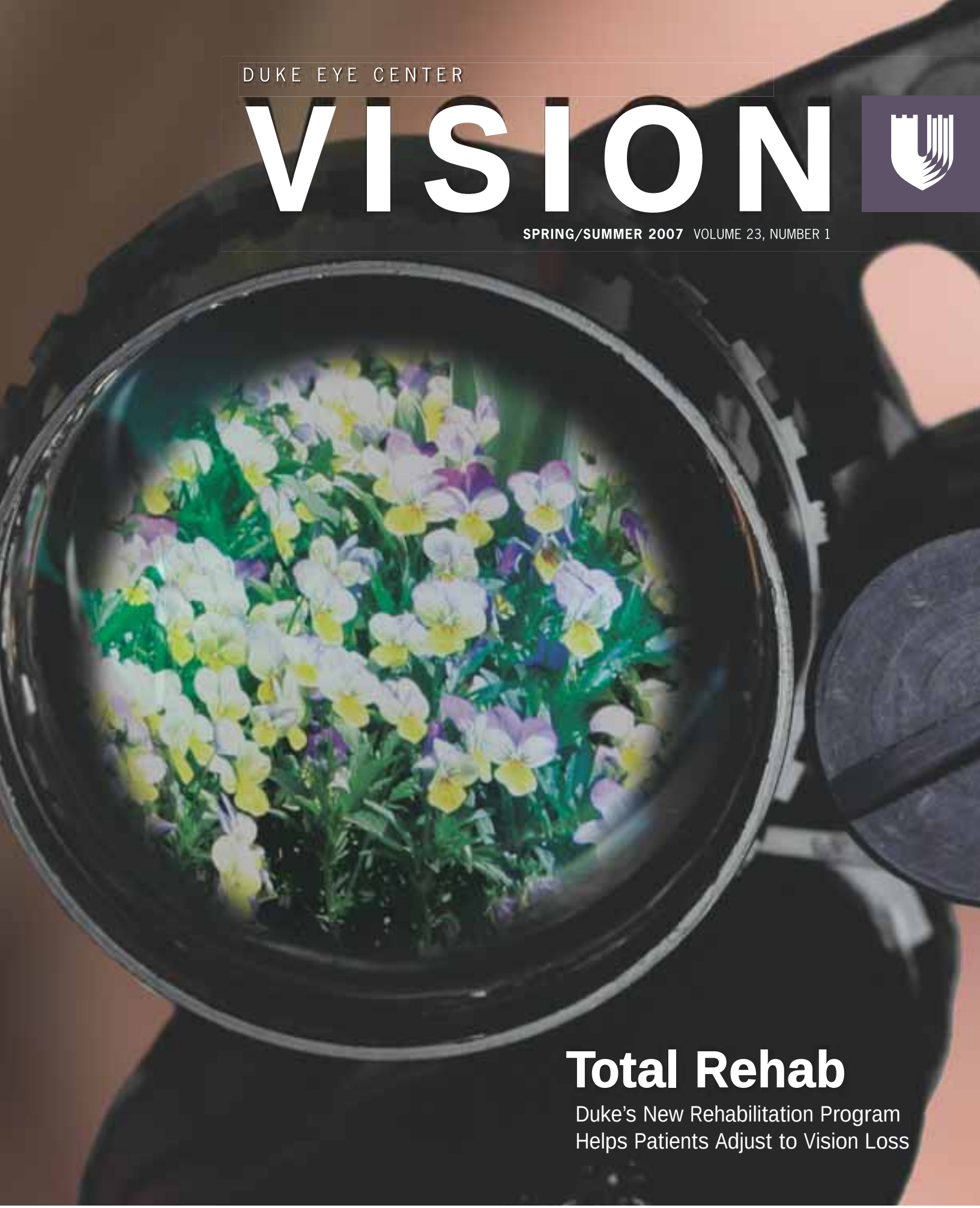
DUKE EYE CENTER

VISION

SPRING/SUMMER 2007 VOLUME 23, NUMBER 1



Total Rehab

Duke's New Rehabilitation Program Helps Patients Adjust to Vision Loss

CHAIRMAN'S CORNER

Few of us truly enjoy change, but the world does change, and actually change can be good! The Eye Center has continued to adapt and grow, maintaining its momentum and position at the forefront of national eye care, research, and education. Change is also required for the Department of Ophthalmology to sustain its position as a vital component of Duke University, the School of Medicine, and the Health System.

In recent months, I have made some administrative changes in response to the continued growth of the Eye Center and the complexities of all that we do. The chair's operational responsibilities have been reorganized, which allows me to spend more time building greater synergies through broader initiatives at Duke. Our new structure also includes the creation of a research leadership team that strengthens the Eye Center's programs in basic science research, translational research (translating discoveries from the laboratory to the patient's bedside), and clinical research as we continue our quest to find a cure for blinding eye diseases.

With this administrative leadership team in place, we are better positioned to go forward with discussions with Duke Administration, the Eye Center Advisory Board, and donors to support the construction of a much-needed patient care facility—the Eye Center Pavilion. The Pavilion would replace, or at least supplement, the 35-year-old Wadsworth clinical building and position the Eye Center to be able to handle, in a patient-centric way, the next generation of expected patient growth. We truly desire to "practice the Golden Rule!"

In this issue of VISION, you will read more about these changes, as well as our recent extraordinary accomplishments in patient care, research, and education. In the cover story, our new Vision Rehabilitation Program serves patients who have experienced permanent, irreversible vision loss that cannot be corrected by traditional glasses or lenses. A second article describes the new pediatric low vision program that assists families and schools with the special needs of visually impaired children. An Eye Center ocular oncologist provides a unique approach to the diagnosis and treatment of eye tumors by applying a variety of imaging methods and treatments typically used for other retinal diseases. You will also learn how second-year medical students get a flavor of ophthalmology in an Eye Center program designed specifically for them.

These changes for the good would not be possible without the leadership, ambassadorship, and continued support of our Eye Center Advisory Board, our donors, patients, friends, alumni, faculty, staff, and the Duke University School of Medicine and Health System. I want to express my gratitude to all for your dedication and support.

David L Epstein, M.D.

David L. Epstein, MD
Chair, Department of Ophthalmology

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TOTAL REHAB

or Rehab 360

From assistive devices to counseling to ongoing support, Duke's new Vision Rehabilitation Program helps patients through the process of adapting to vision loss.

Losing some or all of one's vision is a traumatic experience. Even day-to-day activities like reading the newspaper, watching television, paying the bills, or cooking dinner can be a challenge. Unfortunately, visual impairment is a condition that nearly seven million Americans live with—and as the baby boomer population ages, that number is expected to double.

The good news is that with the right adaptive tools, technology, proper ongoing training, and support, most people with vision loss can do virtually all of the things they need to do.

Recognizing the need for comprehensive services for people dealing with permanent irreversible vision loss, the Duke Eye Center has established the Duke Vision Rehabilitation Program. The program gives patients access to a complete array of services—from recommendations and training on assistive devices, to psychological counseling for patients and their families, to site visits by an occupational therapist to help set up their home or office efficiently—virtually everything they need to maximize their quality of life.

The Duke Vision Rehabilitation Program, located on the lobby entrance floor of the main Eye Center clinic, is directed by Diane Beasley Whitaker, OD, an experienced optometrist and low vision specialist who came to Duke from UNC Hospitals in 2006 to start the program.

"Adjusting to partial or total vision loss is an all-encompassing life process," Whitaker, an assistant professor of ophthalmology, explains. "To address all the different aspects of vision rehabilitation, we've created a comprehensive, multidisciplinary program that offers patients a full range of services, all in one convenient place, to navigate them through the process of vision rehabilitation."

The program serves patients who have experienced permanent, irreversible vision loss that cannot be corrected by traditional glasses or lenses. Vision loss can be a result of a variety of diseases and conditions, including age-related macular degeneration, glaucoma, corneal disease, diabetic retinopathy, trauma, and systemic diseases like hypertension, stroke, or brain tumor. Most of the program's patients are adults. Because children dealing with vision loss have unique needs that require specialized expertise, the Eye Center has also established the Duke Pediatric Low Vision Program (see article on page 7).

Diane Beasley Whitaker, OD, and Jerry Mansell, LDO

The Vision Rehabilitation Program brings together optometrists, ophthalmologists, opticians, assistive technology instructors, social workers, clinical psychologists, geriatric specialists, and occupational therapists at Duke and throughout the community—and the team is still growing. Using this team approach means patients enjoy the convenience of coming to one place to meet all of their needs without duplicating the efforts of the professionals involved in their care.

Comprehensive Care to Meet Personal Goals

Patients are generally referred to the program by their eye care provider or another health care provider such as a neurologist or geriatrician. The first step in the process is measuring the patient's visual function and limitations, including the ability to read written words (which better emulates real-world settings than an eye chart), field of vision, ability to see differences in contrast and depth, and hand-eye coordination. After evaluating the patient's visual function, Whitaker meets with each patient to discuss his/her personal visual goals. Does the patient want to read the newspaper? Work on the computer? Cook dinner? Do needlework? Drive?

Taking into account the exam results and the patient's own goals, Whitaker recommends appropriate strategies and assistive technology, from electronic or conventional magnification devices to computer aids and non-optical aids like needle threaders, writing guides, as well as any appropriate training techniques to maximize visual function.

Once the recommendations for adaptive technology have been made, patients meet with Jerry Mansell, LDO, an optician with nearly 30 years of experience working with visually-impaired patients. Mansell and the patient work together to customize the recommended aids and try alternatives until an optimal solution is found. Mansell then teaches the patient to use the technology correctly and successfully.

"Almost Nothing They Cannot Do"

Mansell, who was recruited to Duke from the Bascom Palmer Eye Institute in Miami to work as the coordinator for the Vision Rehabilitation Program, calls working with patients to help them achieve a good quality of life "my life's calling."

"We will leave no stone unturned to help someone be able to do what they want to do," he says. "Once people accept their vision

We will leave no stone unturned to help someone be able to do what they want to do.

–Jerry Mansell, LDO, Duke Eye Center

loss and understand all of their options, they can choose between the realities. If someone is willing to put in the work to become proficient in using this technology, there's almost nothing they cannot do."

Mansell draws from a range of available devices, strategies, and tools, from special lighting and glare control to magnifiers and electronic devices. Solutions also include large-print address books, large-button phones, and talking watches. Each patient is unique in his/her visual abilities as well as interests, finances, and lifestyle, Mansell notes. One person might want to be able to cook and another might want to be able to sew or watch television. That's why the service of the program is highly individualized.

"With someone who has age-related macular degeneration who wants to be able to read, for instance, the first thing we do is determine what level of vision we can achieve by using full-spectrum lighting and filters to reduce glare, which is a big issue with this disease. Then we determine the best way to deliver the magnification they need, whether through a magnifying glass, special eyeglasses, a hand-held device, or one that's hands-free and with or without illumination. We can also use electronic devices to enlarge reading, writing, and other material onto a user-friendly display. For patients who have no remaining usable vision, an optical character recognition reader (OCR) device can be employed to read mail or the newspaper aloud."

Mansell offers other examples. "For someone who wants to see in the distance, we would use a telescopic lens, telescopic glasses, or electronic devices of different types. For someone who wants to be able to do needlepoint, we'll work with hands-free magnifiers and lighting, as well as teaching the individual to use contrast, like using a black background to see the white thread more easily. For another person who wants to continue to play the cello, we'll need to work on helping him/her read music."

Mansell generally directs patients to stores where they can buy these devices at a reasonable price. However, he also stocks some of the highly specialized items and works closely with the vendors from the companies that provide them.

Ongoing Training Is Essential

The process doesn't stop at finding the right assistive tools. Training patients to use these tools correctly is critical—although unfortunately, it's the step that is often overlooked in the traditional low vision field, Whitaker notes.

