By pooling smaller donations, the Pediatric Discovery Fund fuels the most promising ophthalmology research for children.

Strength in Numbers
When Dr. William Holland Wilmer planned the Wilmer Eye Institute, it was his vision to put patients, ophthalmologists, scientists, students, operating rooms and laboratories all under a single roof. At the time, no such facility existed. What Dr. Wilmer could see was that the care of patients would improve by translating scientific knowledge into better treatments, and that the doctors-in-training would receive a superior education by eliminating the artificial distinction between “patient care” and “medical science.” In short, he knew that research would make us better doctors, better able to serve our patients.

In this issue of Wilmer, you will see many examples of the science conducted at the Wilmer Eye Institute that has translated into better care for patients with eye disease (be it vitamin A deficiency, Ebola or macular degeneration) in the United States and around the world. This explains why Wilmer devotes more funding to research than does any other ophthalmology program. And you will see that this scientific knowledge is used to serve our patients in a caring and empathetic manner. That caring approach begins the moment a patient calls the institute to make an appointment, continues as the patient encounters our greeter at the front door of Wilmer or is welcomed at the registration desk, and then is maintained throughout the time spent with his or her physician. We call this the “Wilmer Way.”

Patients sense the difference. In one example, Sharon Kress, a longtime patient of recently retired faculty member Nicholas Iliff, tells the story of what inspired her to create and endow the Sharon A. Kress and Dr. Nicholas Iliff Excellence in Patient Care Award for residents: his bedside manner. While Nicholas “Nick” Iliff was at the forefront of his field in the technical mastery of his craft, he was equally respected as being a “doctor’s doctor” because he embodied the empathy and concern for patients that are hallmarks of those who work at Wilmer. Nick exemplifies the “Wilmer Way.”

We hope you enjoy these stories of innovation and gratitude.

Sincerely,

PETER J. McDONNELL, Director
The mission of the **Wilmer Eye Institute** is to use and develop the finest scientific evidence to promote improved ophthalmic care and the reduction of visual disability in a collaborative environment that combines compassionate patient care, innovative research and the training of future leaders in ophthalmology and visual sciences.
The notion of children losing their sight is almost unbearably sad. Oddly, however, this emotional connection does not always translate into a large donor base for pediatric ophthalmology, says Michael Repka, M.D., M.B.A., the David L. Guyton, M.D., and Feduniak Family Professor of Ophthalmology, vice chair for clinical practice and chief of the Division of Pediatric Ophthalmology and Adult Strabismus at Wilmer.

But he had a notion of what to do about it.

— Megan Siansky is among those pediatric patients whose vision has been saved by Michael Repka. "One of the most heart-wrenching moments in my life was handing Megan over to Dr. Repka for her surgery," says Megan’s mother, Coleen Siansky, who has chosen to support the Pediatric Discovery Fund. "I remember looking in his eyes, and they communicated everything I needed to know. I’m so very grateful for the care he took of Megan, his patient, but also for the care he gave us, as parents."
Repka created the Pediatric Discovery Fund to pool many smaller donations into a fund that could be directed toward the most promising research in pediatric ophthalmology.

The Pediatric Discovery Fund is a tribute to David Guyton, M.D., the Zanvyl Krieger Professor of Pediatric Ophthalmology, for his 35 years of leadership of the pediatric division. The fund provides critical seed money for the pilot research projects of junior faculty members in pediatric ophthalmology, allowing them to get their nascent-but-promising ideas launched. The discoveries the researchers make can allow them to apply for larger grants from government organizations, like the National Institutes of Health.

“For early-career faculty members, this money is hard to come by but is essential to getting their research off the ground,” Repka says.

In one example that was made possible in part by a gift to the Pediatric Discovery Fund from the Israel & Mollie Myers Foundation, Wilmer assistant professor Megan Collins, M.D., M.P.H., laid the groundwork for her collaboration with private and public funding sources and government partners to improve academic performance and educational opportunities for low-income students in Baltimore through a program called Vision for Baltimore, which provides access to vision care and eyeglasses.

Another donor of great impact is Jane Asch. Her three adopted children all experienced some degree of vision problems, but the most challenging case involved her son, Andy. As an infant, he had an ocular cyst—a dermoid—that the doctors at first hoped might be removed when Andy was older. But months at home with a screaming baby told Asch that something more serious was wrong.

“My local ophthalmologist said, ‘There’s only one place that can help: Wilmer,’” Asch recalls.

That brought her to the care of Repka and surgeon Henry Jampel, M.D., M.H.S., the Independent Order of Odd Fellows Professor. Congenital glaucoma was the diagnosis. Jampel, a glaucoma specialist, performed three separate trabeculectomies—surgeries that relieved the mounting pressure in Andy’s eyes. Asch feared the worst, but then the milky white clouds in Andy’s eyes subsided.

“Andy was blind when I brought him to Wilmer. Now, he can see,” Asch says. “I have a miracle walking around.”
That extraordinary personal touch not only soothed Asch’s motherly worry for her child but also inspired her to become a donor to the Pediatric Discovery Fund. Asch continues to give in whatever measure she can so that others who might not have the resources she does can experience Wilmer’s exceptional care.

“Wilmer changed my son’s life, and I wanted to give back for this miracle I have received,” she says.

Repka, for his part, is impressed by the difference these donors make collectively. “There’s a lot of power in small donations, and there’s no shortage of needed programs to fund, so it’s a good match,” Repka says.

**THE IMPORTANCE OF ANNUAL FUND GIFTS**

The disease that brought Heather Smith to Wilmer is punctate inner choroidopathy—PIC, for short. PIC causes lesions and bleeding in the retina that can lead to declining vision.

“One morning driving into work, the lines on the side of the road and the lane dividers weren’t straight. I was freaking out,” Smith says. She can still drive and read, she says, but spreadsheet lines can look like electrocardiogram readouts. Drugs can help, but there is no cure.

