wilmer has created several endowed professorships in Pickens’ name. “Because Mr. Pickens was educated as a scientist, as a geochemist and became a successful businessman himself, I think he would be delighted to see that Dr. Riazuddin is learning how to translate science into business,” says Wilmer Director Peter J. McDonnell, M.D., the William Holland Wilmer Professor of Ophthalmology.

Speaking on behalf of Mr. Pickens’ family and friends, Pickens’ daughter Liz Cordia told the audience at the professorship dedication that her father would be delighted to see the impact of his gift on the exciting research of young faculty like Dr. Riazuddin.

As Riazuddin pursues translating his research into a treatment with commercial potential, he has his eyes on a very specific prize: reducing preventable vision loss around the globe. “This is what makes me get up in the morning,” says Riazuddin.
Riazuddin’s team has found a way to increase the supply of the cells needed to treat corneal endothelial dysfunction.
“Mission critical.” That was how pediatric ophthalmologist Courtney Kraus, M.D., described the condition of Bernadette “Bernie” Cowell Murray when Kraus examined the 7-day-old newborn in October 2022.

Though it was intimidating news, Bernie’s parents, Maggie Cowell and Joe Murray, were relieved. Their baby’s first days had contained enough confusion and worry to last a lifetime. At birth, Bernie’s eyes looked different. Though her eyes were enlarged and cloudy, Bernie was released from the hospital where Cowell had given birth without a diagnosis and with no guidance for next steps. When Cowell contacted the Wilmer Eye Institute, she did so without knowing which specialist to see.

Fortunately, Cody Richardson, M.D., knew right away what the problem was: congenital glaucoma. He referred them to Kraus, a pediatric glaucoma specialist.

“Dr. Kraus met with us and said, ‘Good news, bad news. We know what it is. It will be a long series of procedures, but we’ll get you right in. Can you do surgery tomorrow morning?’ And we said, yes, of course,” says Cowell.

Congenital glaucoma requires urgent action for two reasons — first, eye pressure builds quickly in infants, which damages the optic nerve and causes vision loss. Second, children with congenital glaucoma have cloudy corneas that need to be cleared as soon as possible.

“The brain relies on having a clear visual image hitting the retinas and then transmission to the visual cortex to develop vision. If your brain can’t see
“The depth of our team means that taking care of children like Bernie comes with the ability to move very quickly and with enhanced options when we have children who have these time-sensitive conditions.”

— COURTNEY KRAUS
during the critical first period of life, you don’t develop good vision,” Kraus explains. “The problem with congenital glaucoma is you’re born with a very cloudy cornea, so everything that gets into your eye is scattered and hazy. The goal of surgery is to lower the eye pressure, which clears the cornea and starts you on the path to visual development.”

Bernie had her first surgery with Jefferson Doyle, M.B.B.Ch., M.D., Ph.D., the Andreas C. Dracopoulos and Daniel Finkelstein, M.D. Rising Professor of Ophthalmology. Afterward, Bernie’s right eye cleared up almost immediately. Her left eye lagged behind, but, by the fall of 2023, Kraus was happy with its progress. “The glaucoma at the moment is well controlled due to Dr. Kraus’ heroic efforts,” says Cowell. “Bernie is doing awesome. She even started mainstream day care the week of her first birthday, which we did not think was possible at birth.”

Over the past 18 months, Bernie has had eight procedures at Wilmer, most of them with Kraus. “When you have a child with congenital glaucoma, you usually see them more often than their pediatrician does. I’ve seen Bernie meet almost every single motor, physical and developmental milestone in her first year of life,” says Kraus.

Kraus, Doyle and Bo Wang, M.D., Ph.D., who recently joined the Wilmer faculty, constitute what Kraus calls the Pediatric Anterior Segment Team within Wilmer’s pediatric division.

It is rare for an academic medical center to have an entire team focused on pediatric anterior segment (or front-of-the-eye) conditions, explains Kraus. “The depth of our team means that taking care of children like Bernie comes with the ability to move very quickly and with enhanced options when we have children who have these time-sensitive conditions,” she says.

