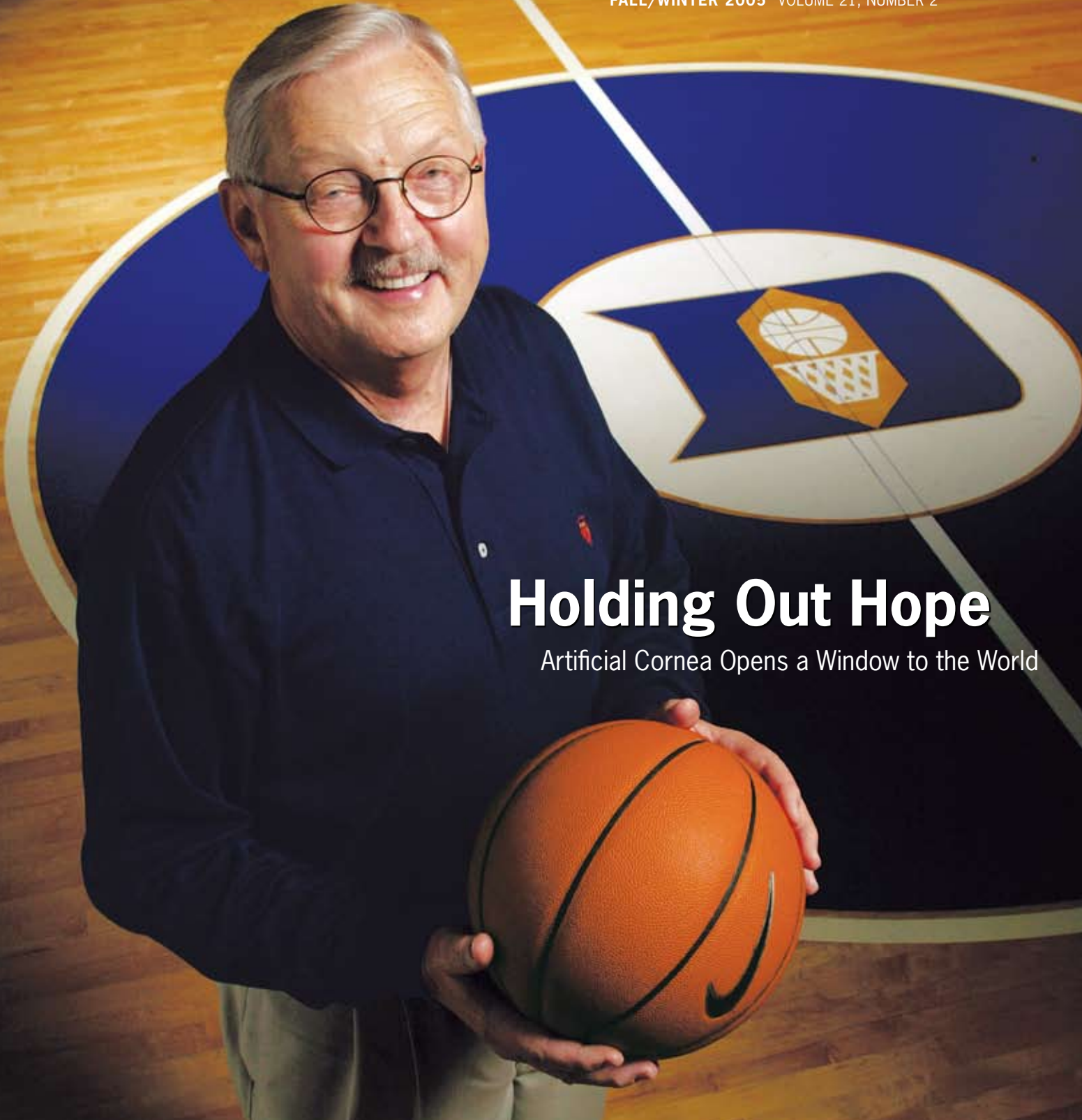


DUKE UNIVERSITY EYE CENTER

VISION



FALL/WINTER 2005 VOLUME 21, NUMBER 2



Holding Out Hope

Artificial Cornea Opens a Window to the World

PATIENT CARE + RESEARCH + EDUCATION



It has been an unparalleled year at the Duke University Eye Center—the opening of our Albert Eye Research Institute and the recruitment of eight outstanding clinicians and researchers to join our already extraordinary faculty. It is a time of great excitement, optimism, and hope for the future in which we have just now achieved a “critical mass” for all of our core missions of patient care, research, and education. We truly now have the potential to become THE outstanding eye center in the world, “second to none.” It is a source of joy for me to witness the high scholarship, intellectual curiosity, and interactivity of faculty and trainees which has produced a literal “bubbling up” of new ideas from our “newly planted fertile soil.”

In this issue of *VISION*, you will read about only a small part of what is happening at the Eye Center. In the cover story, advances in technology have allowed a 71-year-old man to see the face of his grandchild clearly for the first time. A novel technology—a drug-delivery implant—provides treatment for a painful and potentially blinding disease, uveitis. Another feature highlights the collaboration of our glaucoma researchers and our colleagues at the Duke Center for Human Genetics who have located the section of DNA where a gene resides that is potentially responsible for one-sixth of all cases of primary open-angle glaucoma.