Peggy Pullman

Reading the baseball scores at the bottom of a television screen or seeing a bird hover over a flower are things many people take for granted. For Margaret "Peggy" Pullman of Southern Pines, North Carolina, low vision has limited her ability to perform some of her daily activities for nearly a decade, but it hasn't limited her enthusiasm or diminished her sense of humor. She laughs about the time she bought two white potatoes, thinking she had a white potato and a sweet potato. Pullman recalls with amusement a fall foliage trip when she "couldn't see the leaves."

In the spring, she saw Diane Beasley Whitaker, OD, and Jerry Mansell, LDO, in Duke's new Vision Rehabilitation Program for an eye exam and consultation, and she was fitted with monocular telescopic eyewear. For the first time in nearly a decade, Pullman can see flowers in the garden and the Atlanta Braves' scores at the bottom of her television screen, and she looks forward to a fall trip to the mountains. This time she will see the leaves.

After Mansell teaches patients to use the devices they've selected, arrangements are made for ongoing training. Patients can work with an occupational therapist at the Eye Center clinic or in the home or office, where therapists teach patients to use the device in their own environment. During these visits, the occupational therapist can also evaluate the patients' environments and make recommendations for enhancing efficiency and safety, based not only on the visual challenges but other limiting conditions. The therapist can also provide techniques for patients to maximize their remaining vision.

The Duke Vision Rehabilitation Program also works in conjunction with the North Carolina Department of Health and Human Services through its Division of Services for the Blind and provides referrals to the division's many professionals who provide care for people throughout the entire state.

Care for the Whole Person

During the initial exam, patients are also screened for depression or other mental conditions that may accompany vision loss so they can be referred to appropriate health professionals if deemed helpful.

"Many patients can benefit from disability adjustment counseling, not only for themselves but often for their families as well," Whitaker explains. "Family members often experience adjustment issues when a relative loses vision, and counseling can help them deal with the stress and the changes."

Duke's program is an evolution from a traditional low vision program, which often leaves patients to learn how to use the devices on their own, Whitaker notes. "Vision rehabilitation is a process, not a product. We are creating a comprehensive program that covers every aspect of the process, from counseling and education to assistive technology and vocational training. There is already a great need for this type of service, and that need will continue to grow as the baby boomers age."

Telescopic eyewear offers excellent magnification and a large field of view for near, intermediate, and distance viewing. Binocular and monocular models are available in varying power ranges.

A Classroom with a View

School presents unique challenges for kids with impaired vision. Duke's new Pediatric Low Vision Program helps schools and families overcome these challenges.

The last thing most children want is to stand out as "different" from their peers. So when a child faces low vision challenges, the task to eye care professionals and educators is to find the most effective ways to overcome the child's visual impairment, allowing full participation in the classroom while minimizing the "I'm different" factor.

The primary objective of pediatric low vision programs is to help children function maximally in their educational environment, explains Duke pediatric ophthalmologist Sharon Freedman, MD, who has taken the lead in establishing the Duke Pediatric Low Vision Program. Helping children is quite different from adult vision rehabilitation where much of the emphasis is on helping adults do the tasks and hobbies they used to be able to do.

"There are a fair number of children with eye conditions or diseases that leave them with less-than-optimal vision," Freedman says. "Beyond the care they receive from their pediatric ophthalmologist, they also need guidance to meet their needs in school. There are very few programs that specialize in providing pediatric low vision services, and there is a strong need, which is why we decided to establish a formal program at Duke."

Low vision can be the result of a range of childhood conditions—including albinism, pediatric cataracts or glaucoma, various retinal and optical abnormalities, and nystagmus, a condition that causes involuntary eye movement. Fortunately, most of these conditions are very rare, but that also means a child may be one of the only children in the school—or even in a whole school system—with that issue. As one of the nation's top specialty pediatric ophthalmology programs, Duke sees patients with uncommon conditions from all over the world. Through this new service, the Eye Center can more effectively share its expertise and experience to help school systems and families meet the needs of these children.

Sharon Freedman, MD, and Elana Scheiner, OD

School Is the Focus

In North Carolina, any child with best-corrected vision of 20/70 or worse is entitled to the services of a teacher for the visually impaired (TVI), who works with the student to help him or her function at the highest level in the school environment. TVIs are well versed in various techniques and devices—from simple options like good lighting or a handheld magnifier to special glasses or a small portable telescope to help the student see the blackboard. They can even help with assistive technologies such as computerized enlargement of print or a device that projects magnified images from the blackboard onto a computer screen.

To determine what types of assistive devices and strategies would best serve a particular child in the school and home settings, each child goes through a low vision evaluation, generally with a specially trained optometrist. The low vision specialist then works with the TVI, school system, and family to implement these recommendations.

The Duke Eye Center has been exceedingly fortunate to have received very generous gifts from LC Industries and from the Peter and Tracy Douglass family to purchase the low vision examination equipment and devices needed to launch the Pediatric Low Vision Program.

Elana Scheiner, OD, an optometrist who specializes in pediatric low vision, has joined the Duke Eye Center to help lead Duke's new service. Scheiner, who also has a private family practice in Apex, North Carolina, and works with the Governor Morehead School for the Blind in Raleigh, is an expert in helping children with low vision succeed in school. (See her profile on page 29.)

"I'm excited that Duke has taken such a huge step in adding visual rehabilitation and low vision services to what they have to offer," says Scheiner. "My ultimate goal is that these children can meet all of *their* goals: within the classroom and without, they can see what they need."

In addition to seeing referred patients, Freedman and Scheiner as well as Eye Center social worker Renee Halberg, MSW, will be working with the Governor Morehead School to reach out to educators and children in school systems that do not have professionals to provide local pediatric low vision evaluations. The plan is to bring visually impaired children from underserved counties to Duke where Scheiner will provide consultation and low vision planning for the child and the TVI in the student's school.

Children Have Unique Needs

For adults with limited vision who often want help to continue to read, sew, or watch TV, for instance, cost may not be a major issue, nor is the need to stay in one place to use the device. For young patients where the priority is to smooth their educational path, cost and mobility are both big factors.

"Generally, the school system is paying for the devices that the student will use at school," Freedman explains. "If the device is expensive and delicate, or if it is too heavy or cumbersome to move from class to class, what do you do? If the equipment has to stay at school, how can the student do his homework? Our role is to find solutions so these kids can function both in the school environment and then also at home."

With students there's also the "fitting in" factor. "Generally, that means a solution that is portable and, if possible, lower in cost so it can either be duplicated or brought home. For instance we might recommend a little magnifier that the student can put in his backpack and carry around school and take home. It's not glitzy, but it's better for the kid. They want to look normal. If you give them some big thing that stands out, they often won't use it," she says.

The Pediatric Service will benefit greatly from the resources and expertise of the new Duke Vision Rehabilitation Program for adults, Freedman acknowledges. "I am thrilled by the program that Diane Whitaker and Jerry Mansell have established. Although the populations we serve have different needs, there will be many opportunities to collaborate to help our patients better."

Gifts Make New Service Possible

Pediatric low vision is an important field but not a lucrative one. Such programs are lucky if they can break even financially. The Duke Eye Center has been exceedingly fortunate, Freedman notes, to have received very generous gifts from LC Industries and from the Peter and Tracy Douglass family to purchase the low vision examination equipment and devices needed to launch the Pediatric Low Vision Program.

"These gifts were absolutely critical in getting this program started," Freedman says. "We are very excited to be able to offer this resource, not only for our own patients but for children, families, and schools throughout the region."

Sharon Freedman, MD, shows patient Kyle Street where to look on the near card.

A **Remarkable** YOUNG MAN

Kyle Street has inherited many traits from his mother: strong faith, extraordinary grace, sensitivity…and congenital cataracts. It is those first qualities—and a supportive family—that have helped Kyle, now 13, deal with the latter.

Pediatric glaucoma is a group of diseases that are complex and challenging to manage. Duke Eye Center's Sharon Freedman, MD, associate professor of ophthalmology and pediatrics, is one of the few pediatric glaucoma specialists in the country. In 2001 when Kyle was six years old, Colleen and Kevin Street brought their son to see Freedman. Over the last six years, the Streets have made several such visits to Duke from their Indiana home for treatment and surgery.

Kyle's latest and longest journey to the Eye Center, beginning in October 2006, has been a roller coaster ride. Kevin stayed in Indiana with Kyle's older brother to support the family financially, while Kyle and Colleen settled into the Ronald McDonald House of Durham.

Arriving with uncontrolled intraocular pressure and declining vision in his left eye (his better-seeing eye), Kyle underwent surgery immediately. Freedman and Prithvi Mruthyunjaya, MD, an Eye Center vitreoretinal surgeon, implanted an artificial glaucoma drainage device, reconstructed the anterior chamber to remove the vitreous gel from the back part of the eye, and used a laser treatment for weak spots discovered in the peripheral retina. During the next several weeks, two more surgical procedures were needed, one to remove residual lens material which swelled and obstructed the vision, and the second to reattach Kyle's retina after fluid seeped under it from one of the retinal weak spots. The second surgery was performed as an emergency by another Duke vitreoretinal surgeon, Sharon Fekrat, MD, FACS. This surgery required placement of a long-acting gas bubble inside Kyle's eye, which would help keep his retina attached while it healed, but also kept him in Durham for six more weeks. Finally, in December Kyle had yet another small surgery to initiate flow through his glaucoma drainage device, which had become blocked when he had his retina reattachment surgery.

Kyle and his mother returned to their home in January, and he attended a new school in Indiana for the visually impaired. But after several weeks, Kyle noticed a shadow creeping over the vision in his left eye. Again, he and his mother traveled back to Duke for emergency retinal reattachment surgery. At this point, it was becoming clear that his vision, however limited, was indeed tenuous and could possibly disappear for good. Kyle and his family began to seriously contemplate what it would be like for him to live life without sight.

While Freedman and other Eye Center surgeons continued their efforts to restore Kyle's sight, Eye Center social worker Renee Halberg, MSW, worked with him and his mother to provide emotional support and to help prepare Kyle to function in school with further reduced vision.

"Kyle has had to endure a rapid pace of change unimaginable to most 13-year-olds," says Halberg. "And he has done so with a remarkable sense of grace."

Halberg accompanied the Street family to the Governor Morehead School for the Blind in Raleigh, North Carolina where he was introduced to a world where students walk with white canes, learn keyboarding skills, and use Braille readers and computer-assisted technology.

After a scary, emotional month, Kyle's vision began to return. By April his vision had almost improved to where it was last June, Freedman reports. "There is about a 75 percent chance that Kyle's vision will return to its pre-surgery state. Even his best vision is what most people would consider legal blindness."

He looks forward to being home with his friends but laughs as he recounts attending Duke basketball games and the Teddy Bear Ball. There have been some good times, he says. In almost six months at the Ronald McDonald House, he and his mother have made new friends with whom they've celebrated Halloween, Thanksgiving, Christmas, and Kyle's 13th birthday. His one regret is that he didn't meet Duke coach Mike Krzyzewski, although he came close. Maybe next time, he says. Colleen says Kyle's experience at Duke has been a miracle. "I thought my God, my child is blind," she recalls of the day her son's sight left him.

Today she is relieved, optimistic, and appreciative of the efforts of everyone at Duke Eye Center. "They have saved his sight."

Today she is relieved, optimistic, and appreciative of the efforts of everyone at Duke Eye Center. "They have saved his sight," she says.

And given a terrific young man the chance to be a teenager again.

Ocular Melanoma

Care for a Frightening Diagnosis

When you think of your typical eye surgery patient, chances are you're not imagining someone like Jacob Sanok. At six-foot-five and 225 pounds, he's a big guy who is a fingerprint identification technician at Wake County's City/County Bureau of Investigation and drives a Harley-Davidson to relax. But in a kind of emphatic pronouncement of the fact that diseases don't play favorites, Sanok has been battling ocular cancer.