Her ophthalmologist, Jennifer Thorne, M.D., Ph.D., the Cross Family Professor of Ophthalmology, set Smith’s mind at ease. Thorne impressed Smith with her willingness to accommodate Smith’s desire to seek natural ways to keep the disease at bay, rather than rely on medication. To uphold her end of the bargain, Smith became a vegetarian, abjures alcohol, practices yoga and gets plenty of sleep. So far, it’s working.

“Gifts to the fund are crucial,” says Wilmer Director Peter J. McDonnell, M.D. “Initial support provides the seed funding that allows Wilmer researchers to pursue exciting ideas that sometimes ultimately lead to large federal research grants and—the ultimate purpose of our work—enormous benefits to patients.”
To say that the Dana Center for Preventive Ophthalmology at Wilmer is a World Health Organization (WHO) collaborator is a powerful statement in its own right. But to say the Dana Center is the only WHO collaborating vision center in the United States puts the impact of the center in an even more notable light.

The two organizations have partnered to take on several of the main causes of preventable eye diseases around the world: cataracts, glaucoma, nutritional deficiency, onchocerciasis (river blindness) and trachoma (see sidebar). The Dana Center guides many evidence-based programmatic activities around the globe and educates public health leaders on how to alleviate avoidable blindness worldwide.

“We take a public health approach to fighting these diseases,” says David Friedman, M.D., Ph.D., M.P.H., director of the Dana Center and Wilmer’s Alfred Sommer Professor of Ophthalmology. “Our team includes ophthalmologists, of course, but also epidemiologists, statisticians, programmers and project coordinators.”
From its inception, the Dana Center’s mission has been to bring together the strengths of Johns Hopkins’ schools of public health and medicine to counteract preventable eye diseases.

It was on a visit to Wilmer in 1980 that Charles A. Dana Jr., chair of the Dana Foundation, brought into being a vision of preventing blindness on a worldwide scale. With $1 million staked by the Dana Foundation, the Dana Center for Preventive Ophthalmology launched the same year, headed by Wilmer ophthalmologist and epidemiologist Alfred Sommer, M.D., M.H.S., (who would go on to head the Johns Hopkins Bloomberg School of Public Health as dean from 1990–2005).

Sommer had gained international recognition while doing fieldwork in Indonesia in the late 1970s by showing that small doses of vitamin A given twice a year could both prevent and cure eye disease—and also reduce childhood mortality by one-third.

Returning to the United States in 1980, Sommer became the Dana Center’s first director. He immediately began recruiting faculty members from the schools of medicine and public health.

Sommer was every bit as much an epidemiologist as an ophthalmologist. He was interested in better understanding who, why and how many people get diseases like glaucoma, cataracts and trachoma in order to diagnose and treat them sooner. A veteran of overseas assignments, Sommer recalls seeing the Dana Center’s mission from the outset as “half domestic and half international.”

“Our job was to build a field from scratch, and we did that,” Sommer says.

The emphasis on research and training that defined the Dana Center’s mission from its start remains today. In a recent example of the sort of research the Dana Center conducts, Bonnielin Swenor, Ph.D., M.P.H., has been studying aging and vision, and has shown cognitive decline in people with worsening vision.

The relationship works in both directions, Swenor says. Mental decline can precede visual decline as well. “But we found the strongest driver is worsening vision predicting cognitive decline. That finding can help us in our medical decision-making,” she says, and could lead to programs to help older people maintain good vision as they age.

Swenor’s research proved so compelling that Jane Kroger, a noted psychologist and retired professor, who had witnessed a similar decline in a close family member, decided to support the study financially.

“I’d seen macular degeneration lead to cognitive impairment, and when I heard about some of these amazing science fiction-type projects that are going on at the Dana Center, it really caught my attention,” Kroger says.

The Dana Center works close to home too. A Dana Center-sponsored program called Vision for Baltimore is striving to improve academic performance by providing glasses to Baltimore students. Another program funded by the Centers for Disease and Prevention,
SToP Glaucoma, has screened the vision and eye health of over 6,000 inner-city individuals and provided free glasses and access to a free exam if needed. Internationally, there is work on diabetic retinopathy screening and treatment, and a project in sub-Saharan Africa to improve cataract surgery outcomes and volumes. The list of projects goes on and on.

Likewise, the Dana Center works to educate the next generation of public health ophthalmologists by mentoring doctoral, master’s and medical students in short- and long-term training opportunities. Many leaders in the global eye health community have studied at the Dana Center. And the final piece of the puzzle, Friedman says, is the work the Dana Center does to raise awareness of preventable eye conditions and what people can do to avoid them or lessen their impact.

“I think Dr. Swenor’s research is very much in line with that aspect of our mission,” Friedman notes. The connection between vision and mental acuity is not one many people naturally put together, he says. Simply drawing attention to the correlation should encourage more older people to seek eye care as they age.

“Cognitive decline is one of the most important concerns in aging populations. We really should be putting effort into preventing vision loss in older people,” Friedman says.

EXEMPLIFYING THE MISSION

For Sheila West, Ph.D., Pharm.D., the vice chair for research at Wilmer, the Akef El-Maghraby Professor of Preventive Ophthalmology and a Dana Center faculty member, the international aspect of the center’s mission drew her in. “The biggest burden for these eye diseases is overseas in resource-poor environments,” she says.

Her specialty is trachoma, a bacterial infection that scars the eyelids and can scratch the corneas, leading to vision loss. Caused by scarring from repeated bacterial infections, trachoma is common in Africa and affects mostly children.