These advances would not have been possible without the leadership and support of our Eye Center Advisory Board, our donors, patients, friends, alumni, faculty, staff, and the Duke University Health System, Medical School, and the entire Duke University. I want to express my gratitude to all of you for another year of your dedication and generous support. To each of you, I wish a safe and happy holiday season.

David L. Epstein, M.D.

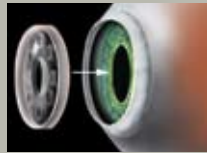
David L. Epstein, M.D.

Chair, Department of Ophthalmology

VISION

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Artificial Cornea

Lionel Burnett is one of a few people nationwide who has had an artificial cornea surgically transplanted into his eye. The surgery has restored much of his sight and his independence, giving him a “window to the world.”

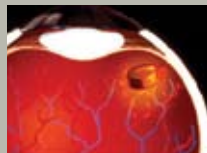
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Glaucoma Gene

Duke researchers and their colleagues at Vanderbilt University and Harvard University have pinpointed a specific region in human DNA where a gene resides that could potentially be linked to one-sixth of all cases of open-angle glaucoma.

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Drug-delivery Implant

Based on the work of a Duke ophthalmologist who was the lead investigator for the clinical trials, a drug-delivery implant that dispenses medication for uveitis has been approved by the FDA. Retisert is licensed by Bausch & Lomb.

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Replacement Windows for the Eye

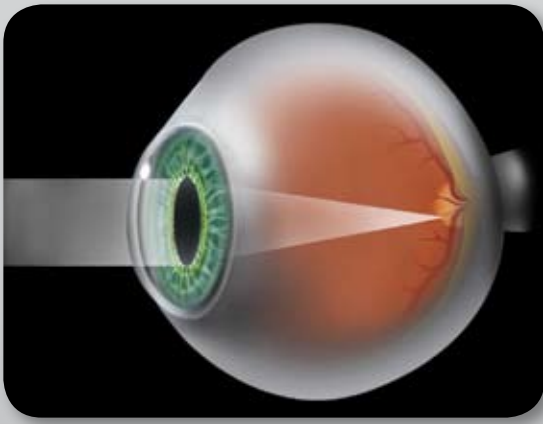
Sight-restoring Artificial Cornea Opens a New Window to The World

For years, Lionel Burnett knew that his beloved Duke Basketball team had scored only when he heard the crowd roar.

This past season, thanks to a groundbreaking advance in ophthalmology research, Burnett was able to watch the ball actually swish through the net.

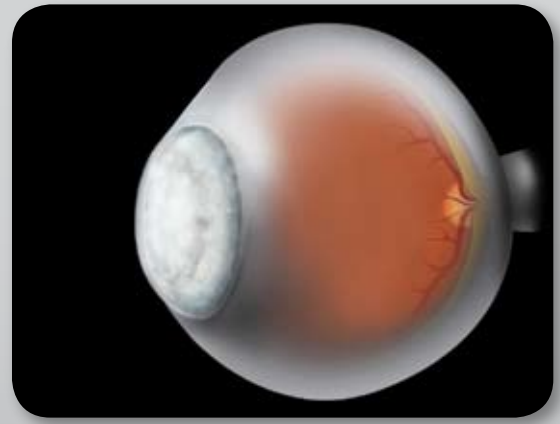
Burnett, 71, is one of a few people nationwide to receive an artificial cornea, or keratoprosthesis, surgically implanted into one of his eyes, restoring much of his sight and even more of his independence. Natalie Afshari, MD, assistant professor of ophthalmology, specializing in cornea and refractive surgery and one of the few surgeons nationally who is experienced in this type of surgery, performed the revolutionary procedure at the Duke University Eye Center in March.

“The cornea is normally just like a clear window in front of the eye that you see through. But when that window becomes cloudy, scarred, or otherwise obscured, the result is loss of vision—and in some cases, blindness,” Afshari explains. “For decades, cornea problems have been addressed with corneal transplantation, replacing the patient’s damaged cornea with a donated



Healthy Eye

In a healthy eye, the image passes through the clear window in front of the eye, the cornea, and focuses inside the eye.



Unhealthy Eye

When the cornea is scarred and opacified, the image cannot focus and be seen.

cornea to regain a clear window. But in some patients, cornea transplantation does not work, due to inflammation, rejection, or the growth of excess blood vessels. In these patients, the keratoprosthesis provides a new option to restore sight.”

Keratoprosthesis (KPro) is an artificial cornea made of a clear plastic material that literally provides a window for patients to see out of and for doctors to see into. Claes Dohlman, MD, chairman emeritus of ophthalmology at Massachusetts Eye and Ear Infirmary at Harvard Medical School, is the pioneering cornea surgeon who is credited with perfecting the device that makes inserting a window into the eye a practical option to help many patients. Various types of artificial corneas are available. The most common—the Dohlman-Doane, or “Boston” keratoprosthesis—was developed by Dohlman. Another recently developed keratoprosthesis is the Alpha Cor KPro, developed in Australia. Afshari is part of a national study group collecting data to evaluate the outcomes of these keratoprostheses.