The team provides one-stop care for children with anterior segment conditions, such as glaucoma and cataracts. Kraus, Doyle and Wang can perform all types of pediatric glaucoma and cataract surgeries, so they do not have to refer their patients outside of the pediatric division.
In addition, they all appreciate that while glaucoma and cataracts cause vision loss, so too do amblyopia (colloquially known as lazy eye) and refractive errors. As pediatric ophthalmologists, they are trained to care for these more common conditions as well.

“We’re treating glaucoma with surgery or eye drops. We’re treating the cataract with surgery, but we’re also remembering the eye patching and checking the glasses prescription. That is what’s so special about a pediatric ophthalmology anterior segment team — we really are offering the children comprehensive care when it comes to what is affecting their eyes,” says Kraus. “We can keep all our patients within our team.”

For families, that one-stop team approach means fewer appointments to keep track of and less chance of important information dropping through the cracks. Beyond providing convenience, this continuity of care often creates strong bonds between doctors and families as well.

“We’re so connected in this early, very scary period of their kids’ lives. I can’t say how much it makes me feel privileged to be a person who makes parents feel a little less scared,” says Kraus.

This bond inspired Cowell, Murray and their families to celebrate Bernie’s first birthday by asking for donations to Wilmer from friends and family in Bernie’s name. “There’s no way to put into words how thankful we are to be this close to Wilmer, to be in the excellent care of these world-renowned doctors,” says Cowell. “We thought this might be a small way to show our gratitude and also to support Courtney’s work.”

Kraus was surprised and moved by the Murray and Cowell family fundraiser in support of her work.

“One of the things I love about my job are these moments impacting kids early in their life and being a part of their lives as they grow and develop,” says Kraus. “Seeing someone recognize the extra effort, the care and the concern, and that I’m really with them in the struggle — that’s what this gift says to me.”
‘The Future Is Wide Open’  

By Jessica Wilson

Through the Vision Science Fund, physicians Francine Siegal and William Zieverink aim for researchers to push the boundaries of science in an ambitious mission to help people see again.
A lightbulb moment is shorthand for an epiphany that changes one’s thinking — and possibly the world — in an instant. Yet, the light bulb was not an invention born in a single moment. The idea grew out of years of research by people in different domains that converged into an invention that was built, failed, was iterated on and eventually enlightened the world.

Francine Siegal, M.D., and William Zieverink, M.D., graduates of the Johns Hopkins University School of Medicine, believe the time is ripe for convergences like this. “We’re living during an exciting time in history, really a renaissance, an openness and acceptance of rapidly evolving, edgy, sci-fi ideas from teams in hyphenated sciences — biotechnology, neuro-immunology — working to ingeniously solve complex problems with simplicity,” says Siegal.

The possibilities of imaginative solutions, however, require a focus on a particular challenge. The one the couple chose to focus on is vision loss.

Siegal and Zieverink created the Vision Science Fund at the Wilmer Eye Institute to spur researchers to explore ideas that push the current boundaries of known science to build creative yet feasible technologies to help people see again. The fund is meant to support basic science research — the “bench” in the bench-to-bedside model of academic medicine — with the goal of restoring vision by any means.

The impetus for creating the Vision Science Fund sprang from Zieverink’s personal experience with eye disease. After the onset of viral meningitis, his immune system killed the virus but attacked his retina. “I woke up one morning on a Sunday, and I had a big blind spot in my left eye,” says Zieverink. A day later, he woke up with a black spot in his right eye that obstructed his vision. “I was blind for four months. That captures your attention,” he says. “It's what makes us think a really good use of our money would be to help people who have eye disease.”

When initially considering avenues of research they wanted their gift to facilitate, Zieverink thought of cells. “I’m the biochemist and the molecular biologist in the family. So, I started thinking in those terms,” he says. Molecular biologists in vision science are concerned with rods and cones, oxidative stress, and cell metabolism, for example.
Siegal approached their brainstorming from another direction. “We need to substitute the idea that we see with our eyes by promoting the truth: We actually see with the visual cortex of our brain,” she says.