The Dana Center supports a multifaceted trachoma control effort known as SAFE—an acronym for surgery, antibiotics, facial cleanliness and environmental change. As an epidemiologist, West, along with her colleagues, first demonstrated that simple face washing was an important tool in preventing trachoma. That tactic is now a core component of the WHO’s global program to eradicate the disease.

In 2017, specifically for her work on trachoma, West was honored with the International Blindness Prevention Award from the American Academy of Ophthalmology.

“International in scope, preventive in nature and public-health focused,” West says, “the total mission of the Dana Center is encapsulated in this one program.”
“I come up to the appointment desk here at 8 o’clock in the morning, and they’re cheerful. That’s a wonderful way to start any kind of medical procedure, especially if you’re going to get a needle in both eyes,” he says. Curtis, 73, has age-related macular degeneration (AMD)—a disease that requires injections to control the rogue growth of blood vessels in the retina that causes vision loss.

After a round of preliminary exams and photos of his retinas, Curtis will see retina specialist Peter Campochiaro, M.D., the George S. and Dolores D. Eccles Professor of Ophthalmology and Neuroscience, who consults the tests and most often recommends a course of injections, which are delivered once a technician has administered antiseptics and anesthetics to Curtis’ eyes.

“Your head’s back, your eyes open. He tells you when there’s going to be some pressure,” explains Curtis. “While this is happening, for years, I have gone back to the same fishing spot in Montana in my mind, and I’m watching a trout—the same old trout,” he says. “I pretend that when the needle goes in, that’s when the fish bites.”

After his time with Campochiaro, Curtis begins his journey home to Rockville. “My vision is frosted glass,” he says. “I try not to bump into people as I leave the hospital.”

Curtis is one of the lucky ones with AMD, a condition that currently afflicts 11 million people in the United States, most of them over age 60. He can actually get to a specialist who can administer the shots of anti-VEGF (vascular endothelial growth factor) medication on a regular basis. And he has insurance to cover the $2,000 price tag of each injection.
Frequent anti-VEGF injections are effective but not practical, admits Campochiaro. “It’s pretty difficult to make all the appointments. If a patient breaks their leg, for example, they miss their shots for quite a while. And their results are not nearly as good,” Campochiaro says. For this reason, he is on the hunt for better treatments with partners from Wilmer’s Center for Nanomedicine, including Justin Hanes, Ph.D., director of the center and the Lewis J. Ort Professor of Ophthalmology, and Laura Ensign, Ph.D., the Marcella E. Woll Professor of Ophthalmology, both biomedical engineers who specialize in drug delivery.

One project began when Hanes and Ensign approached Campochiaro with a question: “If we could make an eye drop that lasted for a long time so you only have to dose it once a day and it could deliver drugs to the retina—would that be important for patients?” With patients like Curtis in mind, Campochiaro gave them an enthusiastic yes.

Ensign and Hanes had been working on a concept that they thought might solve a problem endemic to eye drops—the fact that the eye blinks them out almost as soon as they go in so that typically less than 5 percent of the medication penetrates into the eye. For eye drops to effectively deliver a drug to the retina, a high drug concentration must be maintained long enough for the drug to travel from the front of the eye all the way to the retina in the back of the eye. Achieving this feat in humans is one of the “holy grails” of drug delivery in the eye, says Ensign.

“We identified a new way to use a polymer in eye drops that rapidly distributes the drug over the surface of the eye and then forms a gel,” says Hanes. “This new method keeps the drug against the surface of the eye longer, which allows greater drug penetration.” Because the polymer forms a clear gel that acts as a protective barrier to keep medication from being cleared away by tears, the researchers call this technology the invisible therapeutic ocular bandage (ITOB).

Several aspects of the polymer contribute to its effectiveness. It is thermoreversible, which means it acts in the opposite way of normal gelling behavior. Think of Jell-O, which begins as a liquid and gels as the temperature cools. This polymer does the reverse: It is liquid at room temperature and gels as it warms up on the surface of the eye.

Such polymers exist in many medications, but typical thermoreversible polymers present a problem in eye drops. “Normally, when you use a thermoreversible polymer, it will gel and seize up right away in a clump. When you blink, it can get gummed up in your eyelashes and smear around,” Ensign says.

The team manipulated a particular thermoreversible polymer to act differently, however, such that “the liquid spreads evenly over the eye surface before it gels,” explains Ensign. The result is a thin layer that
fits right under the eyelid. The thinness of the clear gel reduces refraction, which can obscure vision.

The polymer is compatible with a variety of drugs. The one used in the AMD medication the team is currently studying in preclinical trials is a small molecule, called a hypoxia-inducible factor inhibitor, which has been shown in previous studies to stop the faulty growth of blood vessels that cause the vision loss associated with AMD—possibly even more effectively than the anti-VEGF medication currently used in eye injections.

The long-term hope, says Campochiaro, is that using the ITOB as a delivery method will enable patients to administer AMD medication via eye drops, reducing their number of clinic visits and need for injections.

This is welcome news to Curtis. Should these daily eye drops become a reality for patients (see sidebar), Curtis will no longer have to plan his life around the monthly injections or worry that a missed appointment could jeopardize his sight.

“The benefit is not just my convenience; this could really have an impact on a much wider range of people,” says Curtis. Indeed, by 2020, it’s projected that 196 million people worldwide will suffer from AMD; that figure is expected to increase to 288 million by 2040. “The idea that drops can be transported to anywhere and be available to doctors who are not specialists—it would change the world.”

\[Image: Campochiaro administering an anti-VEGF injection in Larry Curtis’ eye\]

\[Image: ‘FUTURISTIC’ MEDICINE\]

The invisible therapeutic ocular bandage (ITOB) project lives within Wilmer’s Center for Nanomedicine, which is “a unique effort in the world to bring novel technologies to patients,” says its co-director, Kannan Rangaramanujam, Ph.D., Wilmer’s Arnall Patz Distinguished Professor. “Philanthropy has a major catalytic influence at the early stages of project development because it enables us to validate our ideas.”