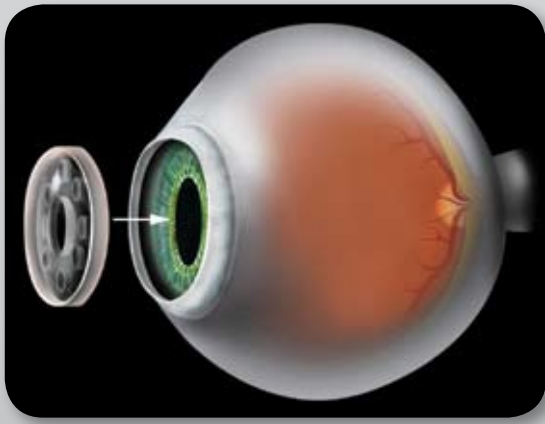
As in traditional corneal transplantation, keratoprosthesis surgery involves transplanting a new cornea. However, the presence of the plastic window makes this procedure dramatically different. Surgical techniques vary slightly depending on which artificial cornea model is used, but the procedure typically begins with the surgeon cutting a hole into the center of the donor cornea and inserting the KPro in the hole, sandwiching the layers to hold them together. The surgeon then removes most of the damaged cornea from the patient’s eye so that the prosthesis can be sewn into place. The donated cornea simply serves as the window frame, providing the material to which the window to the patient’s remaining corneal tissue can be sutured.

Holding Out Hope

A fall into a residue of calcium carbide (used for gas lighting in the 1930s) at age three left Burnett, now a retired banker in Oxford, N.C., with scars on his face, limited vision in his right eye and no vision in his left. Over the years, Burnett managed a successful career with what he calls his “walking around vision.” While he saw doctors regularly for his limited vision in one eye, he was also treated for infections in the other eye. Doctors encouraged him to keep his left eye healthy too because someday a new technology could give back his sight. He had a corneal transplantation on his left eye in 1979, but its benefits lasted only a few months.

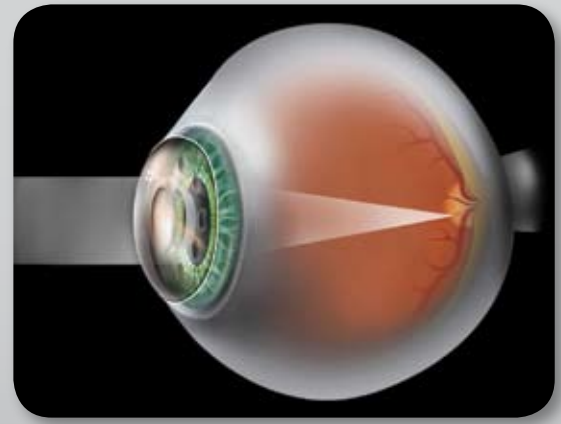
Finally, in 2001, Burnett came to the Duke University Eye Center and to Robin Vann, MD, chief of Comprehensive Service. Vann told him that a cornea specialist who was doing some interesting research was on her way from Harvard, and Burnett didn’t waste any time getting an appointment with Afshari when she joined the Eye Center. Afshari saw him in December 2002, and later fitted Burnett’s right eye (the one with limited vision) with a contact lens—giving him clearer vision. She also told him something he’d been waiting to hear for years.

“She told me about a new procedure that could work on my left eye! I was amazed that she’d even consider doing anything to that eye, but I said I wanted to try—I didn’t have much to lose. She didn’t promise me anything, but she told me that they’d had some success with this new technique and that she wouldn’t do it unless she thought success was possible. I trusted her.”



Artificial Cornea

In keratoprosthesis surgery, the scarred, hazy cornea is removed and a clear keratoprosthesis is inserted in place of it.



Artificial Cornea in Place

The new keratoprosthesis provides a clear window, which allows the image to be focused inside the eye and the individual to see.



A Lifetime Commitment

“Getting an artificial cornea is not an easy ride for the patient,” says Afshari, who has performed several keratoprosthesis procedures at Duke. Potential candidates go through an intensive screening process. Because of the complexity of the procedure and the fact that a foreign body is being put in the eye, patients must commit to frequent follow-up exams and a daily regimen of antibiotic and possibly anti-pressure eye drops for the rest of their lives to keep complications to a minimum.

Most of Afshari’s patients for this procedure are referred to her by other ophthalmologists nationwide after multiple corneal transplants have not worked, or because they have a condition such as severe scarring and development of corneal blood vessels that makes them unsuitable candidates for traditional corneal transplantation. Often, these patients are blind in one or both eyes, whether from accident or disease. Some patients have not been able to see for 10 or 20 years or more. Patients with conditions such as end-stage retinal disease or glaucoma, certain inflammations, or very dry eyes may not qualify.

“We only perform this on adults right now because, like any surgery, there are risks,” Afshari notes. “These include infection or thinning of the cornea around the keratoprosthesis, increased eye pressure, bleeding, scarring, inflammation, need for repeat surgery, and loss of vision.”

About three-quarters of keratoprosthesis patients will develop glaucoma if they don’t already have it, so many have a glaucoma tube inserted to help manage the pressure. Afshari works closely with Paul Lee, MD, JD, professor of ophthalmology, on the Eye Center’s Glaucoma Service, to care for these patients, and with Brooks McCuen, MD, head

Natalie Afshari, MD

of the Vitreoretinal Diseases and Surgery Service, as well as Eric Postel, MD, associate professor, also of the Vitreoretinal Service, to remove membranes surgically that can develop behind the keratoprosthesis.

Growing Interest

When Afshari brought the technique with her from Harvard to Duke in 2001, Duke and Harvard became two of the few places in the world performing this groundbreaking technique. Today, a handful of other major eye centers have started performing the procedure, but as more data become available, interest in KPro is growing rapidly in the ophthalmology community. At the same time, research is continuing to make artificial corneas even safer and less expensive.