The couple acknowledges that science and technology are moving at a breakneck speed, so what ends up being funded could be something not yet even imagined. But that has not stopped them from envisioning how the funds could be used. An example they have discussed is “building a simple receptor that’s applied, perhaps, to the cornea to perceive images that will be communicated directly, wirelessly, to the visual cortex of the brain — so everyone, everywhere, in all countries across the globe, will be able to see, cost-effectively, no matter the cause of their blindness,” Siegal says.

Laura Ensign, Ph.D., the Marcella E. Woll Professor of Ophthalmology, is vice chair for research at Wilmer. She knows the enduring impact an unrestricted gift like the Vision Science Fund can have on a cutting-edge research program like that at Wilmer.

“I could name several current research initiatives that the fund might support in the near term, but the exciting truth is no one knows yet where this funding could lead, and I think that is the promise that Dr. Siegal and Dr. Zieverink see,” Ensign says. “The future is that wide open. This fund gives us the flexibility to pursue the most promising ideas.”

Wilmer Director Peter J. McDonnell, M.D., the William Holland Wilmer Professor of Ophthalmology, appreciates that focus on the future.

“I could name several current research initiatives that the fund might support in the near term, but the exciting truth is no one knows yet where this funding could lead, and I think that is the promise that Dr. Siegal and Dr. Zieverink see. The future is that wide open. This fund gives us the flexibility to pursue the most promising ideas.”

— LAURA ENSIGN
“Unrestricted gifts like this are the lifeblood of the high-risk, high-reward research the Wilmer Eye Institute is known for,” he points out. “Only this sort of out-of-the-box research can lead to bold new approaches to address blindness. Their wisdom in establishing the Vision Science Fund will allow researchers at the forefront of sight restoration to explore exciting new approaches that would have been impossible without their support. We are profoundly grateful to them for their foresight and their generosity.”

The couple hopes to plant “a seed of imagination among young researchers to create vision,” says Siegal. And because research is costly, particularly when a line of questioning is brand new, they hope to excite the passion of other donors to support the cause of restoring vision — by any means imaginable. ●

Andrew Myers contributed to this article.

HOW TO SUPPORT THE WILMER EYE INSTITUTE

Your donations directly impact the Wilmer Eye Institute’s mission to transform medical outcomes in the field of ophthalmology through collaboration and innovation, resulting in compassionate, leading-edge, patient-informed care.

TYPES OF GIFTS

Cash Gifts
Gifts of all sizes made by check or credit card provide immediate support to the Institute. Gifts can be made outright or pledged over a period of up to five years.

Matching Gifts
Many employers offer a matching gift program. Complete the employee’s section of the Matching Gift Form provided by your employer and mail the form to us. We will take care of all the other details and paperwork.

Memorial and Tribute Gifts
Memorial and tribute gifts are a wonderful way to commemorate family, friends or even a special physician. Any gift can be made in memory, or in honor, of an individual.

Gift Planning
Our Office of Gift Planning can provide you with resources to help fulfill your philanthropic wishes in coordination with your overall financial and estate planning.

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hopkinsmedicine.org/wilmer/charitable-giving
A Legacy Gift Honors a Life Well Lived

By Jennifer Walker

After being diagnosed as legally blind at the Wilmer Eye Institute in early childhood, Fred Leader lived an adventurous life in his 53 years. In grade school, Fred — the second child in a family that includes older brother Michael and younger siblings Jane and David — delivered eggs to neighbors and built ham radios with the help of Jane and David, who acted as his guides and readers. In 1968, Fred, 19, and David, 11, took a three-week hiking and camping trip with Fred’s donkey, Josie. Four years later, they took a seven-week voyage from Seattle to Pennsylvania on a tandem bike, which Fred had custom built in England.

“These weren’t my ideas,” says David, jokingly adding that he probably would have rather been on the couch watching The Three Stooges. “This was all Fred. He was always very active and independent. We all have stories about things he drafted us to do with him.”