While preliminary research on the ITOB is promising, the drops are still in preclinical trials. Up to three phases of human trials await if the animal models hold up and if toxicity studies show the product is likely to be safe.

The ITOB requires greater financial support than that available through grants because it is a high-risk, high-reward project. For this reason, the Robert H. Smith Family Foundation has stepped in to support the project. The Smith family has had a long relationship with Wilmer.

“Our foundation’s support of Wilmer goes back many years, beginning after my parents started seeing Dr. Morton Goldberg. They were so impressed with him that they decided to support him and his plans for Wilmer,” says Michelle Smith. “Fast forward to today, and we are very excited to see the amazing strides being made at Wilmer. The invisible therapeutic ocular bandage project represents the kind of ‘futuristic’ medicine we want developed to help patients as soon as possible.”

\[Image: Campochiaro administering an anti-VEGF injection in Larry Curtis’ eye\]

\[Image: ‘FUTURISTIC’ MEDICINE\]
David Tolsma has Fuchs’ dystrophy, a rare, progressive wasting away of the inside layers of the cornea. “The cells don’t regenerate, and the dead cells build up. It’s like looking through dirt on a windshield,” Tolsma says.

As an avid golfer and a bird-watcher, Tolsma witnessed a degradation in his sight to the point that it was robbing him of his favorite hobbies. He even had to stop driving at night.

Eventually, the condition grew bad enough that it brought him into the care of Wilmer’s Allen Eghrari, M.D., a specialist in corneal transplantation.
In 2016, Eghrari transplanted the first of Tolsma’s waning corneas, his left. His right was replaced the next year. Both surgeries went exceedingly well, Tolsma says. So well, in fact, that Tolsma and his wife, Cynthia, have become donors to Eghrari’s other area of expertise, countering the ravages of Ebola in West Africa.

“The Ebola virus often enters through the eye, and, if the patient is fortunate to survive the disease, there are often serious and long-term eye issues that follow,” Eghrari says.

He is leading a field study in West Africa to catalog and characterize the complications of Ebola on the eye. He has also worked together with Liberian ophthalmologists and nurses to develop innovative experiences with examination equipment, telemedicine and ophthalmic photography.

Seeing a clear need and an opportunity for real impact, the Tolsmas chose to tackle Ebola instead of the disease that most directly affects them, Fuchs’. “We trusted Dr. Eghrari and wanted him to use the money as he saw best. If the work happened to be in Liberia, it didn’t matter to us,” Tolsma explains. “My wife and I are at a stage where we have become serious givers who want to help people we know in good causes.”

Survivors of Ebola tend to be younger, stronger patients, and they are being treated for cataracts, cornea and other eye problems—care that at times may even restore vision for their long life ahead.

“When you have confidence that the recipients will be well-served and the person providing the service is as great as Dr. Eghrari, it’s a pretty easy decision,” Tolsma says. “We are happy to help in any way we can, especially young people in West Africa.”

For Eghrari, the partnership with the Tolsmas is a perfect example of the good that is possible when like-minded people are united by a common interest and work together in a spirit of unity. “Everyone has the ability to take the initiative, to help people in need and to really make a difference in the world,” Eghrari says. ▲

“\textit{When you have confidence that the recipients will be well-served and the person providing the service is as great as Dr. Eghrari, it’s a pretty easy decision. We are happy to help in any way we can, especially young people in West Africa.}” —\textit{David Tolsma}
Top: Allen Eghrari observing a surgery in Liberia

Center: “When we first landed on the ground in 2015, we got together all the eye care stakeholders in Liberia for a stakeholders meeting and to ensure that Liberians could contribute meaningfully in the planning of the project. The picture (in which I’m kneeling) includes Liberian ophthalmologists, optometrists, ministry of health officials, NGO representatives and survivor advocates,” says Eghrari.

Bottom: The Ebola virus
HANDA TAKES THE REINS
NEW CHIEF OF THE RETINA DIVISION AT WILMER

Like a piece of misapplied scotch tape that gets bunched in the middle, a macular pucker is a fold in the retina precisely where it is least wanted—the very heart of the retina, where fine detail is resolved. James Handa, M.D., the Robert Bond Welch, M.D., Professor of Ophthalmology and the newly seated chief of the Retina Division at Wilmer, says that state-of-the-art surgery can correct the problem. Aided by sophisticated surgical equipment, Wilmer surgeons can grab the membrane, peel it back and pull it flat again to improve vision. It is a delicate and complex surgery.

As impressive as the procedure is, this sort of cutting-edge capability does not always garner the attention it deserves, says Handa. As chief of the division and as a surgeon, Handa wants to change that.
The Wilmer Retina Division is the largest division at Wilmer with 19 full-time faculty members and as many as 300 patients seen each day. The division is well-known and highly regarded for its exceptional clinical care, cutting-edge research and success at treating a remarkable array of conditions ranging from age-related macular degeneration to ocular malignancies.

While many of those treatments involve surgeries of great skill and expertise, surgery is not always the first thing that comes to mind when speaking of Wilmer’s Retina Division. In his new role as division chief, Handa sees his priority as maintaining Wilmer’s high standing in all aspects of retinal care while substantially raising the profile of its surgical practice, which he says is as good as any in the world.

“There is not a surgical or medical retinal condition that we cannot treat with the highest degree of confidence,” Handa notes. “We need to raise awareness—the consciousness—of the incredible skill and capabilities available here.”

“Jim Handa is an extremely successful clinician and recognized scientist in retina, as well as a card-carrying retina surgeon,” says Neil Bressler, M.D., the James P. Gills Professor of Ophthalmology and the outgoing division chief, who served in the role for the past 13 years. “He is one of a handful in the world with the experience to lead this division into the future.”