Afshari is training Duke cornea fellows and cornea specialists from other eye centers to perform the surgery. She is also part of a team that is sharing information and outcome data on KPro at major national and international ophthalmology conferences.

Seeing in Stereo

On March 3, 2005, Afshari performed a two-hour keratoprosthesis procedure on Burnett's left eye. When he awoke from the general anesthesia, he was amazed.

"It was fantastic! What I could see was very clear and sharp. I could see colors. The next morning in my hospital room, there was a man standing across the room, and I could see his striped shirt."

As Burnett recovered from the surgery, his vision remained crystal clear, he says. Three weeks after surgery, vision in his left eye was 20/40. "My left eye is just as good as my right eye with the contact lens now. For the first time in my life, I'm seeing in stereo! There's no pain, and the redness cleared up a lot since the surgery. I'm real pleased with it."

Burnett comes to Duke for regular follow-up exams and takes five different eye drops each day. He is able to play golf again, to read the newspaper, to watch sports on television, and to take walks outside without stumbling. He even has a driver's license again. Perhaps most gratifying, he can see the face of his grandson Trey. When the three-year-old was born, Burnett says the baby's "face was a blur." Now with the ability to see well with both eyes, Burnett, his wife Cindy and grandson Trey sometimes spend hours tossing the basketball—and soon—with the college basketball season just starting—they'll be watching his Blue Devils take the hardwood.

Opening a Window to the World

Even to the doctors, the impact of the artificial cornea is amazing, Afshari says. "To watch patients who have missed seeing many milestones in their lives finally be able to see—it's incredible. Plus, after the keratoprosthesis is in place, we are able to look into the eye through this incredibly clear window to see the optic nerve and the retina. Even a normal, healthy cornea is never that clear!"

Afshari hopes that the keratoprosthesis will prove particularly beneficial in the Third World. "Worldwide, corneal blindness is a major problem. In many cases, corneal transplants won't work, or there is a shortage of donor corneas. Keratoprosthesis and similar advances hold tremendous hope for some of these patients in the future. Imagine if we could have a full supply of manufactured corneas that we could use to help these people."

Meanwhile, Burnett is busy exploring the new world he finds himself in. "I've lived in a fuzzy world all of my life. This has been like opening a window to the world. I can see colors and textures; I can see the flowers and the sky. I don't know what I've done to deserve this, but I'm dang glad I got this opportunity."

For more information about keratoprosthesis contact Natalie Afshari, MD, at www.dukeeye.org.



Researchers Honing in on Major Glaucoma Gene

Glaucoma-causing gene, we've got you surrounded. And it's just a matter of time before we find you.

In a groundbreaking research study that could ultimately lead to new advances in glaucoma treatment, Rand Allingham, MD, Duke Eye Center's Glaucoma Service chief, and his colleagues at the Duke Center for Human Genetics, Vanderbilt University, and Harvard University have pinpointed a specific region in human DNA where a gene resides that could potentially be linked to more than one-sixth of all cases of primary open-angle glaucoma (POAG). POAG is the most common form of this blinding eye disease worldwide.

"Up until now, we've been very successful in identifying genes that cause or are associated with glaucoma," Allingham explains. "However, all the known genes combined explain no more than 5 percent of those cases of open-angle glaucoma. So if we can identify this particular gene, we will have found the most common genetic cause of POAG described to date. Glaucoma is an inherited disease. Finding this gene will contribute to a much broader understanding of the specific pathways that lead to the development of glaucoma and could have a huge impact on our ability to diagnose and treat this devastating disease."

For this study, Allingham and his team examined genetic samples from 86 families around the U.S. who have multiple members affected by glaucoma. Fifteen of those families—17 percent—appeared to have a gene located in a specific, small region of chromosome 15.

"If these numbers hold in the overall population, this gene has more than three times the impact of the most potent gene that has been identified as causing glaucoma," Allingham says.

"Equally fascinating—individuals in the families identified as having a gene in that region experienced onset of glaucoma at a slightly younger age—an average of 17 years younger than those who did not have a link to that region," he says. (Normal onset of POAG is late-50s or early-60s; members of these families developed the disease in their mid-40s.)

Researchers were also surprised to find that both African-American and Caucasian families were among those with a gene in this chromosome region. "In general, African-Americans are four to five times more susceptible to POAG than Caucasians," Allingham notes, "so it will be interesting to see whether the newly identified gene explains this disparity."

Now that they know the chromosome region where the gene resides, Allingham and his team are on a mission to find the gene itself. As if tracking down a fugitive, they've narrowed the search to a neighborhood—now, they need to find the house and the room where the gene is hiding. Duke University Eye Center and the Duke Center for Human Genetics have received a \$3 million grant from the National Eye Institute to fund continued research to identify the gene.

"There are hundreds of genes in this region of chromosome 15," says Allingham. "We eliminated the genes that we know about after we analyzed them and did not find links to this problem. So now we are presuming that this is a gene that has not been studied yet. We've actually got a potential candidate gene from that region that we're looking closely at now."

Once the gene is identified, the investigators will test a larger population of families with glaucoma to determine the percentage of glaucoma cases that have these variants.



Rand Allingham, MD

They are conducting similar investigations in Ghana, where Allingham and other researchers are working to stem a growing tide of glaucoma-induced blindness. (See related story on page 24.) Ultimately, this research could lead to new forms of diagnosis and treatment of glaucoma.