Sanok, 54, knew something was wrong with his vision last September when he noticed a peculiar opaqueness—a shadow in the peripheral vision of his left eye. After seeing his local ophthalmologist, he was seen by a local retina specialist who discovered that Sanok had an extensive retinal detachment associated with an abnormal mass or lesion in the back of the eye. The concern was that this mass was possibly cancerous, so he was referred to Prithvi Mruthyunjaya, MD, assistant professor of ophthalmology and Duke Eye Center ocular oncologist, who has been making a name for himself using the latest medical advances to fight ocular cancer.

After extensive testing, including a high resolution ocular ultrasound and other imaging tests, the diagnosis was clear: Sanok had primary ocular melanoma—a very large one too—threateningly close to the optic nerve.

> I'm a meat-and-potatoes type of person. You look at your options, you choose your option, and you stick with it. I might be losing my one eye, but I'm gaining because there's very little chance of the cancer coming back.

Pursuing a Menacing Disease

Born in India, Mruthyunjaya grew up in upstate New York where several of his role models and mentors happened to be ophthalmologists. His interest in the field sparked, and he came to Duke 10 years ago as a resident. From the first day of his residency, he was attracted to the challenge of diagnosing and treating retinal diseases and was fascinated by the retina's connection to overall systemic health.

While serving as chief resident, Mruthyunjaya was accepted for a retina fellowship, which gave him the opportunity to bring ocular oncology formally to Duke. His wife was already working as a medical oncologist at Duke, so he was familiar with the challenges presented by oncology and intrigued by the possibility of working with other physicians from the Duke Comprehensive Cancer Center.

Mruthyunjaya then completed a second fellowship, this one in ocular oncology at London's Moorfields Eye Hospital.

With no walkathon or ribbon associated with it, ocular cancer is not well known—and indeed, it's quite rare. Though most ocular cancers can be controlled, in some cases its impact can be serious, especially in the setting of metastasis (spreading of the ocular tumor outside of the eye to other organs). Such metastases have a variable occurrence depending on the type of cancer and its particular clinical features.

Duke sees a fair number of cases because it serves as a regional referral center with technological capabilities that many other hospitals lack, such as advanced high resolution ultrasound and imaging technologies capable of revealing detailed characteristics of even the smallest ocular tumors.

The most common type of tumor that Mruthyunjaya treats is primary ocular melanoma, which first occurs in the eye itself. He frequently manages the treatment of cancer metastases from other parts of the body, such as lung or breast cancer.

There are no known risk factors for these ocular melanomas. Often patients will have symptoms that mimic those of retinal detachment, such as flashing lights or floating objects in their field of vision. But many patients experience no symptoms—it's usually a sharp-eyed ophthalmologist who detects unusual lesions in the eye.

With Duke's technological capabilities, Mruthyunjaya offers a unique approach to the diagnosis and treatment of eye tumors, applying a variety of imaging methods and treatments typically used for other retinal diseases. For diagnosis, in addition to the latest generation high-resolution ultrasounds, he often relies on fluorescein or indocyanine green (ICG) angiography, a process in which dye is tracked as it passes through the retinal and deeper choroid blood vessels at the back of the eye. Optical coherence tomography (OCT), a technology analogous to ultrasounds, has proven to be useful in better predicting which lesions may be likely to develop into more aggressive tumors.

When these diagnostic modalities prove insufficient, Mruthyunjaya is aggressive in using the latest instrumentation to biopsy lesions that are indeterminate in the clinic. "We make a diagnosis accurately and promptly rather than observing such lesions to see if they change," he says.

Fighting Ocular Cancer

Mruthyunjaya says that when patients are told they may have an ocular melanoma, they're often shocked.

"They're floored and flabbergasted by the concept of it," he says. "Especially when we hear the term 'melanoma,' we think of a funny spot on the skin. Our job is to educate patients so the reality of what's going on starts to make sense. We try to support them from the beginning, providing emotional and psychological support. I work closely with Renee Halberg, MSW, our Eye Center social worker, who has invaluable experience working with cancer patients."

Mruthyunjaya is guided by four main principles when making decisions about treatment. The first priority is to eradicate the tumor. Second, he works to keep it from spreading. Third, if possible, he tries to save the eyeball itself. Finally, he works to preserve as much vision as he can.

"Our priority is to make the patient cancer-free," he says. "But sometimes the eye and vision are sacrificed for the sake of eradicating the tumor."

Treatments vary depending on the location and size of the tumor, whether it has spread outside the eye, and the patient's

Prithvi Mruthyunjaya, MD, performs a follow-up examination on oncology patient Jacob Sanok following his cancer removal surgery.

overall health status and wishes. Using surgical techniques like enucleation (removal of the eye), iridocyclectomy (removal of the iris and ciliary body beyond it), and plaque brachytherapy (in which a radioactive disk is sutured to the eye for five days to kill the cancer cells), the tumor can often be removed or otherwise eradicated. In other cases, chemotherapy is applied topically, injected, or radiation therapy is used systemically.

Duke emphasizes coordinating care with a team of doctors. With eye tumors' high metastasis rate, this approach becomes especially critical.

"We take the systemic health of our patients very seriously," Mruthyunjaya says. "I coordinate closely with their primary doctor and local oncologist to ensure that the rest of their body is not affected by the ocular tumor and to make sure they get routine monitoring."

Mruthyunjaya finds the integrative approach highly rewarding: primary care physicians, oncologists, radiation oncologists, and other medical professionals all coming together for the sake of the patient. "It's an incredible testament to the collaborative, integrative medicine that we try to practice here at Duke," he says. "In our corner of the oncology world, we're making strides to make that an everyday reality."

A "Lucky" Guy

Count Sanok among the people who can appreciate Duke's approach to patient care.

Due to the size of his melanoma and its precarious position close to the optic nerve, Mruthyunjaya and Sanok decided that removing the eye would be a better option than plaque therapy, leaving the least chance that the tumor would return.

Mruthyunjaya removed the eye and replaced it with an orbital implant. Six weeks later Sanok received a prosthesis painted to resemble his remaining eye.

Looking at Sanok's hazel-green eyes, observers are hard-pressed to tell which is the prosthetic. He has healed with excellent retention of muscle function, so the prosthesis moves naturally.

Disease-free since the surgery, Sanok counts his blessings. "I'm a meat-and-potatoes type of person," he says. "You look at your options, you choose your option, and you stick with it. I might be losing my one eye, but I'm gaining because there's very little chance of the cancer coming back."

Losing an eye has scarcely changed his lifestyle. He still cruises his Harley-Davidson Road King Classic and rode it on the annual Rolling Thunder trip over Memorial Day weekend to the Vietnam Veterans Memorial in Washington, D.C.

"There's only two things I cannot do legally: I can't fly a commercial airplane, and I can't operate as a neurosurgeon," he says, laughing.

"I consider myself very, very lucky. It could have been much worse. I had to lose one eye. To me, it was a very good trade-off. I had my moments of fear, of disillusionment and anger and such. But I said, 'That's it. You've had your five minutes to dwell on it.'"

Says Mruthyunjaya, "Cancer is difficult for anybody in any part of the body. In my ocular oncology clinic, we try to put the disease into context and help patients feel empowered in their treatment decisions. We meet head-on the issues patients and other ophthalmologists are not typically used to dealing with regarding eye disease—because there is so much more riding on these decisions than just vision."

Dana M. Blumberg, MD

Glaucoma Specialist

When Dana Blumberg, MD, joined the Duke Eye Center faculty in January, she was thrilled to be back in academia. Although the glaucoma specialist had spent more than a year in private practice in Washington, D.C., and had been a part-time instructor at the Johns Hopkins Wilmer Eye Institute during that time, she missed the opportunity to teach regularly and to work side by side with other physicians who were interested in ophthalmic research.

Dr. Blumberg is a superbly trained glaucoma specialist who brings with her a passion for patient care and research. She has served as a co-investigator for the internationally acclaimed Ocular Hypertension Treatment Study, which has made a major impact in the approach to treatment of people with abnormally elevated eye pressures.

"I missed the stimulation of being in an academic environment," says Blumberg, appointed as assistant professor of ophthalmology. "I looked at academic medical institutions, and Duke felt like the best fit for me. Duke has an amazing glaucoma service with a lot of accomplished clinician-scientists who have varied research interests."

As one of the newest members of the Eye Center's Glaucoma Service, Blumberg provides basic eye care as well as specialized treatment for glaucoma patients, both at the Duke Eye Center of Cary and at the Durham Veterans Affairs Hospital. She also teaches ophthalmology residents, fellows, and medical students.

When time permits, she conducts several clinical research projects to improve educational methods to diagnose and treat glaucoma. It's a research focus perfectly suited for an academic institution, Blumberg acknowledges. "There are a lot of resources for me in a place like Duke, not only within the Department of Ophthalmology, but also in other programs like the Office of Continuing Medical Education or other departments interested in continuing education."

According to Rand Allingham, MD, glaucoma service chief, "Dr. Blumberg is a superbly trained glaucoma specialist who brings with her a passion for patient care and research. She has served as a co-investigator for the internationally acclaimed Ocular Hypertension Treatment Study, which has made a major impact in the approach to treatment of people with abnormally elevated eye pressures."

"In addition to her research interests, Dr. Blumberg is a collaborator in a novel effort to develop a computerized system to train ophthalmology residents," continues Allingham. "We are delighted to welcome her as a new member of the Glaucoma Service."

Blumberg decided to pursue a career in medicine as she was finishing her undergraduate studies at Brown University. The decision meant coming to peace with the fact that she would be following in her parents' footsteps after all. Up until then, she had wanted to follow a path distinct from her father, a surgeon, and her mother, a teacher. "And here I am, teaching and practicing medicine," Blumberg says with a laugh.

During medical school at St. Louis University, the same things that drew the New York native to medicine also drew her to ophthalmology, and ultimately to the glaucoma specialty—the opportunity to care for and build relationships with patients over time and the chance to provide both medical and surgical care. Blumberg was a resident, and later the chief resident, at Case Western Reserve University. Following her residency, she went to Wilmer Eye Institute for a glaucoma fellowship.

Moving from a major metropolis to Raleigh has been an adjustment, but Blumberg immediately felt the appeal of living in the Triangle, where she spends some of her free time reading fiction and exercising. "People in this area are very friendly, and one of the things that drew me to Duke was its collegial, supportive environment. I'm thrilled to be here."

Karl G. Csaky, MD, PhD

Retina Specialist

Like his father a half-century ago, Karl Csaky, MD, PhD, has come to Duke as a physician-scientist. In January Csaky (pronounced "CHALK-ee") joined the Duke Eye Center faculty as associate professor of ophthalmology.

Csaky came to Duke from the National Eye Institute (NEI), part of the National Institutes of Health in Bethesda, Maryland, where he was a senior investigator of retinal diseases and therapeutics. At Duke he will be doing similar work as he did at NEI: laboratory and clinical research and patient care for medical retina issues such as macular degeneration and diabetic retinopathy. Csaky spends time in research and sees patients at the Duke Eye Center of Cary and Durham Veterans Affairs Hospital.

His research focuses on several areas related to improving care for patients with diabetic retinopathy and macular degeneration. "In the laboratory, my main emphasis right now is on drug delivery, developing technology to implant a device in the patient's eye that will allow drugs to be delivered over a period of three to five years—not just for retinal diseases but also for glaucoma and other conditions," says Csaky. He is also working on prognostic tests for the development of severe macular degeneration and studying its causes.

Csaky also works with several pharmaceutical companies on clinical trials to evaluate the effects of promising new medications for age-related macular degeneration. Csaky co-holds several patents for medications and drug delivery devices.

To capitalize on Csaky's extensive experience running clinical trials, Duke has also named him to a new position, director of the Ophthalmic Clinical Trials Unit at the Duke Clinical Research Institute (DCRI), the world's largest academic clinical research organization. His appointment will increase ophthalmology's presence at the DCRI, as he works with that organization, not only for his own clinical trials, but also as a resource for other Duke Ophthalmology faculty involved in clinical research.