That future, Handa believes, will be more focused on surgery. Among the areas of Wilmer’s practice that he feels deserve more attention is robotic surgery, where Peter Gehlbach, M.D., Ph.D., is one of the world’s foremost experts.

Handa himself is no stranger to robot-assisted eye surgery. He worked with Russ Taylor, Ph.D., of the Johns Hopkins Whiting School of Engineering—known as the father of robotic surgery—to develop machines that guide the surgeon’s hands while performing finely detailed surgeries on retinal tissues—some of the smallest and most delicate tissues in the human body. Incisions are smaller. Patients heal faster. Often, there is little need even for pain medications following such surgeries, Handa says.
“We’re really trying to change how people think about eye surgery,” Handa says.

Bressler welcomes the increased focus on surgery and sees the added emphasis as a natural evolution that builds on the division’s recognized strengths.

“Jim brings a wonderful, fresh perspective to things,” he says.

Another area of surgical expertise that merits attention, Handa says, is Wilmer’s success with the Argus II retinal prosthesis that is restoring a certain measure of sight to the blind. Some have called it a bionic eye.

The Argus II involves wearing what looks like a pair of performance sunglasses, on which a small digital camera is mounted. A video processor relays signals from the camera to a chip implanted in the patient’s eye. That chip is wired to the optic nerve and the brain. Working together, this system restores a modicum of vision that allows navigation of the world without assistance. Wilmer is a leader in eye prostheses, Handa says—he and Fernando Arevalo, M.D., the Edmund F. and Virginia Ball Professor of Ophthalmology, are two of a small number of surgeons in the world to have successfully performed the Argus chip implantation.

In other emerging areas of opportunity, Handa points to the promise of regenerative medicine. He says the work of Wilmer faculty members, like Mandeep Singh, M.D., Ph.D., with stem cell implants to counter genetic vision conditions represents the future of retinal surgery. Elsewhere, in a relatively new dimension of Wilmer’s surgical offerings, Kim Jiramongkolchai, M.D., has initiated a surgical practice specifically targeted to children, while Zelia Correa, M.D., Ph.D., the Tom Clancy Professor of Ophthalmology, is a specialist in both pediatric and adult eye cancers, which often require surgery.

“These are all state-of-the-art procedures that we need to start bragging about—and we will!” says Handa.

“JIM HANDA IS AN EXTREMELY SUCCESSFUL CLINICIAN AND RECOGNIZED SCIENTIST IN RETINA, AS WELL AS A CARD-CARRYING RETINA SURGEON. HE IS ONE OF A HANDFUL IN THE WORLD WITH THE EXPERIENCE TO LEAD THIS DIVISION INTO THE FUTURE.”

NEIL BRESSLER
Barbara Simerl found her vision gradually getting worse, and eventually, glasses were of little use. She felt her twin passions of reading and needlepoint slipping away. “I knew it was bad when I couldn’t read my Kindle anymore,” Simerl recalls.

She reached out for help to a doctor who prescribed an expensive, binocularlike device that allowed her to read just one word at a time. His seeming indifference to the challenges she faced was the last straw. During one checkup, Simerl had enough. “I literally asked him to leave,” she recalls. “And that’s when I called Johns Hopkins.”
Her close friend’s husband was familiar with the Lions Low Vision and Vision Rehabilitation Center at Wilmer and recommended she visit. Since starting at the center, Simerl has never looked back. She was placed in the care of Judith Goldstein, O.D., associate professor of ophthalmology and director of the program, and Kristen Lindeman, O.T., a low-vision occupational therapist, who have continued to care for her and provide solutions to maximize her independence. Goldstein prescribed specialized high-powered lenses for Kindle reading, and Lindeman has since prescribed a desktop magnifier that helps Simerl read her mail and other essential documents. “It’s very personal for me,” Simerl says. “Kristen really cares. She’s come to my home several times.”

The mission of the low-vision program is to help patients to read, walk safely, drive, cook or manage their everyday activities to the best of their ability for as long as they can, says Goldstein.

Often, those solutions include technologies like audiobooks, high-powered glasses and machines that magnify text to the point the patient can read again. Other times, the solution involves teaching the patient to rely on other senses as much as possible. “We call it sensory substitution,” says Goldstein. “Replacing one sense with another.”

Home visits are a big part of the Lions Low Vision Center’s therapeutic activities, Goldstein says, because making modifications to daily living requires a therapist to see patients in their everyday environment.

Simerl has now been a patient for many years and has become a donor to the Lions Low Vision Center. Her gifts have allowed the low-vision team to completely renovate one of its rehabilitation rooms, and she has included the Lions Low Vision Center in her estate planning.

“Mrs. Simerl has made an enormous difference for all our patients,” Goldstein says.

Verdell Clark’s path to the Lions Low Vision Center was similar to Simerl’s. As she grew older, she noticed her vision was getting worse but brushed it off. She would repeatedly return to the drugstore for reading glasses of ever-higher magnification, but soon, even they were not sufficient. Turning to a nearby clinic, Clark learned her prescription — 3.25, she remembers distinctly — was too great even for the clinic to fulfill.

“For something that high, they told me I had to go to ‘low vision,’” Clark recalls them telling her. “I didn’t even know what ‘low vision’ was.”

She did some research, and that led her to Wilmer.
Goldstein says that most low-vision patients have not always had vision problems. Many patients have conditions that are age-related and that gradually progress over time, so the ongoing adjustment is often the hardest part.

In addition to recommending technology use and retraining strategies, Wilmer approaches low vision in another significant way: through networking. Initiatives involve building a social circle to help strengthen people’s confidence and adjustment to vision loss. As with many medical conditions, there can be a stigma associated with low vision, and people can feel profoundly isolated.