"Because glaucoma is a complex disease that involves interaction between many different genes, we have to use state-of-the-art science if we are to identify the underlying genetic causes," notes Margaret Pericak-Vance, PhD, director of the Duke Center for Human Genetics and one of Allingham's collaborators on the project. "For this project, we've used a very new statistical approach, developed here at Duke, which has allowed us to look closely at this subset of families. We are optimistic that, by examining this particular puzzle piece more closely, it will ultimately help us solve the puzzle of glaucoma genetics."

This research was published in the June issue of *Investigative Ophthalmology and Visual Science*.

Drug-delivery Implant Approved for Uveitis

It's a tiny implant embedded inside the eye, but it could make a world of difference to someone suffering from a painful eye condition known as uveitis. The implant is actually a drug-delivery device that can dispense anti-inflammatory medication to the posterior (back) of the eye for years.

Based on the work of Duke researcher Glenn Jaffe, MD, the lead investigator for the clinical trials, Retisert, a fluocinolone acetonide intravitreal implant licensed by Bausch & Lomb, was approved in April by the U.S. Food and Drug Administration for treatment of posterior uveitis.

Uveitis is a group of inflammatory diseases that typically strikes the eyes of individuals between the ages of 20 and 50. Uveitis can cause severe pain, light sensitivity, decreased vision and sometimes blindness. Experts estimate that 175,000 people in the United States are affected while the number around the world could be as high as 800,000.

When uveitis occurs at the front of the eye (called iridocyclitis), it often can be easily treated with medicated drops. "Sometimes, getting the inflammation to subside requires drops every half hour or every hour throughout the day," says Jaffe, a member of the vitreoretinal faculty and director of the uveitis program at the Duke Eye Center.

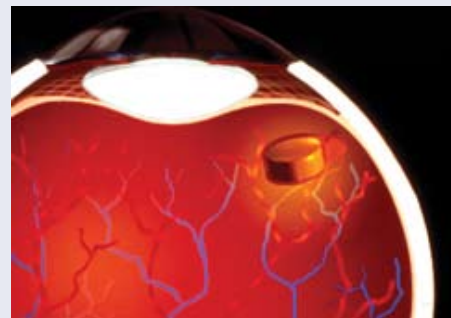
More complex problems arise when the uveitis occurs in the posterior segment of the eye. Doses of medication can be injected near the inflamed area, but determining that the correct amount of medication is reaching the inflamed area can be difficult. "We either give an injection around the eye or sometimes into the eye to try to minimize the side

effects and just have a local effect without affecting the rest of the body," says Jaffe. "Sometimes that's not enough and that's when we have to give prednisone (orally), or medications to suppress the immune system, which often cause side effects in the rest of the body."

The new steroid implant can deliver medication locally for a prolonged period of time without causing side effects elsewhere, and, potentially, it can eliminate the need for drops, injections, and oral medications. Typically, the implant will release medicine over the course of 2.5 to 3 years. "And after that period of time, the hope is that the eye inflammation will abate and the disease will burn itself out," he says. If the inflammation recurs, another implant can be inserted.

The steroids used in the implant have side effects, but they are localized within the eye. "The main side effects are cataracts and elevated pressure inside the eye," Jaffe says. "Cataracts are really common with uveitis anyway, but they can also develop from using steroids in the eye—even though the steroids have controlled the inflammation."

"With the implant, if the patient didn't have a cataract before, there is a very strong chance that they will develop one, but the good news is that when you do the cataract surgery, the eye is totally quiet (inflammation diminished) so you are taking the cataract



The steroid implant is shown in the eye.

out under the most favorable conditions possible," he says. "In contrast, without the implant, you have difficulty getting the eye quiet enough so that the patient can even have the cataract surgery," Jaffe says.

"Most of the implants we've done have been put into people in their 30s, 40s, and 50s," says Jaffe. "These people have had uveitis for quite some time because onset is nearly always in the most productive years of your life," he says. "With the implant, we keep the eyes healthy and allow people to have productive lives."

The surgery is performed under local anesthesia—the same way cataract surgery is done. The eye is numbed; the patient is given a sedative and is drowsy. It takes about 30 minutes to perform the surgery. The patient is observed for an hour, then allowed to go home. Normal activities can be resumed in about a week.

For properly selected people, the benefits of the implant outweigh the side effects, Jaffe says. "I believe that with its unique drug-delivery technology, Retisert will offer an efficacious treatment for this chronic, severely blinding disease."

Jaffe's clinical trial results "Long-term Follow-up Results of a Pilot Trial of a Fluocinolone Acetonide Implant to Treat Posterior Uveitis" were published in the June issue of *Ophthalmology*. Paul Ashton, PhD, with Control Delivery Systems of Watertown, Mass., and P. Andrew Pearson, MD, former Duke retina fellow and current chairman of the Department of Ophthalmology at the University of Kentucky, along with Jaffe, were on the original research team that developed the implant.



Glenn Jaffe, MD

Artificial Lenses Restore Clear Vision for Patients with Cataracts



Robin Vann, MD

Artificial lenses implanted during cataract surgery restore clear vision to millions of patients each year. But the lenses help only at a single focal point, usually improving distance vision. Recently, however, the FDA approved new “bifocal” lenses for cataract patients. These lenses restore vision from near to far, eliminating the need for glasses for most wearers.