"Duke Ophthalmology already has a very strong research program, and we're working to be the very best—to become *the* leader in ophthalmic translational research. Within Duke one of our goals is for ophthalmology to become a 'poster child' for other departments by developing a very rigorous and yet efficient system for excellent, high-level clinical research, with the goal to improve the diagnosis and treatment of patients with eye diseases," he says.

In the laboratory, my main emphasis right now is on drug delivery, developing technology to implant a device in the patient's eye that will allow drugs to be delivered over a period of three to five years—not just for retinal diseases but also for glaucoma and other conditions.

For Csaky, who earned his medical degree and a PhD in pharmacology at the University of Louisville, joining the Duke faculty is a homecoming of sorts. He was in the midst of his medical residency at Duke in the mid-1980s when he was awarded the prestigious Fulbright Scholarship to study ophthalmology at the University of Essen in Germany for a year. He fell in love with ophthalmology and went on to train at the University of Southern California, Washington University in St. Louis, and Johns Hopkins University. Csaky then spent two years as a postdoctoral fellow in molecular biology at NIH's National Cancer Institute—training that gave him a unique perspective in the laboratory—before beginning his 13-year career at the National Eye Institute.

But Csaky's links to Duke go back even further. When his father, a Hungarian physician, emigrated to America in 1950, he came to Duke for his first job as a medical researcher. Csaky was born in Durham and lived in Chapel Hill for many years. With two young children, he and his wife now spend a great deal of time with their children's activities and Csaky still enjoys playing tennis when he can.

With a resume like his, Csaky could have gone practically anywhere. He chose Duke "because I think this department has the most potential nationally for becoming the leader in translational medicine for ophthalmic disease. I base that on the very strong university presence, the outstanding faculty here, and the priorities of the university and the department."

Kelly Muir, MD

Glaucoma Specialist

Duke Eye Center's current chief resident, Kelly Muir, MD, will join the Eye Center faculty in September as an assistant professor of ophthalmology. As a member of the Glaucoma Service, she will conduct research and see patients at the Duke Eye Center and its satellite offices.

It's unusual to find a faculty as unified and enthusiastic as this ophthalmology faculty. Plus I'm a North Carolinian, and I had no interest in leaving our state.

After graduating from UNC-Chapel Hill in 1997 as a Morehead Scholar with a bachelor's degree in Latin American studies, Muir came to Duke for medical school. With the exception of a one-year internship in her hometown of Charlotte, her medical training has been at Duke: as an ophthalmology resident, glaucoma fellow, and this past year, as chief resident, a prestigious position that includes teaching and mentoring other ophthalmology residents.

When it came time to decide where to continue her career, Muir didn't look beyond Duke. "It's unusual to find a faculty as unified and enthusiastic as this ophthalmology faculty. Plus I'm a North Carolinian, and I had no interest in leaving our state."

The Duke Ophthalmology faculty wanted Muir on its team as well. "Dr. Muir is a rising superstar on the Duke Glaucoma Service," says Glaucoma service chief Rand Allingham, MD. "She is a talented, energetic, and dedicated practitioner. Her research interest is to identify more effective and patient-friendly ways to improve our delivery of state-of-the-art eye care. We are thrilled to have her join us on the Duke Eye Center faculty."

Much of Muir's time will be spent in clinical research. She is one of a handful of Duke Ophthalmology faculty to receive a prestigious National Eye Institute K12 grant. These grants are awarded to promising clinician-scientists to give them time to focus on research early in their careers and to develop the tools they'll need to be effective researchers down the road. Muir is focusing on reducing barriers to care for patients, particularly those with poor health literacy. She will also pursue a master's degree in clinical research at Duke, see patients for routine and glaucoma care, and continue to teach residents—the part of her chief residency she has enjoyed most.

Muir, who has wanted to be a doctor for as long as she can remember, was attracted to ophthalmology as a third-year medical student when she had the opportunity to work with Duke vitreoretinal surgeon Cynthia Toth, MD. "I liked being able to take care of an entire organ system for the patient—you can be both the medical and surgical expert—and that I could see patients over time, rather than a one-time fix. During my second year of residency, I did a rotation on the Glaucoma Service, and I felt it suited my interests in long-term patient care and chronic disease management."

Muir, who with her husband, a hepatologist at Duke, has a toddler daughter, is looking forward to "the opportunity to continue to teach, and also to contribute to the field in a broader way, in terms of research, without having to sacrifice patient care."

As for her research, Muir says, "Anything we can do to make the management of chronic diseases like glaucoma easier on our patients—whether by improving their education about why they need to control their disease or making it physically easier to put in eye drops—is a great benefit, and I'd like to contribute to that."

Natalie Afshari, MD,

Cornea and Refractive Surgery, was a speaker at the annual meeting of the American Academy of Ophthalmology in November. She serves on the cornea program committee of ARVO and was an invited moderator for a scientific session on corneal surgery and endothelial keratoplasty during the annual meeting in May. Afshari also served as a scientific poster judge and speaker at the 2007 annual meeting of the American Society of Cataract and Refractive Surgery. She is a councilor of the American Academy of Ophthalmology representing the American Society of Cataract and Refractive Surgery, and she has been named to the Best Doctors in America.

R. Rand Allingham, MD,

Glaucoma Service, found in a recent study funded by a philanthropic gift that major glaucoma genes may exist and be prevalent among certain populations. In this study, some gene locations were identified in primarily Caucasian families, and others were found primarily in African American families with glaucoma. A major assault on where this gene is located is near. The POAG genetic research team, including Michael Hauser, PhD, and Silke Schmidt, PhD, from the Duke Center of Human Genetics, is studying the DNA of over 1,000 research subjects. The DNA analysis utilizes over 1,500 genetic markers spaced over a small region of chromosome 15 that is known to harbor a major gene for glaucoma. This study is designed to pinpoint the gene location and very possibly the gene itself. Research of this nature will ultimately lead to individualized diagnosis and treatment for glaucoma. Allingham's research is funded by the National Eye Institute of the NIH, private foundations, and individuals.

Sanjay Asrani, MD,

Glaucoma Service, spoke at the annual meeting of the American Academy of Ophthalmology in November and presented his research on imaging of narrow angle glaucoma at the annual meeting of the American Glaucoma Society. He will be the keynote speaker for the annual meetings of the Virginia Society of Ophthalmology and the Brazilian Glaucoma Congress in 2007.

Srilaxmi Bearelly, MD,

Vitreoretinal Diseases and Surgery Services, is the site principal investigator of the VERTACL trial, which is evaluating two treatment methods for wet macular degeneration. She and coauthor Sharon Fekrat, MD, FACS, have recently had manuscripts accepted for publication in the *American Journal of Ophthalmology* and *Annals of Ophthalmology*. Bearelly has also published two book chapters, "Ciliochoroidal Effusions" and "Proliferative Retinopathies." She and Eye Center colleague Scott Cousins, MD, are actively recruiting patients for a NIH-supported clinical study investigating the mechanisms of dry macular degeneration progression.

Catherine Bowes Rickman, PhD,

Research, received a $250,000, two-year R21 grant from NEI/NIH for her research "AMD Model Based on Constellation of Known Human AMD Risk Factors." The goals of this grant are to develop further the apoE TR mouse model of AMD by analyzing the effect of longer exposure to the diet insult to correlate changes in the RPE, Bruch's membrane and choroid to degenerative effects in the photoreceptors and to identify molecular pathways responsible for these changes using large-scale gene expression profiling. Her recent presentations include "Modeling Age-related Macular Degeneration Using a Multifactorial Murine Model" at the Medical University of South Carolina Aging Research Center in Charleston, S.C., "Using EyeSAGE for Human Retina and RPE Expression Profiling" and "Modeling Age-related Macular Degeneration Using a Multifactorial Murine Model" at Alcon in Fort Worth, Tex., and "Functional Analysis of Complement Factor H: Implications for Age-related Macular Degeneration" in San Carlos de Bariloche, Argentina.

Jill Bryant, OD,

Comprehensive Service, was promoted to assistant professor of ophthalmology and medical director of the Contact Lens Service at the Eye Center. She became a fellow of the American Academy of Optometry in December.

Edward Buckley, MD, Pediatric Ophthalmology and Strabismus Service, became the chair of the American Board of Ophthalmology, the organization charged with assuring the public that ophthalmologists are well-trained. In this role, he oversees the examinations of new ophthalmologists just beginning practice as well as recertifying those who have been in practice for some time. In March he gave the Angeline M. Parks Lecture at the Children's National Medical Center in Washington, D.C., and in April he participated in workshops for pediatric ophthalmologists on such topics as congenital cataracts, adult strabismus, and pediatric neuro-ophthalmology at the American Association of Pediatric Ophthalmology and Strabismus annual meeting. Additionally, he continues assisting with the development of the Duke/NUS Medical School in Singapore.

Alan Carlson, MD, Cornea and Refractive Surgery, along with medical student Stacey Gorovoy, received the "Best Paper" award at the Cornea Society meeting during the AAO meeting in Las Vegas in November for their research on donor tissue adherence after Descemet's Stripping Endothelial Keratoplasty (DSEK) transplantation surgery. Carlson also addressed the Nashville Society of Ophthalmology and the North Carolina Society of Eye Physicians and Surgeons on preventing complications from anterior segment surgery, including LASIK and cataract surgery using multifocal intraocular lenses. He also spoke on new treatment options for corneal transplantation patients at the American Society of Cataract and Refractive Surgery meeting in San Diego. These presentations included two posters and two videos, coauthored by residents Richard Awdeh, MD, and Adam Easterling, MD. Carlson and cornea fellow, Bhairavi Kharod, MD, coauthored an article reviewing the history and advantages of DSEK that will appear in an upcoming issue of *Expert Review of Pharmacoeconomics and Outcomes Research*.

Pratap Challa, MD, Glaucoma Service, recently presented his work on pseudoexfoliation glaucoma at the American Glaucoma Society meeting in San Francisco. Along with other coauthors from the Eye Center, he recently published a paper on molecular vision that identifies a gene mutation that causes lens dislocation. Challa, along with coauthors at the Durham Veterans Affairs Hospital, recently published a paper in the journal *Telemedicine and E-Health*, which won the journal's paper of the year award. The paper provided an economic analysis of digital teleophthalmology.

Scott Cousins, MD, Robert Machemer, MD, Professor of Ophthalmology, Vitreoretinal Diseases and Surgery Services, received The American Geriatrics Society/John A. Hartford Foundation Project: Geriatrics-for-Specialists Initiative: Geriatrics Education for Specialty Residents Program Grant of $16,000 a year for two years. The grant represents a collaboration between the Departments of Ophthalmology and Geriatrics to increase geriatric content in ophthalmology's residency training.

David Epstein, MD, chair, Department of Ophthalmology, was elected to a four-year term as trustee of the Association of University Professors of Ophthalmology.

Sharon Fekrat, MD, FACS, Vitreoretinal Diseases and Surgery Services, presented at the Vail Vitrectomy 2007 meeting in March. She is collaborating with Genentech on a Phase III multi-center study using Lucentis to treat eyes with retinal vein occlusion. With resident Rajeev Ramchandran, MD, and retina fellow R. Keith Shuler, MD, Fekrat has coauthored the chapter "Treatment of Retinal Vein Occlusion" in *Medical Retina Essentials in Ophthalmology*. Fekrat also joined the *Ophthalmology Times* editorial advisory board. She is the site principal investigator for the READ 2 Study, which is a Phase II multi-center study evaluating Lucentis for eyes with diabetic macular edema.

Sharon Freedman, MD, Pediatric Ophthalmology and Strabismus Service, along with colleague Cynthia Toth, MD, contributed several chapters to a recently published comprehensive text of vitreoretinal surgery, *Vitreoretinal Surgical Techniques,* Second Edition. Three of her projects, coauthored with pediatric clinical fellows Erin Schotthoefer, MD, and Tammy Yanovitch, MD, and with Sandra Holgado, a clinical orthoptist, were presented as papers or posters at the annual meeting in Seattle in April. She traveled to the Kellogg Eye Institute as visiting professor in February and to St. Petersburg, Russia, as a guest speaker in May. Freedman also participates on the board of directors for the American Association for Pediatric Ophthalmology and Strabismus (AAPOS) and on the editorial board of the *Journal of AAPOS*. She continues as chair of the annual program committee for AAPOS.