It helps others with low vision to have role models like Clark and Simerl to see that they can succeed and remain independent, says Lindeman, adding, “It lets them know that they are not alone.”

She recently initiated a program—known as the See Us Network, or SUN—designed to bring together people with low vision and educate the community about the spectrum of vision impairment that defines low vision.

SUN features a strong mentor-mentee aspect in which newer patients are paired with established patients so they can learn from each other. They meet in person and use the internet, phones and social events to keep up communications with each other. Anyone can be a mentor or a mentee. “In fact, many people are both, helping others while being helped themselves,” Lindeman says.

Clark is a member of SUN. She serves on the board and as treasurer of the network. Her husband has even gotten involved. The experiences of that “second-tier” low-vision support community are just as important to the strength of the group as the patients themselves.

“These people know what low vision means to their loved ones,” Lindeman says. “And they have lots of ideas on how to help.”
Renowned for the quality of its care, the Wilmer Eye Institute is also known for the compassion shown by every member of its patient care team. That commitment to great service is evident in the way each patient is personally shepherded through even the most basic visit. There’s a name for this process: It’s called the “Wilmer Way.”

The Wilmer Way lives at all of Wilmer’s locations, from Green Spring Station to Bethesda. A visit to the clinic at The Johns Hopkins Hospital is a microcosm of this all-encompassing approach. It begins with a phone call. On that call, the patient might talk to a patient access specialist like Megan Suehle, who is prepared to offer appointments the very same day if the patient can make it. Most people are unaware—and surprised—that Wilmer can do same-day appointments. For patients experiencing problems with their eyesight, it is a profound comfort, Suehle says. “Their eyesight is important. We see them as soon as possible,” she adds.

On the day of the appointment, every patient is met by a greeter, who is committed to getting patients to the right place at the right time. But a greeter’s most important job is to make the patient feel at ease, says Rita Dziecichowicz. She began as a volunteer some 11 years ago but soon made it her career. “I walk them down the hall. I calm them,” Dziecichowicz says. “They come with such problems. It makes me feel good to help.”

The next stop along the Wilmer Way is registration, where the patient might be fortunate to meet someone like Elaine Dorsey. Her function is check-in and paperwork, but her place is as a confidante. Dorsey exudes an air of discretion that says: Trust me. “I give them a soft tone. I’ll embrace them. Sometimes, they cry. It’s an important job. Some patients even have a favorite registration person,” Dorsey says.

The Wilmer Way carries through to the exam room, where a patient care specialist like Mike Dent will attend to the patient’s needs. Dent is a supervisor in the Retina Division, Wilmer’s largest division. Dent preps a history, dilates the eyes of the patient and photographs the patient’s retinas, if need be. He also assists as the Wilmer physician completes his or her consultation. Dent sees himself as a teacher. “I explain things. Build a relationship. There are patients I now have dinner with,” Dent says. “I try to run [the exam room] like a family. That’s the Wilmer Way.”
In 1997, Sharon Kress was severely injured in a car accident. One month in a coma, three months in a wheelchair with a feeding tube and some 35 surgeries would follow, many for her face and eyes.

That brought her into the care of Wilmer surgeon Nicholas Iliff, M.D.
In 1998, Iliff conducted the first of 20 procedures he would perform on Kress. He not only managed the health and well-being of her eyes, Kress says, but also referred her to other doctors at Johns Hopkins to assist with her many injuries. Kress credits Iliff and those doctors with helping to rebuild her life.

“He always had time for me personally. He always listened, answered my questions and addressed my concerns,” Kress says. “He really cared for me.”

Once, after a visit to Iliff, Kress was driving home to New Jersey when her eye began to bleed. Kress phoned Iliff, who quickly calmed her and coached her through exactly what to do. “Having your eye bleed is beyond devastating, but having someone there to help you is priceless,” Kress says.

That extraordinary level of care inspired Kress to make the transition from patient to donor. She began to support ophthalmologists-in-training studying under Iliff, endowing several fellowships that helped them complete their training. She later included Wilmer in her estate plans.

Most recently, Kress permanently endowed the Sharon A. Kress and Dr. Nicholas Iliff Excellence in Patient Care Award, which will be given annually by Wilmer to the first-, second- and third-year residents who are deemed to provide the most exceptional patient care. It will first be bestowed in 2020 and include a monetary award.

The award is the third to recognize resident contributions to the core missions of Johns Hopkins Medicine. Two existing awards acknowledge excellence in research and in teaching. What was missing was recognition of excellent patient care, says Michael Boland, M.D., Ph.D., Wilmer’s residency program director.

“Residency is often a thankless period during one’s career. Awards like these are an opportunity to recognize the great work residents do for Wilmer and our patients,” Boland says.

In the end, the gift is one of recognition of Iliff himself, who, Kress says, is a “Renaissance man”—a super doctor and educator, and a man who cares deeply about his patients.

Iliff cared for Kress for 18 years, until his retirement in 2016. He describes her as an incredibly generous and thoughtful woman. “Donations like this are critical to Wilmer’s mission, but this is more about Sharon Kress and her perspective on what is important in life. It means a lot to us all.”

“HAVING YOUR EYE BLEED IS BEYOND DEVASTATING, BUT HAVING SOMEONE THERE TO HELP YOU IS PRICELESS.”

SHARON KRESS
VISION FOR THE FUTURE

The Johns Hopkins Legacy Society

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 legacy gift will ensure Dr. Wilmer’s legacy continues through education, treatment and pioneering research. Consider these opportunities to leave a meaningful legacy while taking into account your personal goals.

FROM YOUR WILL OR TRUST
Gifts that cost nothing in your lifetime.

RETIREMENT PLAN DESIGNATION
A tax-efficient way to leave a legacy.