Cataract surgery restores clear vision to almost three million Americans each year by replacing the eye’s natural lens, which has become cloudy, with an artificial lens implant. Robin Vann, MD, chief of the Comprehensive Service at the Duke University Eye Center, says conventional cataract surgery has its limitations.

“When someone has a cataract, a clouding of the natural lens of the eye, we try to improve the sight by replacing the natural lens with an artificial lens implant that isn’t cloudy. The traditional lens implant basically has a single power. The best that we can do with this lens is to restore sight so that there is one clear focusing range. The vast majority of individuals want to try to have great distance vision, so most of the time we adjust the lens implant’s power so that you see very well far away.

“This doesn’t address the need to see well up-close, whether it’s intermediate range, computer range or reading range. Until recently—with the current technology of single-power lenses—the best we could do for patients was to give them excellent distance vision but they’d still have to wear glasses or contacts to see up close.”

However, says Vann, that’s changing.

“What’s exciting is that there are now several manufacturers who are making lens implants that give you more than one focal range,” says Vann. “Depending on the manufacturer and the design of the lens implant, we have fancy terms like ‘pseudo-accommodative’ or ‘multifocal intraocular lenses.’ Two new lenses have just gotten FDA approval to have a multifocal intraocular lens for cataract surgery, so that you can not only see well far away but also at intermediate range and up close. In effect, these are intraocular bifocal lenses.”

Alcon Labs offers a lens called ReSTOR, while Advanced Medical Optics makes two multifocal lenses: ReZoom and Array. Eyeonics makes an “accommodating” lens implant, one that moves in the eye, called the Crystalens.

The tiny intraocular lens implant, whether the traditional lens implant or the new multifocal implant, can be done on an outpatient basis and doesn’t require general anesthesia.

Vann, assistant clinical professor of ophthalmology at Duke, says early studies of the innovative lens implants are extremely encouraging.

“Upwards of 80 percent of individuals who have had these implants in both their eyes are completely free of glasses for all their vision needs.”

This summer, several Duke ophthalmologists, including Vann, began using the ReSTOR lens with excellent early results. “Of course, the new lens isn’t for everyone, but I am very pleased with the initial results and excited to be able to provide cataract patients with a new option—the ability to see near and far—and in most cases without glasses,” says Vann.

For additional information about cataracts and/or the ReSTOR lens, visit www.dukeeye.org.



Lines of people wait to be screened.

Mission Brings Eye Care to Dominican Poor

El Seibo is one of the poorest regions in the Dominican Republic. There are no eye care providers in that part of the island nation, and as a result, many citizens are blind.

As part of the United Nations' Millennium Goals to combat poverty in Third World countries, the first lady of the Dominican Republic launched an initiative to improve eye health. Her office teamed up with the Connecticut Lions Eye Health Program to organize a large-scale, free eye screening and to provide basic eye care for those in need.

In March 2005, Leon Herndon, MD, of Duke's Glaucoma Service and medical director of the Eye Center, was invited by Roger Martin, a member of a Connecticut Lions Club, to visit the Dominican Republic to assess the country's eye care needs and to make plans for a major eye screening event. In late April, the two men returned to El Seibo, along with 150 volunteers (including 70 physicians) from the U.S. and other parts of the Dominican Republic, to screen more than 6,500 people during a two-day period.

"It was even more terrific than I'd anticipated," says Herndon. "Dr. Juan Battle, director

of the Christian Central Eye Hospital in Santo Domingo, mobilized the residency program there, so we had all of their residents, fellows, and physicians in El Seibo for this massive event."

Triage stations were set up in a school. Residents screened patients and sent them to one of three clinics: general eye care, cataracts, and glaucoma. Herndon supervised the glaucoma clinic, which, using donated equipment, offered state-of-the-art testing. Those diagnosed as having this potentially blinding disease were immediately treated by Herndon, beginning with donated eye drops. He performed laser treatment on 25 patients at high risk for greater vision loss. Thanks to equipment donated by Lumenis, Herndon was able to perform this laser procedure for the first time in the Dominican Republic. Duke Eye Center research coordinator Cecilia Santiago-Turla, MD, who accompanied Herndon, collected patient blood samples for the genetic component of Duke's ongoing studies of open-angle glaucoma.

Patients will receive follow-up care at Elias Santana Eye Hospital in Los Alcarizos.



Leon Herndon, MD, examines a patient.

Herndon says he plans to participate in future missions. He also hopes to establish clinical and research collaborations between Duke and the eye hospital there, and to set up a teaching rotation with an exchange program for Duke and Dominican ophthalmology residents.

Having participated in similar missions to Ghana, Herndon says he likes "the aspect of giving back. I know it's just the tip of the iceberg because these people have so many needs beyond eye care, but it still feels good to be helping people who, in many cases, would otherwise go blind."

Brilliant Kites

Art for AERI

What is it about kites? They're fluid and full of motion. They allow us to capture the wind, if only for a few exhilarating moments. Even in ancient times kites captured our imaginations and let us virtually soar great distances.

"Capturing imaginations was exactly what we had in mind," says Betty Haskin, the Eye Center's arts coordinator and staff member of Health Arts Network at Duke.

Haskin, at the request of David Epstein, MD, chairman of the Eye Center, assembled an Arts Advisory Committee to purchase art for the new Albert Eye Research Institute (AERI). The *Calliope Kite* and *Sunset Kite*, commissioned for AERI, are the latest additions.