Leon Herndon, MD, Glaucoma Service, was an invited speaker at the 10th Annual Ocular Drug and Surgical Therapy Update meeting in Dana Point, Calif., in February. He served on the executive and program committees for the annual American Glaucoma Society meeting in San Francisco in March. Herndon also organized the annual Residents' Glaucoma Symposium in March, which brings residents from the three North Carolina ophthalmology residency programs together to discuss current glaucoma management strategies.

Glenn Jaffe, MD, Vitreoretinal Diseases and Surgery Services, was an invited speaker at the Advances in Retinal Therapy meeting in Vienna, Austria, in November and gave two presentations, "Intravitreal Steroids: Is the Story Over or Just Beginning?" and "When Do I Use Fluorescein Angiography and When Do I Use Optical Coherence Tomography to Diagnose and Manage Retinal Diseases?" He was an invited guest speaker at the Clinical Trials Endpoints meeting in Washington, D.C., and spoke on the "Use of Optical Coherence Tomography in Clinical Trials of Diabetic Macular Edema." The meeting brought together experts on clinical trial design and clinical trial conduct and was cosponsored by the National Eye Institute, the Food and Drug Administration, and the American Association for Vision and Ophthalmology. In February Jaffe was the Ernest Goodner Memorial Lecturer at the University of California at San Francisco and spoke on the "Use of Optical Coherence Tomography for Age-related Macular Degeneration."

Terry Kim, MD, Cornea and Refractive Surgery, and Anthony Kuo, MD, were the recipients of Allergan's Horizon Grant. Kim and John DeStafeno, MD, cornea fellow, coauthored a paper on topical Avastin for corneal neovascularization that was published in the *Archives of Ophthalmology*. He and Bhairavi Kharod, MD, cornea fellow, published an article on adhesives for cataract incisions in *Current Opinion in Ophthalmology*. Along with John Berdahl, MD, resident, he published a paper on corneal phacoemulsification wounds in the *Journal of Cataract and Refractive Surgery*. He also coedited and coauthored the textbook *Curbside Consultation in Cataract Surgery* with David Chang, MD, and Thomas Oetting, MD. Kim presented at the Illinois Association of Ophthalmology/Chicago Ophthalmological Society meeting, the 2007 Royal Hawaiian Eye Meeting, Bascom Palmer's Southeastern Cornea Conference, and Wilmer's Current Concepts in Ophthalmology meeting. In the spring, Kim was a visiting professor at both New York University and the University of Michigan.

Gordon Klintworth, MD, PhD, Research, is the primary editor and author of several chapters of the Third Edition of Garner and Klintworth's *Pathobiology of Ocular Disease: A Dynamic Approach*, which is scheduled for release this year. The text describes the current status of the pathobiology of all diseases that affect the eye and vision. Unlike other texts on eye diseases, this book reviews the causes of the diseases as well as the basic mechanisms that lead to them. The text has 73 chapters and more than 100 worldwide contributors, all recognized experts on different diseases. Several chapters were authored by Duke faculty.

Jill Koury, MD, Comprehensive Service, returned to New Orleans in February to attend the New Orleans Academy of Ophthalmology meeting. She was incoming president of this organization before coming to Duke.

Paul Lee, MD, JD, Glaucoma Service and vice chair of Department of Ophthalmology, helped lead AAO efforts at pay-for-performance discussions with CMS and glaucoma screening indicator with NCQA. He helped moderate a U.S. congressional briefing with PBA on the value of vision to the American public in April. Lee gave the ARVO keynote talk in May. He recently was named vice chair of ophthalmology.

Brooks McCuen, MD, Robert Machemer Professor of Ophthalmology in the School of Medicine, Vitreoretinal Diseases and Surgery Services, participated in the Vail Vitrectomy 2007 meeting in March. He was a featured speaker at the 2007 Brazilian Retina Society meeting in April, and in May he lectured at the Wills Eye Hospital Visiting Professor Lecture Series in Philadelphia.

Philip McKinley, MD, MPH,

Comprehensive Service–Winston-Salem, recently spent two weeks providing eye care in two areas of Honduras: Ahuas in La Mosquitia and Limón on the northeast coast. He presented "Mobile Mother-to-Child AIDS Prevention Program" in La Mosquitia to members of Home Moravian Church. McKinley was a panel member for a discussion group on health inequities in Forsyth County, and he presented "Global Eye Health and the Jamaica Vision 2020 Plan" at the McKinley Conference in Winston-Salem.

Stuart J. McKinnon, MD, PhD,

Glaucoma Service, will serve as a member of the Anterior Eye Disease Study Section, Center for Scientific Review for the 2007-2011 term. Members are selected on the basis of their demonstrated competence and achievement in their scientific discipline as evidenced by the quality of research accomplishments, publications in scientific journals, and other significant scientific achievement.

Frank Moya, MD,

Glaucoma Service–Winston-Salem, coauthored a chapter on wound healing for the American Academy of Ophthalmology's new textbook *Basic Principles of Ophthalmic Surgery*, which will teach surgical techniques to residents in training.

Prithvi Mruthyunjaya, MD,

Vitreoretinal Diseases and Surgery Services, was course director for the Fourth Annual North Carolina Tri-Residency Retina Conference hosted at the Duke Eye Center in January, bringing together residents and retina faculties from Duke, UNC-Chapel Hill, and Wake Forest University. Daniel F. Martin, MD, director of vitreoretinal surgery at Emory University and former Duke retina fellow, was keynote speaker. In November Mruthyunjaya lectured on the review of ocular oncology for the Lifelong Education for Ophthalmologists (LEO). At the North Carolina/South Carolina Society of Eye Physicians annual meeting in Hilton Head, S.C., he presented "Emerging Treatment Strategies for Uveal Melanoma." Recent publications include "Efficacy of Low Release-rate Fluocinolone Acetonide Devices to Treat Experimental Uveitis" in *Archives of Ophthalmology* and an article in AAO's *EyeNet* (clinical pearls) on "Central Serous Chorioretinopathy," which was coauthored with R. Keith Shuler, MD, fellow, and selected for inclusion in the 2006 Best of *EyeNet* edition at the AAO annual meeting.

Eric Postel, MD,

Vitreoretinal Diseases and Surgery Services, became principal investigator at Duke (for the subcontract) for the Eye Center's AMD genetic study. The study has four years of funding remaining, and Postel is still actively recruiting study subjects and producing important results that are better at characterizing AMD, which can potentially lead to preventive therapies. As director of Perioperative Services, he supervised the over-$6-million renovation of the OR, PACU, and waiting areas, which was completed early in January and includes more comfortable seating for patients and their families. His article "Neovascular Age-related Macular Degeneration and Its Association with LOC387715 and Complement Factor H Polymorphism" was published in the January issue of *Archives of Ophthalmology*. He received tenure as associate professor of ophthalmology.

Terry Semchyshyn, MD,

Cornea and Refractive Surgery Services–Winston-Salem, lectured on Descemet's Stripping Endothelial Keratoplasty (DSEK) at the Winston-Salem Optometric District Society meeting, reporting progress data for patients who have undergone this procedure. He remains an active volunteer at Winston-Salem's Community Care Center, a free health clinic for underserved populations.

Ivan Suñer, MD,

Vitreoretinal Diseases and Surgery Services, delivered the keynote address on new treatments for wet macular degeneration at the Nordic Ophthalmic Congress in Copenhagen, Denmark. He presented "The Essential Role of VA Hospitals in Ophthalmology Residency and Fellowship Training" at the Association of University Professors of Ophthalmology Meeting in Indian Wells, Calif., and "The Role of

Vascular Endothelial Growth Factor Inhibitors in Wet Macular Degeneration" at the Valencia Society of Ophthalmology in Spain. He was a visiting professor at the Jones Eye Institute of the University of Arkansas, lecturing on "Retinal Surgery Techniques," "The Role of Smoking in Macular Degeneration," and "VEGF Inhibitors in the Management of Retinal Diseases." He was elected president of the National Association of Veterans Affairs Ophthalmologists at the American Academy of Ophthalmology Annual Meeting in Las Vegas. Suñer received a grant from Genentech to perform a clinical trial on a novel therapy for diabetic macular edema, combining peripheral laser photocoagulation and Lucentis therapy.

Robin Vann, MD,

Comprehensive Service, chaired and lectured at a special section of the Joint Commission on Allied Health Personnel in Ophthalmology meeting in Las Vegas in November. He has written a book chapter related to the preoperative evaluation of cataract patients, and he lectured at Harvard Medical School's Intensive Cataract Surgical Training Conference in June.

David K. Wallace, MD, MPH,

Pediatric Ophthalmology and Strabismus Service, completed the American Academy of Ophthalmology's one-year Leadership Development Program at the AAO's Annual Meeting in Las Vegas in November. At the AAO, he also presented "Pediatric Eye Disease Investigator Group Study Results" at the Orthoptic Symposium and "What's New in Amblyopia Treatment" at the Late Breakers' Symposium. He was recognized by the AAO for outstanding service in the development of the Practicing Ophthalmologists Curriculum that comprises the knowledge base for board recertification. Wallace was a visiting professor at Wake Forest University grand rounds in October, presenting "Evidence-based Amblyopia Treatment" and "Current Concepts in Retinopathy of Prematurity." For the *Journal of AAPOS*, he wrote an editorial "Oxygen Saturations and Retinopathy of Prematurity: Are We on Target?" and he was first author on "Evaluation of the Accuracy of Estimation Retinoscopy." Wallace was recently appointed to North Carolina's Commission on Early Childhood Vision Care by Governor Mike Easley.

Molly Walsh, MD, MPH,

Glaucoma Service, presented "New Techniques in the Management of Glaucoma," at the North Carolina Society for Eye Physicians and Surgeons Conference. She is currently completing a study that evaluates the effect of systemic statin therapy on the progression of retinal ganglion cell death in glaucoma.

Diane Beasley Whitaker, OD,

Vitreoretinal Diseases and Surgery Services, has expanded the Vision Rehabilitation Program to include assistive technology instruction and occupational therapy. She is participating in a study with a geriatric psychiatrist to evaluate treatment and intervention for depression in the elderly population with an emphasis on visual impairment as a contributing factor.

Julie Woodward, MD,

Oculoplastics and Refractive Surgery, was the keynote speaker at the Brazilian Society of Oculoplastic Surgery in September. She participated in the Palm Beach Forum in Florida in January.

Terri Young, MD,

Pediatric Ophthalmology and Strabismus Service, was appointed in December to three-year terms on both the ARVO Genetics Advisory Group and the American Academy of Ophthalmology Pediatric Ophthalmology Program Committee. In February she presented at grand rounds at Columbia University. Her recent publications include "Complex Trait Genetics of Refractive Error" in *Archives of Ophthalmology* (2007), "Ocular Abnormalities in Apert Syndrome: Genotype/Phenotype Correlations with Fibroblast Growth Factor Receptor Type 2 Mutations" and "The Natural History of Glaucoma and Ocular Hypertension After Pediatric Cataract Surgery" in the *Journal of the American Association of Pediatric Ophthalmology* and *Strabismus*. Young received an NEI (NIH) grant for $504,380 for the "International Collaborative Twin Study of Refractive and Glaucoma Endophenotypes" in April. She is a co-investigator for a $2 million three-year grant at the Singapore Eye Research Institute for the study "Genes—Gene Environment Interactions and Myopia in Singapore Children."

Carol Ziel, MD,

Glaucoma Service–Winston-Salem, spoke to area female ophthalmologists in Winston-Salem and Charlotte on "Changing Trends in Glaucoma." She also spoke to senior citizens at the Shepherd's Center of Greater Winston-Salem on "Eye Care As We Age."