CHARITABLE GIFT ANNUITY
A charitable gift annuity supports the future of the Wilmer Eye Institute and provides lifetime income to you or a loved one, along with significant tax benefits. Take advantage of recently announced higher payout rates for a new charitable gift annuity.

To learn more about these and other creative ways to support any area of Johns Hopkins, contact:

Office of Gift Planning
410-516-7954 or 800-548-1268
giftplanning@jhu.edu
giving.jhu.edu/ways-to-give/gift-planning

Seek advice from a tax professional before entering into a gift annuity agreement.
2018 EVENTS

David Knox, M.D. ’61, gave the 30th Wilmer Memorial Lecture at the annual Wilmer Residents Association Meeting on “The History of Neuro-Ophthalmology at the Wilmer Eye Institute.” The day consisted of poster presentations by Wilmer researchers and talks by Wilmer faculty members and residents. Recipients of the Distinguished Alumni Award included Lee Snyder, M.D. ’03, and Gene de Juan Jr., M.D. ’83. Stuart Fine, M.D., who completed a fellowship at Wilmer in 1973, gave the Susruta Lecture in History and Ethics on “Recruiting the Best and the Brightest for Academic Ophthalmology.”
BENCH UNVEILING JUNE 18, 2018

Staff members from the Wilmer Eye Institute unveiled a bench dedicated to Ferdie Anicoche, who passed away in November 2017. Anicoche started working at the Wilmer Eye Institute in March 2003. A bright light within Wilmer with an infectious smile, he received the Wilmer Nurse Award in 2012 and became certified as an operating room nurse in 2016. He was the devoted husband of Maria Liza, a senior clinical nurse in the Johns Hopkins Weinberg perianesthesia unit, and the proud father of Asher, Cyrill and Chantal.
Prevent Blindness, a nonprofit established in 1908 with the mission to “prevent blindness and preserve sight,” awarded the Jenny Pomeroy Award for Excellence in Vision and Public Health to the Johns Hopkins University School-Based Eye Care Team. Presented at the Focus on Eye Health National Summit in Washington, D.C., the award included an invitation to speak about the team’s work with Vision for Baltimore and Vision for Chicago. The eye care team includes Wilmer’s Megan Collins, M.D., M.P.H., assistant professor of ophthalmology; David Friedman, M.D., Ph.D., M.P.H., the Alfred Sommer Professor of Ophthalmology and director of the Dana Center for Preventive Ophthalmology; and Michael Repka, M.D., M.B.A., the David L. Guyton, M.D., and Feduniak Family Professor of Ophthalmology and chief of the Division of Pediatric Ophthalmology and Adult Strabismus. Robert Slavin, Ph.D., and Nancy Madden, Ph.D., both faculty members within the Johns Hopkins University School of Education, round out the team.

The Independent Order of Odd Fellows, a fraternal organization dedicated to fellowship among its members, social welfare and the care of the sick, held an event on Aug. 19 to honor Henry Jampel, M.D., M.H.S., who holds the Independent Order of Odd Fellows Professorship at the Wilmer Eye Institute. At the event, Jampel, who also serves as medical director of Wilmer’s Green Spring Station clinic, received an additional $1 million for his endowed professorship to support glaucoma research.
In honor of World Sight Day, an annual day of awareness to focus global attention on blindness and vision impairment, Wilmer raised funds to support the Dana Center for Preventive Ophthalmology’s Gift Fund. The only World Health Organization collaborating center in the U.S., Wilmer’s Dana Center is a leader in global and domestic research on blindness prevention. Its mission is to prevent avoidable visual disability and blindness around the globe by conducting research, instituting sound public health policies and programs, and training the next generation of leaders in public health ophthalmology.

On World Sight Day, Wilmer’s development staff members were stationed throughout Wilmer’s clinical network, from Bel Air to Bethesda, to inform the public and answer questions about the effects of vision impairment around the world and the Dana Center’s activities to alleviate it. Members of the Dana Center also hosted a virtual Ask Me Anything forum on Reddit, where users posed questions on a range of topics, including glaucoma, low vision and dry eye. One user asked, “What is the most prominent eye condition seen globally?” The answer: cataract.

### Coats’ Disease Fundraiser Oct. 6, 2018

Coats’ disease is a rare eye condition where blood vessels in the retina leak blood into and behind the retina, often leading to blindness. In 2014, after a diagnosis of Coats’ disease, Sean Smole came under the care of Wilmer ophthalmologists Jim Handa, M.D., the Robert Bond Welch, M.D., Professor of Ophthalmology, and Michael Repka, M.D., M.B.A., the David L. Guyton, M.D., and Feduniak Family Professor of Ophthalmology. That same year, the Smoles launched the Curing Coats Fundraiser, held each fall at their home. Through the generous donations of their community—food trucks, music, photography, supplies, raffle items, etc.—they are able to donate 100% of the funds raised directly to Wilmer and the research of clinician-scientist Akrit Sodhi, M.D., Ph.D., the Branna and Irving Sisenwein Professor of Ophthalmology.

Sodhi’s work focuses on the chemical pathways in the eye that cause the body to create new blood vessels, leading to dangerous leakages in the retina—work that is directly applicable to Coats’ disease.