The committee was looking for stellar artwork to grace the two-story Lachman Family Lobby of AERI. "But we also wanted artwork that would engage children and their families who come for appointments in the new Pediatric and Strabismus Service, which has a waiting room overlooking the lobby," adds Haskin. Committee members found the perfect solution in *Calliope Kite* and *Sunset Kite* by Durham artist Mary Vandergraft.

The three-dimensional Chinese-style kites "breathe" and turn in the gentle flow of the ventilation system high above the rich brown leather lounge seating. Its full spectrum of colors belies its humble beginning as the swath of white silk that Vandergraft used as her blank canvas. After dyeing the great lengths of silk a pale warm tone, she began

decorating the kites by painting designs with colorless wax. Once the wax dried, she applied brilliant fabric dyes in blue, gold, red, green and purple. The dyes were set in a steaming process, and the wax was removed by dry cleaning. Then the artist began constructing the kites, using her ingenuity and mechanical skills

"These are the largest kites I've created to date," Vandergraft comments, "and I am thrilled that they are hanging in my own home town at Duke Eye Center."

In addition to the kites, a designated portion of the construction budget allowed the Arts Advisory Committee to select artwork for other areas of the new building. The vibrant colors in *Spottie's Birthday Party* by retired nurse-turned-artist Joan VanderMeer put smiles on patients' faces who are waiting for their eyes to dilate. The colorful ceramic *Jumping Rabbit Triptych* by Chapel Hill artist Cathy Kiffney surprises many who stop for a sip at the second-floor drinking fountain. And in the third-floor reception area for physicians' offices, visitors and staff are greeted by two soothing landscapes by South Carolina artist Jack Cayton. Members of the Arts Committee who generously gave their time to help select the artwork for AERI include: Rand Allingham, MD, Rebecca Auman, director of development, Laura Enyedi, MD, Renee Halberg, LCSW, Betty Haskin, arts coordinator, Leon Herndon, MD, and Marsha A. Seaton, CRNA.



Calliope Kite (shown above) and *Sunset Kite* were installed on August 15 by a team of technicians and artists: Vandergraft and Haskin had assistance from Larry Peters of Eye Center Clinical Engineering and Scotty Jones of Hospital Engineering and Operations.



Natalie Afshari, MD,

Cornea and Refractive Surgery, was named to "Best Doctors in America." In the spring, she was elected to the ARVO Cornea Program Committee. She was also invited to join the editorial board of *EyeNet*, the magazine published by the American Academy of Ophthalmology. Afshari is part of the Cataract and Anterior Segment Panel of the American Academy of Ophthalmology, as well as the Cataract Subspecialty Interest Team, which provides information about cataract surgery to ophthalmologists worldwide. Afshari and her collaborators have published three scientific papers this year and have had seven more accepted for publication. The paper topics include LASIK, refractive surgery, corneal transplantation, Keratoconus, and Fuchs corneal dystrophy. She served as a moderator of a scientific session on Wavefront LASIK at the annual 2005 American Society of Cataract and Refractive Surgery meeting.



Rand Allingham, MD,

Glaucoma Service, was promoted to professor of ophthalmology. He was lead author of a study "Early Adult-Onset POAG Linked to 15q11-13 Using Ordered Subset Analysis," which was published in the June issue of *Investigative Ophthalmology and Visual Science*. In August, he and glaucoma colleagues, Pratap Challa, MD, and Leon Herndon, MD, returned to Ghana, West Africa, for a clinical and research trip as part of the Duke Ghana Glaucoma Project. The program received national attention while the team was overseas through articles released by the Associated Press and broadcasts on National Public Radio.



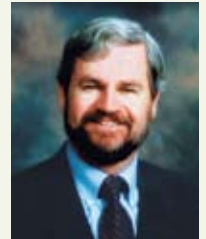
Sanjay Asrani, MD,

Glaucoma Service, was promoted to associate professor of ophthalmology, and he was named to "Best Doctors in America." He was the keynote speaker at the Brazilian Glaucoma Society's annual meeting. Using a recently developed high-resolution optical coherence tomography system, Asrani is currently pursuing research on early glaucoma diagnosis in adults and children.



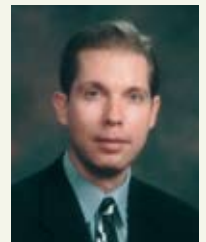
Edward Buckley, MD,

Pediatric and Strabismus Service, was recently elected vice president of the American Association for Pediatric Ophthalmology and Strabismus, the largest group of pediatric ophthalmologists in the world. He is also serving as chairman of the ophthalmology section of the American Academy of Pediatrics. These two organizations are strong advocates for children's eye health issues and seek to advance knowledge in this area. As associate dean of Duke Medical Education, he is assisting with the development of a Duke-sponsored, research-oriented medical school in Singapore. In the fall, he was invited guest of the South American Strabismus Society (CLADE), and he delivered the keynote address to the Hong Kong Ophthalmological Society in China. Also this fall, he spoke at the Ohio State Ophthalmological Society Annual Meeting and was the William Williford visiting professor at the University of Tennessee.