Holland and Patterson Receive Strength, Hope, and Caring Award

Brantley Holland, LDO, manager of Duke SuperOptics, and colleague Jenny Patterson, an ophthalmic consultant at the optical store, received a Strength, Hope, and Caring Award in the clinical staff category. Kevin Sowers, Duke Hospital chief operating officer, presented the award in January.

Jeff Bright, Kevin Sowers, Jenny Patterson, Brantley Holland, LDO, Mary Ann Fuchs, and Charles Mansfield

The awards program recognizes a clinical staff member, a non-clinical staff member, a physician, or team who consistently demonstrate "going above and beyond." The Duke University Hospital Human Resources Advisory Committee, composed of Duke employees, selects the winners.

Lee Receives the Alcon Research Institute Award

Paul Lee, MD, JD, the James P. Gills III, MD, and Joy Gills Professor of Ophthalmology and vice chair of ophthalmology, received a prestigious Alcon Research Institute (ARI) Award for $100,000 in March.

"The ARI Awards have helped to fund new research initiatives to discover treatments and cures for serious eye diseases, and I am delighted to receive this honor," says Lee. "Duke University and the Durham community are home to some of the finest vision and health care researchers in the world, and I look forward to continuing my work with these individuals. The goal is to pursue innovative research that might lead to new avenues of investigation."

The Alcon Research Institute is "a virtual institute" that seeks and honors outstanding ophthalmology researchers from around the world. Nominees are selected by an elite group of national and international researchers. Recipients of the awards are honored at ARI's biennial symposium when they become members.

"The Alcon Research Institute Award is an award of international recognition for true excellence, scientific leadership, and breakthroughs, especially in applying the best in science to human ocular disease," says David Epstein, MD, chair of ophthalmology.

Yanovitch Receives the Anna's Angels Award

Tammy Yanovitch, MD, pediatric fellow, received an internal Duke grant to perform clinical research on Down syndrome in collaboration with the Department of Genetics. "Detecting Amblyopia in Children with Down Syndrome by Sweep Visual Evoked Potentials" has been funded in the amount of $25,000 by the Anna's Angels Foundation (Anna Michelle Merrill's foundation for Down syndrome research). Terri Young, MD, Sharon Freedman, MD, and David Wallace, MD, will serve as mentors when she initiates the study during the second year of her pediatric research fellowship in July.

Kelly Receives Honors

Mike Kelly, manager of clinical imaging, won first place in the Ophthalmic Photographers' Society's international competition at the American Academy of Ophthalmology's annual meeting in November. Ophthalmic photographers from 26 countries competed.

In May Kelly became the first ophthalmic photographer in history to have images included in the permanent collection of the Smithsonian Institution, in Washington, D.C. His photographs already reside in the collections of the British Optical Association in London, England, and the University of California at Berkeley.

Morris, Riley Receive Meritorious Service Awards


Sheila Riley and Wendy Morris

Two long-time Duke Eye Center employees, Wendy Morris and Sheila Riley, were recently named recipients of the 2007 Presidential Meritorious Service Award in the Clerical/Office support category, a prestigious honor bestowed on Duke employees who have made distinctive contributions to their profession.

Morris, administrative coordinator to David Epstein, MD, chair of the Duke Eye Center, began her career at Duke as a medical secretary in Pediatric Ophthalmology 17 years ago and has held various roles throughout the years.

"When someone notices your hard work and dedication, and takes their time to nominate you for this award, it's a sweet, gratifying feeling. I'm very grateful to Dr. Epstein," she says.

Riley, a Duke employee since 1994, serves as the staff assistant for Sharon Freedman, MD, associate professor of ophthalmology and pediatrics, and describes her work environment as, "The whole division [pediatrics] is a 'team' and everyone here is a team player." This team approach may be why she described winning this individual award as a "shock." "It was a huge surprise, not to mention an honor…it was overwhelming that I was even nominated," she says.

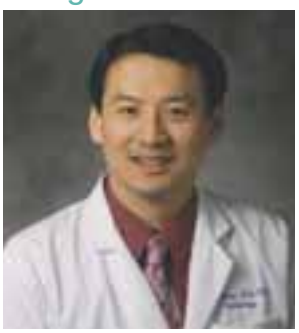
Duke president Richard Brodhead, PhD, presented a certificate and a check for $100 to each of the 25 deserving Meritorious Service Award winners at an April luncheon. During the same ceremony he also presented five Presidential Awards, with the recipients receiving a Presidential Medallion and a check for $1,000.

"Wendy has an outstanding work ethic which is contagious and brings out the very best in those she works closely with," says Epstein of his top administrative coordinator. "You can always count on her to execute with perfection."

Freedman has high praise of Riley as well, saying, "To say that she has consistently exceeded expectations and has reflected a high level of service, trustworthiness, and respect, would be a significant understatement of her achievements."

Each year 30 staff members from Duke University and the health system are selected for their outstanding job performance within the past calendar year. Recipients for one Presidential Award and five Meritorious Service Awards are selected from the areas of Clerical/Office Support, Clinical/Professional Non-managerial, Service/Maintenance, Managerial, and Executive Leadership.

Tseng Receives Heed Award



Henry Tseng, MD, PhD, glaucoma fellow, has been awarded the prestigious Heed Ophthalmic Foundation Fellowship. The Heed Ophthalmic Foundation supports ophthalmologists who are pursuing postgraduate fellowship studies and research in ophthalmology. Tseng is conducting a laboratory investigation into the role of optineurin in neuronal protein trafficking and the pathogenesis of normal tension glaucoma.

Three Nominated for Golden Apple Award

Eye Center faculty Rand Allingham, MD, Sharon Freedman, MD, and pediatric fellow Erin Schotthoefer, MD, were each nominated for the Golden Apple Award for excellence in teaching this past March. Medical students nominated the physician-teachers they felt have played an exceptionally effective and dedicated role in their education, and then voted to determine the winners.

"Education is one of our core missions, and, it is a great source of pride and satisfaction for me when our department's teachers are recognized," says Eye Center chair David Epstein, MD.

Jaffe Receives Award

Glenn Jaffe,MD, professor of ophthalmology, Vitreoretinal Diseases and Surgery Services, received the prestigious Richard and Hinda Rosenthal Foundation award at the recent Macula Society meeting in London (for which he was also the program chairman). The award, which is given to "that individual under the age of 50 years whose work gives high promise of notable advance in the clinical treatment of disorders of the eye," was presented by William Mieler, MD, a past president of the Macula Society, and one of Jaffe's mentors during fellowship training at the Medical College of Wisconsin. Following the award presentation, Jaffe gave the Rosenthal Award Lecture "Non-biodegradable Sustained Drug Delivery Implants to Treat Posterior Segment Disease."

Medical Students Get the Experience of Ophthalmology

Two-week program gives second-year Duke medical students an insight into the field

Third-year medical student Supriya Rao, Mark Fernandez, MD, Sharon Fekrat, MD, FACS, and Nieraj Jain, MD. Fernandez and Jain will be first-year residents at the Eye Center in July 2008.

Thanks to a special program offered by the Duke Eye Center, students at the Duke University School of Medicine can get an early close-up look at the field of ophthalmology to help them decide if it might be the right career specialty for them.

Five times each year, during breaks from their regular classes, second-year medical students can participate in the Department of Ophthalmology's two-week "selective."

The selective introduces second-year medical students to the medical and surgical aspects of comprehensive ophthalmology and specialties, and the program is offered at a particularly critical time for these students, notes Duke retina specialist Sharon Fekrat, MD, FACS, who directs the program. "By their second year, medical students are starting to think about what field they'd like to go into. Plus at the Duke School of Medicine, students can spend their third year pursuing a research experience. So this selective comes at a perfect time to help students decide if ophthalmology might be the 'in' specialty, and whether they want to spend their third year of medical school engaged in ophthalmic research."

"Our goal," Fekrat explains, "is to offer them a flavor of ophthalmology early in their training. This exposure is valuable to all future physicians. Even if they choose another field of medicine, it will help them to understand the eye and its relationship to other diseases and to know when it's important to refer a patient to an eye care specialist."

To make the selective experience as personal and personalized as possible, only five students may participate in each session. Each weekday starts with a 7 a.m. lecture by Eye Center faculty, specifically designed for and delivered to the medical students on a variety of ophthalmic topics. Then the students rotate through each of the subspecialties including cornea, retina, glaucoma, oculoplastic surgery, neuro-ophthalmology, pediatric ophthalmology, and comprehensive ophthalmology—spending time with attending physicians, ophthalmology residents, and fellows, and observing patients in the clinics and procedures in the operating room. Extra time is built into the selective so that students may return to a subspecialty of particular interest to gain additional experience.

The medical students also meet the Eye Center's research faculty and learn about the groundbreaking research taking place at Duke, which is changing how eye disease is understood and treated.

For Supriya Rao, a third-year medical student who remains undecided about her career specialty, the program presented an opportunity to continue to work with Fekrat on a research project that she eventually presented at ARVO, a national ophthalmology meeting. "The rotation was excellent and informative," says Rao. "It was a good introduction to the world of ophthalmology."

Students spend one night on call with an ophthalmology resident to get a taste of the residency experience and see emergency eye care in action.

Recent Duke Medical School graduates Mark Fernandez, MD, and Nieraj Jain, MD, say the program helped them decide that ophthalmology at the Duke Eye Center was their career path. "Exposure to faculty, residents, and researchers really endeared me to the program, such that it was a pretty easy decision for me to rank Duke first when it came time to apply for residencies," says Fernandez.

Jain had some interest in ophthalmology before coming to the Eye Center for the second-year program. "By the end of the first week of this rotation, I had pretty much decided that I wanted to be an ophthalmologist."

Staff assistant Kina Steele works with Fekrat to coordinate the program, and Stuart McKinnon, MD, PhD, assistant director of the program, is available to assist the students when Fekrat is seeing patients at a satellite clinic.

Five times each year, during breaks from their regular classes, second-year medical students can participate in the Department of Ophthalmology's two-week "selective."

For medical students who want to learn more about the diagnosis and treatment of ocular diseases, the department also offers longer elective programs in general ophthalmology and pediatric ophthalmology.

"The students we get in the selective are very enthusiastic, and they ask great questions," says Fekrat. "It is a pleasure to help them experience our specialty and to encourage many of them to join us in this exciting and fulfilling field of medicine."

Cary Office Expands to Accommodate Growth

The phenomenal growth of the Duke Eye Center of Cary surprised no one.

Now that it has recently expanded into an adjacent 1,000-square-foot area, the extra room with its additional equipment—including lasers—and staff will allow more patients to be seen more quickly at this popular satellite office. Eye surgery will still be performed at the main Duke Eye Center on the medical center campus, but there is now a procedure room available for performing certain types of eye surgery normally done in an eye clinic.

Brett Moran and Sanjay Asrani, MD, discuss plans for the expansion of the Cary office

Two physicians came on board in April: Dana Blumberg, MD, a second glaucoma specialist, and Karl Csaky, MD, PhD, a medical retina specialist. Mike Richard, MD, an oculoplastics surgeon, joined the office last July. Laura Enyedi, MD, a pediatric ophthalmologist, has already extended her hours. Natalie Afshari, MD, is currently the only cornea specialist there, but plans are under way to add another cornea physician. Sanjay Asrani, MD, a glaucoma specialist, is the lead physician.

"We've had a great response from the patients who have been to the Cary office," says Brett Moran, associate administrative director at the Eye Center. "People just love the convenience of it."

First opened in 2001, the office offered comprehensive ophthalmology that featured glaucoma and cornea treatment. Pediatrics was soon added.

"It has been such a pleasure to see this office grow, and at the same time, continue to meet an ever-growing medical need in this area," says Asrani, an associate professor of ophthalmology and the first physician to practice in the Cary office. "We're still able to keep providing the same level of excellent service that we were, and that's very important to us."