At this fall’s event, Wilmer Director Peter J. McDonnell, M.D., spoke about the institute and his gratitude for the funds raised. Handa introduced Sodhi, who gave an update on his research. The event was well-attended, and the crowd enjoyed the food trucks and fun immensely while raising money for an important cause.
Gathering in Chicago, Illinois, for the American Academy of Ophthalmology (AAO) Annual Meeting, Wilmer faculty members, Wilmer alumni, and friends and family stopped by a reception hosted by Wilmer at Gibsons Italia, overlooking the Chicago River. As a global community of 32,000 medical doctors, AAO sets standards for ophthalmic education and advocates for patients. Numerous Wilmer faculty members played leadership roles in the conference, and more than fifty made presentations—activities that spread the influence of the Wilmer Way throughout the field of ophthalmology.
The 2018 Wilmer Board of Governors

Sanford Greenberg, Ph.D., Chairman
Kim Alkire
Mary E. Bartkus
George and Mary Nell Berry
Suzanne and Edward Birch, Ph.D.
Elaine and Howard Brownstein
Bob Butchofsky
Deborah A. Colson
William E. Conway Jr.
Meredith B. and John Cross
Liz Dubin
Maureen and Robert B. Feduniak
Sandy and Rick Forsythe
Heather and James P. Gills Jr., M.D.
Myrna D. and Morton F. Goldberg, M.D.
Monica Lind Greenberg
Susan Greenberg
M. Alan Guerrieri
Martha Head
Allan M. Holt
Claire S. and Allan D. Jensen, M.D.
Ian Kelly
Helen and Raymond P.L. Kwok
Harriet and Jeffrey A. Legum
James V. Mazzo
Kenneth A. and Jo A. Merlau
Cherie Ort
Marlee Ort
Michael Panitch
Ellen Patz
T. Boone Pickens
David E.I. Pyott
Stephen F. Raab and Mariellen Brickley-Raab
Ted and Ann Reiver
Suzanne Slesin
Louis E. Slesin, Ph.D., and Lesli Rice
Clarice Smith
Niel F. Starksen, M.D., and Sandra Tong Starksen, M.D.
Rebecca Atkinson Stirn
Cassandra Hanley and Marc Sumerlin
Jonathan Talamo, M.D.
Bill and Norma Kline Tiefel
Albert W. and Therese L. Turner
Robert B. Welch, M.D.
William J. Wood, M.D.

JOIN US IN OUR QUEST FOR DISCOVERY

The mission of the Wilmer Eye Institute is to use and develop the finest scientific evidence to promote improved ophthalmic care and the reduction of visual disability in a collaborative environment that combines compassionate patient care, innovative research and the training of future leaders in ophthalmology and visual sciences. For the past nine decades, our efforts have been made possible by the financial support of our generous donors. Your investment in the Wilmer Eye Institute makes it possible for our physicians to offer unrivaled patient care to you and to countless others who may find their sight threatened by illness or injury. We invite you to partner with the Wilmer Eye Institute on our quest of discovery and to help us find the next treatment or cure.

For information on how to join us in our mission to end blindness and life-altering eye diseases, please contact:

WILMER DEVELOPMENT OFFICE,
410.955.2020, wildev@jhmi.edu

Libby Bryce Bell,
Senior Director of Development
Kathy Anglemyer,
Senior Associate Director of Development
Jillian Beam,
Associate Director of Development
Jocelyn Davis,
Assistant Director of Development
Madison Greer,
Administrative Coordinator
Allison Kerr,
Senior Administrative Coordinator
Megan Leffner,
Associate Director of Development
Lindsey Rogers,
Senior Development Coordinator
Jeff Weingart,
Assistant Director of Development
Jessica Wilson,
Communications Specialist
2018-19 RESIDENTS

Sophie Cai
Kathleen Jee
Angeline Nguyen
Inna Stroh
Angela Zhu

Inas Aboobakar
Tracy Krick
Kapil Mishra
Narine Viruni
Jiawei “Jenny” Zhao

Meleha Ahmad
Ishrat Ahmed
Karun Arora
Pujan Dave
Jacob Light
OUR DONORS

The scientists and staff members of the Wilmer Eye Institute gratefully acknowledge our partners in philanthropy listed here. The generosity of these friends supports a tradition of collaboration and far-reaching investigation as, together, we pursue the complex challenges of eye diseases. While our space here is limited, our thankfulness is not. Although gifts of any amount are gratefully received, only gifts, pledges and pledge payments totaling more than $250 in the fiscal year ending June 30, 2018, could be listed in this report. If any donor was accidentally missed, or if you prefer to remain anonymous, please contact the Development Office at 410-955-2020.
When Dr. William Holland Wilmer planned the Wilmer Eye Institute, it was his vision to put patients, ophthalmologists, scientists, students, operating rooms and laboratories all under a single roof. At the time, no such facility existed. What Dr. Wilmer could see was that the care of patients would improve by translating scientific knowledge into better treatments, and that the doctors-in-training would receive a superior education by eliminating the artificial distinction between “patient care” and “medical science.” In short, he knew that research would make us better doctors, better able to serve our patients.

In this issue of Wilmer, you will see many examples of the science conducted at the Wilmer Eye Institute that has translated into better care for patients with eye disease (be it vitamin A deficiency, Ebola or macular degeneration) in the United States and around the world. This explains why Wilmer devotes more funding to research than does any other ophthalmology program. And you will see that this scientific knowledge is used to serve our patients in a caring and empathetic manner. That caring approach begins the moment a patient calls the institute to make an appointment, continues as the patient encounters our greeter at the front door of Wilmer or is welcomed at the registration desk, and then is maintained throughout the time spent with his or her physician. We call this the “Wilmer Way.”

Patients sense the difference. In one example, Sharon Kress, a longtime patient of recently retired faculty member Nicholas Iliff, tells the story of what inspired her to create and endow the Sharon A. Kress and Dr. Nicholas Iliff Excellence in Patient Care Award for residents: his bedside manner. While Nicholas “Nick” Iliff was at the forefront of his field in the technical mastery of his craft, he was equally respected as being a “doctor’s doctor” because he embodied the empathy and concern for patients that are hallmarks of those who work at Wilmer. Nick exemplifies the “Wilmer Way.”

We hope you enjoy these stories of innovation and gratitude.

Sincerely,

PETER J. McDONNELL, Director
By pooling smaller donations, the Pediatric Discovery Fund fuels the most promising ophthalmology research for children.

Strength in Numbers