Following his death in 2003, Fred left a six-figure bequest to Wilmer. This year, David, an executor of his brother’s trust along with Fred’s wife, Anne Gardner Leader, who died in 2023, is fulfilling his brother’s primary philanthropic wish of supporting the Wilmer Eye Institute: This gift will be used to create two endowments in the name of the “Fred M. Leader Family.” The first endowment will establish a professorship in the Retina Division, while the second will support a fellowship in pediatric ophthalmology.

“Fred knew of Wilmer’s reputation of excellence in medical care and research for the blind,” says Michael, who, along with his brother David, is a president and CEO of a family business in the retirement community industry in Pennsylvania. “He thought Wilmer would make a substantial contribution in advancing this care.”

While Fred was treated by specialists in retina, pediatric ophthalmology and low vision at Wilmer throughout his childhood, it is Fred’s initial diagnosis that his siblings remember most. At Wilmer, the family learned that Fred was blind due to a defect with his retinas. This was in the mid-1950s, when George Leader, Fred’s father, was governor of Pennsylvania (1955–1959) and had access to any medical institution in the family’s home state.

“We chose to work with Wilmer because we were convinced that it’s the best place for ophthalmology in the nation. It was the first time my family encountered people who had the tools to help us understand how to move forward.”

— DAVID LEADER
Fred went on to amass many accomplishments. He attended public schools, with his mother reading the textbooks to him in the evenings. At Swarthmore College, he used braille and audio recordings to study for his math and economics classes. As a young adult, Fred — who would spend several years as a board member with the National Federation of the Blind — participated in programs that taught him how to ride a bus, count money, use a cane and even ski with a buddy. In 1971, he began his career with the Department of the Navy, where he worked as a systems analyst and computer programmer, using a machine that converted 80-column punch cards into braille. For 23 years, Fred and Anne also cared for goats and cattle, and grew Christmas trees on their 100-acre Pennsylvania farm. “We couldn’t be happier to honor a life well lived by supporting Wilmer as Fred’s legacy,” says David.

Adrienne Scott, M.D., clinical director of the Wilmer Eye Institute in Bel Air and an expert in retinal diseases, is the recipient of the Fred M. Leader Family Retina Professorship. Tejal Magan, M.D., an ophthalmologist from London, is the first recipient of the pediatric fellowship. Scott says: “As I learn about Mr. Leader’s life, I recognize that Mr. Leader was incredibly resilient and did not let his blindness stand in the way of his pursuing his passions. This support will mean a great deal to my sickle cell retinopathy research program. It will allow my team to continue our work in understanding how sickle cell affects the retinal circulation and to research ways to protect vision health in patients with sickle cell disease.”

VISION FOR THE FUTURE

In 1925, the nation’s first university eye clinic to combine eye patient care, research and teaching was established, thanks to the generosity of friends and former patients of William Holland Wilmer. Your gift will ensure Dr. Wilmer’s legacy continues through education, treatment and pioneering research. Consider these opportunities:

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Seek advice from a tax professional before entering into a gift annuity agreement.
In 1968, Morton F. Goldberg, M.D., co-hosted the Airlie House Symposium on the Treatment of Diabetic Retinopathy, a groundbreaking international meeting of the world’s experts on diabetic retinopathy that led to a major revolution in care for patients with the disease that had previously led to irreversible blindness.

The symposium, which Goldberg co-led with Wilmer colleague Stuart Fine, M.D., spurred the creation and implementation of a new standardized classification of diabetic retinopathy and led to the first major collaborative, prospective clinical trial in the field of ophthalmology: the Diabetic Retinopathy Study.

Goldberg — the Joseph E. Green Professor of Ophthalmology and director emeritus of Wilmer — shared this and other stories from his extraordinary career recently in an episode of the History of Retina podcast as part of its Leaders & Legends Oral History Series, which honors pioneers in retinal science and technology whose work has improved the lives of millions with retinal disease.

USE THE QR CODE OR VISIT THE LINK BELOW TO WATCH HIS INTERVIEW:
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