At each Eye Center location, patient activity is carefully monitored. Moran receives a monthly data report that provides a detailed analysis of patient scheduling trends and patient satisfaction, along with other statistical information. Delays in scheduling a new-patient appointment or a current patient follow-up is one of the first signals that an additional physician or an expansion might be needed.

"From data we're able to track how long a patient has to wait before he/she can see the doctor again. This is crucial to us because we don't want the patient to have too long to wait for an appointment," Moran says. "After we see how the pattern is developing, then we communicate with the medical community to see what they're experiencing."

"My job was to assist Brett in making the expansion happen," Asrani says. "It was imperative to us to keep our level of service as high as ever. I work to keep the employees motivated. We work as a team, and our team is incredibly dedicated. Despite the struggles of our expansion, our team has done an exceptional job as always. They make it personable and efficient. If it weren't for them, this would be like any other practice."

The business plan for the expansion into the additional adjacent space was submitted at the end of 2006, but as early as 2004 Moran says he knew larger space would be needed for the Cary office. "When I started to see how the numbers were shaping up, I called immediately and asked for extra adjacent space to be held for us. I knew we were going to need it," Moran says.

In 2006, 6,000 patients were seen at the Cary satellite office. By mid-March 2007, 1,600 had already been seen. Moran predicts that the 2006 patient numbers could easily double by 2010.

The success of the office is explained by several factors, according to Asrani. "Patients need and value us for the high level of ocular treatment that we provide. And from the medical community outside of the Duke system, the response has been amazing. We're seeing referrals from a number of different types of doctors," he says.

> We've had a great response from the patients who have been to the Cary office. People just love the convenience of it.

"We also see patients who are hesitant to deal with I-40 and its traffic headaches, and they don't want to have to negotiate around a hospital for a routine appointment. We have an ideal location at Regency Parkway in Cary. The patient walks into the building, and there we are."

Eye Center Faculty Take on New Roles

As part of one of the country's premier medical centers and institutions of higher learning, the Duke Eye Center, ranked in the top-ten by *U.S.News and World Report,* continues to build new and better collaborations throughout Duke University, the medical center and health system, and the community, resulting in improved patient care and cutting-edge research that advances the understanding and treatment of eye disease.

Collaborations have already furthered the Eye Center's mission. Genetic research with the Duke Center for Human Genetics has shed light on the hereditary components of glaucoma, macular degeneration, and pediatric diseases, while partnerships with the Duke Clinical Research Institute to conduct large-scale, multi-site clinical trials on promising treatments include macular degeneration and diabetic retinopathy. Currently, the Eye Center is expanding its clinical services to grow with Duke's effort.

In recent years, identifying and nurturing the growing opportunities for collaboration have taken more and more time of Eye Center chair David Epstein, MD. In January Epstein announced several changes to the Eye Center's leadership structure, allowing other faculty members to take on more responsibilities for the operation of the Department of Ophthalmology, while freeing up the chair to focus primarily on building greater synergies through broader initiatives.

> I am excited about these changes, which will allow the Eye Center to take even greater advantage of the tremendous resources that abound throughout Duke University and the surrounding community.

"I am excited about these changes, which will allow the Eye Center to take even greater advantage of the tremendous resources that abound throughout Duke University and the surrounding community," says Epstein. "These faculty members are well prepared to take on these important roles. This new leadership team will be instrumental in maintaining Duke Eye Center's momentum and its position at the forefront of eye care and research nationally, and the Department of Ophthalmology's position as a vital component of Duke University, the School of Medicine, and the Health System for generations to come."

Brooks McCuen, MD, Robert Machemer Professor of Ophthalmology in the School of Medicine, service chief of Vitreoretinal Diseases and Surgery Services has stepped down as vice chair after the traditional five-year term. Paul Lee, MD, JD, the James P. Gills III, MD, and Joy Gills Professor of Ophthalmology, and glaucoma specialist, is the new vice chair of the Department of Ophthalmology. The responsibilities of the vice chair have been expanded significantly to include more oversight of operations that have previously been within the chair's purview. Lee's new role will include more involvement with faculty recruitment and the day-to-day operations of the Eye Center's expanding patient care. Lee's leadership experience includes serving as medical director for the Eye Center and heading the finance committee of the Private Diagnostic Clinic, the physician group for Duke University Medical Center.

David Epstein, MD

"I have tremendous respect for Paul Lee," Epstein says. "He is a very effective leader with outstanding judgment and an amazing breadth of experience. I believe he and I will form a true partnership, and with the faculty and administration we will make Duke one of only a handful of truly great ophthalmology programs in the world."

Fulton Wong, PhD, professor of ophthalmology and neurobiology, who served as scientific director for nearly seven years, asked to step down to spend more time on his international research in Singapore. "Although his true passion was always his goal to cure retinitis pigmentosa and preserve vision, when the department needed his leadership as scientific director, Fulton immediately stepped up to the challenge and performed at the very highest level," Epstein notes appreciatively. "He helped lead a major expansion of our research program that resulted in our current Albert Eye Research Institute. I am grateful to him for all that he has done for our department and for his commitment to the Eye Center faculty."

Vadim Arshavsky, PhD, professor of ophthalmology, pharmacology, and cancer biology, has replaced Wong as scientific director. Arshavsky will focus on the Eye Center's interdisciplinary basic science program, which is aimed at understanding eye disease at the cellular and molecular levels.

"Vadim Arshavsky is a brilliant neuroscientist who has made breakthrough findings in retinal function with important implications for disease mechanisms of the eye," says Epstein. "He is top-notch and has the leadership skills to head the Eye Center's research team."

In addition to these appointments, Epstein has created several new research positions to strengthen the Eye Center's leadership in basic science, translational (moving discoveries from the lab to the patient's bedside), and clinical research. Scott Cousins, MD, Robert Machemer, MD, Professor of Ophthalmology and professor of immunology, will direct a new Translational Research Program with Paulo Ferreira, PhD, associate professor of ophthalmology, molecular genetics, and microbiology, as assistant director. Karl Csaky, MD, PhD, associate professor of ophthalmology, will direct a new Site-based/Clinical Research Program with David Wallace, MD, MPH, associate professor of ophthalmology and pediatrics, as assistant director.

Duke Examines Risks Associated with Treatments for Macular Degeneration and Diabetic Retinopathy

Duke researchers are exploring the safety of anti-VEGF therapies such as Macugen and Lucentis for the treatment of wet age-related macular degeneration (AMD) and diabetic retinopathy. These medications are injected directly into the eye and have brought tremendous results for many patients who are affected by these devastating eye diseases.

Both wet AMD (the advanced stage) and diabetic retinopathy are among the leading causes of blindness in America. "While there have been significant advances in treating these debilitating eye diseases, the current system of post-marketing safety surveillance for these treatments does not reliably detect adverse events," says Scott Cousins, MD, Robert Machemer, MD, Professor of Ophthalmology, director of the Duke Center for Macular Diseases and lead ophthalmologist in the study.

"Analysis of Safety Outcomes with Anti-VEGF Treatment" is the first study to access the full repository of Medicare data to document these treatment patterns and to explore adverse treatment effects in the eye and the body. Data files are updated quarterly, which enables researchers to observe trends in near real-time.

Analysis of Safety Outcomes with Anti-VEGF Treatment is the first study to access the full repository of Medicare data to document these treatment patterns and to explore adverse treatment effects in the eye and the body.

"There is growing evidence that the newer treatments for wet AMD may increase the risk of stroke and other cardiovascular complications, which underscores the need to understand better the adverse events related to these products," says Cousins. "When you consider that AMD patients are elderly and already have an increased risk for conditions such as cardiovascular disease and stroke, gaining greater insight on the risks of these therapies is critical to managing patient safety."

AMD is the most prevalent cause of vision loss among the elderly, affecting 15 million people in the United States. About 20 percent of people with AMD have the wet form, caused by pathologic neovascularization under the retina. These vessels leak, bleed, and scar, causing retinal dysfunction and blindness. Diabetic retinopathy is the most frequent cause of vision loss of patients under the age of 60. There are approximately 5.3 million people in the United States who have diabetic retinopathy. Diabetic macular edema is caused by leakage from damaged retinal capillaries. Proliferative retinopathy is caused by pathologic neovascularization growing from the inner "top" surface of the retina. These abnormal vessels also tend to leak, bleed, and scar.

The study is supported by OSI Eyetech, Inc., and is a collaborative effort between Duke Clinical Research Institute (DCRI) and the Duke Eye Center. Lesley Curtis, PhD, assistant professor of medicine, and Kevin Schulman, MD, professor of medicine, are also investigators.

Toth Heads AREDS2 Study at the Eye Center

Researcher Cynthia Toth, MD, professor of ophthalmology, is heading the Duke Eye Center's participation in a multi-center study sponsored by the National Eye Institute (NEI). The study is looking to see if the nutritional supplements lutein, zeaxanthin, and two nutrients found in fish oil, DHA and EPA, will slow the development of age-related macular degeneration (AMD), a leading cause of vision loss for older individuals. Lutein and zeaxanthin are carotenoids, the yellow and orange pigments found in many fruits and vegetables like corn, sweet potatoes, carrots, and especially in dark leafy greens such as spinach and collards.

The Age-related Eye Disease Study 2 (AREDS2) is a multi-center randomized trial designed to assess how high doses of macular xanthophylls (lutein and zeaxanthin) and/or omega-3 long chain polyunsaturated fatty acids (DHA and EPA) affect the treatment of AMD and cataracts. The study also assesses whether forms of the AREDS nutritional supplement with reduced zinc and/or no beta-carotene works as well as the original supplement in reducing the risk of progression to advanced AMD. A total of 4,000 participants in the United States, age 50 to 85, will be enrolled in the study and followed for five years. Researchers will evaluate individuals with large drusen (yellow spots beneath the retina) in both eyes or large drusen in one eye and advanced AMD in the other eye.

Age-related macular degeneration affects the sharp, central vision required for activities such as reading, driving, and recognizing faces.

In NEI's original Age-Related Eye Disease Study (AREDS), released in 2001, researchers found that taking a high-dose combination of vitamin C, vitamin E, beta-carotene, and zinc (except for smokers) reduced the risk of progression to advanced AMD and moderate vision loss in people who are at high risk. These supplements did not provide an apparent benefit for study participants who had either no AMD or early AMD.

"First, AREDS supplementation should be considered standard of care for patients with AMD and large drusen," Toth explains. "Second, although millions of older Americans are affected by AMD, most other treatments are applied late in the disease process. The AREDS2 study will hopefully find whether we can further reduce the progression of early disease."

First, AREDS supplementation should be considered standard of care for patients with AMD and large drusen.

Further information is available through Cynthia Toth, MD, or Neeru Sarin, research coordinator for this study, at 919-668-5341 or toll-free at 1-800-422-1575.

Ophthalmic Medical Technician Program Returns Following a Two-year Hiatus

It's an exciting, challenging field with many job openings and good salaries, and Jo Legacki, COMT, director of Duke's Ophthalmic Medical Technician Program, didn't want prospective students to miss the opportunity. For months she traveled the state to find just the right students for the revamped Ophthalmic Medical Technician Training Program at Duke Eye Center. The 20-year-old program took a two-year hiatus in 2005.


Jo Legacki

Ophthalmic medical technicians begin patient exams, measure and record visual status, perform diagnostic procedures, and assist in clinical and surgical settings.

The 15-member class will begin the extensive training program in early July. Duke Eye Center offers the only one-year ophthalmic medical technician program in the nation. Graduates receive a certificate from Duke University Medical Center and qualify to apply for the Certified Ophthalmic Medical Technician's (COMT) national examination administered by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO).

"When this class graduates, they'll be trained and experienced on the most commonly used, most up-to-date equipment," says Legacki. "They'll be ready to step into an ophthalmic practice anywhere in the country and be a working member of the team right away."

Certified ophthalmic medical technicians are in demand because there is a national shortage, according to Legacki. Salaries vary and depend, as with most jobs, on the region of the country, the type of practice (academic, private practice, single doctor, multi-specialty, etc.), and the applicant's experience.

"We're always looking for good technicians here at Duke, and we also have satellite offices in Cary and Winston-Salem," she says.

Legacki has been a certified ophthalmic medical technologist for nearly five years. Originally trained in Florida as an optician, she was offered an ophthalmic assistant's job when she first moved to North Carolina with her family. "I took that job, loved it, and stayed with it. I worked my way up. I got certified as an assistant, then worked for two years, getting certified as a technician, and ultimately as a COMT." Before joining Duke Eye Center of Winston-Salem two years ago, she worked at the Bowman Gray School of Medicine for seven years. "I'm very happy here. I'm grateful for the opportunity to share this profession where I'm always learning and meeting great people."

CME Events

Nineteenth Annual Glaucoma Symposium
September 8, 2007
William and Ida Friday Center
Chapel Hill, NC

The Direct Dry AMD Meeting
October 25-27, 2007
The Washington Duke Inn and Golf Club
Durham, NC

Sixteenth Advanced Vitreous Surgery Course
April 24-26, 2008
The Washington Duke Inn and Golf Course
Durham, NC

Contact: Renee Wallace
walla023@mc.duke.edu
919-684-6593

McCuen Steps Down as Vice Chair of Ophthalmology

Brooks McCuen, MD, Robert Machemer Professor of Ophthalmology in the School of Medicine, service chief of Vitreoretinal Diseases and Surgery Services, has stepped down as vice chair of the ophthalmology department after a traditional five-year term. McCuen has also served in other administrative roles, including 20 years as director of the Eye Center's successful fellowship program. Last year he was honored with the prestigious Gertrude Pyron Award.


Brooks McCuen, MD

Former volunteer coordinator Robin Woods, current volunteer coordinator Renee Wallace, and Barbara DeScisciolo, MD

Volunteering Brings Great Satisfaction for Retired Anesthesiologist

The need for an emergency eye surgery initially brought volunteer Barbara DeScisciolo, MD, 78, to the Duke Eye Center in 2003. When Eric Postel, MD, associate professor of ophthalmology, reattached her retina, however, he did more than just that. He created an attachment between DeScisciolo and the Eye Center that remains to this day.

"Yes, I believe they started to recruit me while I was still in the examining room," she says with a laugh. She officially began her volunteer duties in February 2004.

While she was undergoing preparation for her retina surgery, she happened to mention to one of the Eye Center staff members that she had been a long-time volunteer in Norfolk, Virginia, where she and her husband Angelo had retired to be near their son, a career navy man, who was stationed there.

"The next thing I knew, I'd signed up to be a volunteer at the Eye Center," she says.

"Robin Woods (former volunteer coordinator) is the first person I saw at the Eye Center and was instrumental in getting me signed up. She's got this great smile, and I think she's one of the nicest people I ever met."

At the Eye Center, DeScisciolo comes in with a packed lunch, prepared to stay for a six-hour day. She works in the PACU, where she collects, photocopies, and files medical paperwork. Even in this technological age, paper records are still a vital part of every medical experience.

"I get a lot of satisfaction that I am actually helping; that is very important to me," she says. "And I like the nurses so much at the Eye Center. They are a great bunch of professionals."

The Duke Eye Center is not the only place that benefits from her desire to help. She also volunteers at Duke HomeCare & Hospice, the Duke Community Bereavement Services in Hillsborough, and the cat room at an Alamance County animal shelter.

DeScisciolo believes volunteering is important for older individuals. "I think we should all do whatever we are able to do. We get the feeling of helping and that's a great feeling to have. It's great to be able to be busy, get out in the world, and actually help someone else…all at the same time," she says. "I can see that what I do for the Eye Center helps make a difference."

Originally from Connecticut, she moved to Albany, New York, for college. After receiving her medical degree from McGill University, she had a busy career as an anesthesiologist at a private women's hospital in Schenectady, New York. She and her husband had four children. In the fall of 2003, DeScisciolo moved to Hillsborough to be near a daughter.

When she has a few minutes to spare, DeScisciolo enjoys listening to classical music, particularly opera, and spending time with her two cats, Jet and Lucy. Since moving to Hillsborough, she admits that she's developed a keen interest in history. "It's fascinating to me to be able to live in an area where so much American history has been made."

She has developed a great appreciation for country music since her move to North Carolina. Knitting is another passion, and she is often at work on prayer shawls.

Volunteer work suits her to a 'T,' she says. "I like being a stagehand, the person that works behind the scenes," she says. "It's much better than being the star, in my opinion."

For additional information about volunteer opportunities at the Duke Eye Center, contact Renee Wallace, volunteer coordinator, at 919-684-6593.

Friedman and Mruthyunjaya Lecture at Science of Disease

David Epstein, MD, Henry Friedman, MD, and Prithvi Mruthyunjaya, MD

Henry S. Friedman, MD, deputy director of the Preston Robert Tisch Brain Tumor Center, and James B. Powell Jr., Professor of Pediatric Oncology in the Duke Department of Surgery, and Prithvi Mruthyunjaya, MD, assistant professor of ophthalmology in Vitreoretinal Surgery and Ocular Oncology Services, presented "Current Treatment Paradigms in Ocular Melanoma: Looking to the Brain for Clues" in the AERI Auditorium in March. A reception for faculty and trainees preceded the lecture.

Allingham and Kim Receive Horizon Awards

Two Duke Eye Center faculty received Horizon Awards from a new grant program developed by Allergan to support research fellowship programs. The awards were announced at the American Academy of Ophthalmology in Las Vegas in November.

Terry Kim, MD, associate professor of ophthalmology, Cornea and Refractive Surgery Services, and director of the fellowship program at the Eye Center, was named in the cornea grant category, while Rand Allingham, MD, professor of ophthalmology, service chief of the Glaucoma Service, was a glaucoma recipient. Kim and Allingham will share $40,000 for their respective fellowship programs.

"The Duke Glaucoma Service will use the Allergan Horizon Award to support research being conducted by the Duke Glaucoma Service clinical and research fellows," says Allingham. "Unfortunately, there are many innovative and creative research projects that go undone for lack of funding. We feel honored to be a recipient of the Horizon Award from Allergan that will be used to pursue investigations into novel therapeutic approaches in the treatment of glaucoma."

"As one of the recipients in the cornea field, we plan to use this grant to help with our research on novel pharmacologic treatments for corneal neovascularization," says Kim. "We have had preliminary success in anti-VEGF compounds topically to treat corneal neovascularization, and we hope to build on this experience."

Allergan created the $1-million Horizon grant program to facilitate research in glaucoma, corneal, and retinal diseases. The grants will assist fellows who seek to develop careers in academic medicine, especially in the diagnosis and pharmacologic treatment of specific ocular diseases.

All about Your Eyes Named One of the "Best Consumer Health Books of 2006"

According to the May 2007 issue of *Library Journal, All about Your Eyes*, a book edited by Duke Eye Center's Sharon Fekrat, MD, FACS, and Eye Center alumnus Jennifer Weizer, MD, was listed as one of the best consumer health books of 2006 and was the only book selected that was not focused on weight loss. *All about Your Eyes*, with more than 30 Duke eye specialists contributing, was written to explain all aspects of eye health, disease, and treatment in language patients can understand.

Duke Eye Center Celebrates Surgical Unit Expansion

Paul Lee, MD, JD, Eleanor Carter, CRNA, Charles Mansfield, Priscilla Ramseur, RN, Kevin Sowers, Mary Ann Fuchs, Eric Postel, MD, El Marie Parker-Brodie, RN, William Fulkerson Sr., MD, and Pamela Sutton-Wallace.

Duke Eye Center celebrated the completion of a $6-million expansion and renovation project to support an increasing volume of patients needing surgical eye care with a dedication and ribbon-cutting ceremony in March. The two-and-half-year project added a new operating room, renovated and replaced an examination-under-anesthesia (EUA) room, expanded and updated the post-anesthesia care unit (PACU), expanded and renovated the waiting area, and added a new pediatric waiting room.

"This project also provides patients and their families a more comfortable and appealing place to receive their surgical treatment and to wait for services," says Eric Postel, MD, associate professor of ophthalmology and Eye Center director of Ophthalmology Perioperative Services and the Ophthalmology Clinical Service Unit.

In the mid-1990s, the Eye Center had about 35,000 patients in the outpatient clinic and performed about 2,000 surgeries annually. Last year the Eye Center on the medical center campus had more than 75,000 patient visits and performed nearly 6,000 surgeries.

During the project, the operating rooms kept running and even had record months where more than 500 surgeries were performed. "The faculty and staff had to perform a difficult dance that required a fair degree of coordination to continue to function while demolition and construction wove their way through all these spaces each night," Postel says. "But in the end, this has been worth the effort. We would like to acknowledge and thank everyone for their support, guidance, tolerance, and contributions."

Scheiner Joins Pediatric Low Vision

When you consider the passion optometrist Elana Scheiner, OD, a pediatric low vision specialist brings to the field, it's strange to think that tennis may have played a large part in bringing her to the Duke Eye Center.

As a child growing up in New Jersey, nearly year-round warmth would have seemed the stuff of dreams. So when she met her husband at the New England College of Optometry in Boston, a move south wasn't too hard of a sell.

She packed her bags for the Tar Heel State after her residency at the West Haven VAMC Eastern Blind Rehabilitation Center, where she first worked in visual rehabilitation. For her working with patients with low vision—problems that cannot be corrected with lenses or surgery—was a revelation. By using aids, including magnifiers, high-powered reading glasses, and telescopes, Scheiner could help patients make full use of whatever vision they had.

"It's one thing to take someone from a blurry 20/20 to a clear 20/20, but there are few things I find more rewarding than helping someone who's visually impaired see something for the first time or for the first time in a long time," Scheiner says.

Since 2000 she and her husband have been partners at Family Eye Care of Apex, where she continues to practice while she works part-time at Duke. When she was contacted by the Governor Morehead School for the Blind to see some of their students, she discovered a new passion: working with children.

"Kids are so motivated, so goal-oriented," she says. "They come in and say, 'I want to read this Harry Potter book.'"

Scheiner found that children lack the disappointment and denial that often trouble adults struggling with vision loss. "They don't often have a 'seeing life' that they want back," she says. "If I can just get them to see something, they're ecstatic. It's an absolute thrill."

She says that it's long been a dream to work at Duke. "I'm so excited the Eye Center has taken such a huge step in adding visual rehabilitation and low vision to what they have to offer. I'm hoping to play as large a role as I can in helping to bring this field of visual rehabilitation to kids coping with visual impairment."

LC Industries Donates $100,000 to Pediatric Ophthalmology

LC Industries has long been a supporter of Duke pediatric ophthalmology, with previous gifts of $150,000 to the Eye Center Children's Fund. The company's latest donation of $100,000 provided seed money to start the Duke Pediatric Low Vision Program. The program assists children overcome their visual impairment so they can fully participate in the classroom. (See story on page 7)

"Our goals (LC and Duke Eye) are the same…we enjoy our partnership with the Duke Eye Center to help visually impaired chidren," says Bill Hudson, president and CEO, who has been with the organization for 38 years. Based in Durham, LC Industries' mission is to provide quality employment for visually impaired workers.

Douglass Family Donates to Pediatric Ophthalmology

When Peter Douglass decided to run his first marathon, he and his wife Tracy, a Duke Eye Center Advisory Board member, decided to make the Chicago Marathon a special challenge. Following Peter's 26.2-mile run, he and Tracy donated $26,200 to Pediatric Ophthalmology at Duke Eye Center.

The generous Douglass family of Chicago has previously donated to Pediatric Ophthalmology and provided seed money for the new Duke Pediatric Low Vision Program (see story on page 7). Their son Drew is a patient of Sharon Freedman, MD, associate professor of ophthalmology and pediatrics. Drew Douglass was featured in the Summer/Spring 06 issue of *VISION*.

Get the latest information!

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