Alan Carlson, MD,

Corneal and Refractive Surgery, served as chair of the Wavelight Laser Refractive Surgery Symposium at the American Academy of Ophthalmology meeting. At the same meeting, he taught a skills transfer course on advanced cataract surgical techniques. He lectured at several medical conferences, including the North Carolina State Society of Ophthalmology Meeting in Asheville. Carlson co-authored with Kunal Kanitkar, MD,





an article on “Computer Vision Syndrome,” published in the *Review of Ophthalmology*. He contributed two articles to *Cataract and Refractive Surgery Today* and an article to *Refractive Eyecare for Ophthalmologists*. Carlson is contributing surgical photographs for the upcoming book commemorating Harold Ridley, MD, and the history of intraocular lens implantation, being written by David Apple, MD. He was interviewed on “*Doctor On Call*,” discussing the ReSTOR multifocal intraocular lens, the Verisyse Phakic intraocular lens implant, custom LASIK surgery, and a new corneal transplantation technique.

Pratap Challa, MD, Glaucoma Service, recently completed a research trip to Ghana, West Africa, along with co-investigators Rand Allingham, MD, and Leon Herndon, MD. He and



co-authors Pedro Gonzalez, PhD, Paloma Liton, PhD, David Epstein, MD, and Coralia Luna, PhD, published a paper in *Molecular Vision* regarding the delivery of genes to the trabecular meshwork.

Laura Enyedi, MD, Pediatric and Strabismus Service, was named to “Best Doctors in America.” She presented at pediatric grand rounds at Wake Medical Center in Raleigh in the summer.



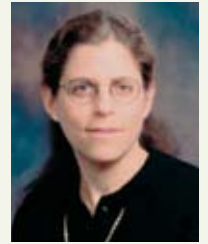
David Epstein, MD, chairman of ophthalmology, was the invited speaker at the 16th Japan Glaucoma Society meeting in Kumamoto, Japan, and at a Pfizer symposium “Ophthalmic Drug Development and Delivery” in San Diego in September. Epstein spoke at the American Academy of Ophthalmology’s Glaucoma Subspecialty Day in Chicago, and he delivered the Florence Teicher Lectureship in Glaucoma at Columbia University in New York.



Sharon Fekrat, MD, Vitreoretinal Diseases and Surgery Service, was invited to serve on a panel of vitreoretinal specialists who met in New York in July to prepare a position paper on clinical trials in ophthalmology. At the annual meeting of the North Carolina Society of Eye Physicians and Surgeons/South Carolina Society of Ophthalmology in Asheville, she spoke on “Central Retinal Vein Occlusion in Patients on Long-term Coumadin Anticoagulation.” In October, Fekrat spoke on “The Surgical Management of Branch Retinal Vein Occlusion” at the American Academy of Ophthalmology’s Vitreoretinal Subspecialty Day in Chicago, and she presented at the inaugural Ocular Imaging Conference. In addition, she received the 2005 Secretariat Award from the American Academy of Ophthalmology, and she is an invited speaker at RETINA 2006 in Maui in January.



Sharon Freedman, MD, Pediatric and Strabismus Service, was a visiting professor at Emory Medical Center and at Northwestern University (Chicago) this past spring. She was recently the guest speaker at a symposium in Virginia for more than 100 teachers for the visually impaired. Several of her papers were recently published or accepted for publication on topics related to pediatric glaucoma.



Leon Herndon, MD, Glaucoma Service, lectured at the American Academy of Ophthalmology, the Fourth Annual Downeast Ophthalmology Symposium in Bar Harbor, the North Carolina Society of Eye Physicians and Surgeons Annual Meeting in Asheville, and at conferences in Atlantic City and Boston. In the summer, he joined other glaucoma faculty on a research trip to Ghana, West Africa. In Ghana, he delivered two corneas from the Texas Eye Bank to a Liberian refugee camp in Ghana—to allow a visiting Israeli eye surgeon to restore sight to a refugee with a scarred cornea. Herndon was the course director for the 17th Annual Glaucoma Symposium in Durham.



Glenn Jaffe, MD,

Vitreoretinal Diseases and Surgery Service, was named to "Best Doctors in America." His paper "Long-term Follow-up Results of a Pilot Trial of a Fluocinolone Acetonide Implant to Treat Posterior Uveitis" was published in *Ophthalmology* in June. Featured as the cover story, the article describes how a steroid implant effectively controls severe inflammation in the posterior of the eye and preserves vision in patients with posterior uveitis, a potentially blinding disease. Based on this work, and a multicenter trial for which Jaffe was lead investigator, the implant (also called Retisert) was approved by the FDA. In July, at the American Society of Retina Specialists meeting in Montreal, he taught a course on surgically implanting the device. In October, Jaffe spoke at the Fourth International Conference on Ocular Infections in Hokkaido, Japan, and he presented at the subspecialty day retina and uveitis meetings prior to the American Academy of Ophthalmology meeting.



Terry Kim, MD,

Corneal and Refractive Surgery Service, was promoted to associate professor of ophthalmology with tenure. He was honored as one of the "Top 50 Opinion Leaders in Cataract and Refractive Surgery" by *Cataract and Refractive Surgery Today*. Kim and former Eye Center resident Paul Kang, MD, published their work on "Novel Tissue Adhesives to Secure Laser in Situ Keratomileusis Flaps" in the June 2005 issue of the *Journal of Cataract and Refractive Surgery*. At the recent 2005 ASCRS meeting, Kim received a film festival award and also participated on the Cornea Clinical Committee. This past summer, Kim was a visiting professor at Seoul National University in Korea and at the University of Pittsburgh. He lectured at the 20th Asia-Pacific Academy of Ophthalmology Congress in Malaysia, the 10th Annual International Joint Meeting of the Italian Association of Cataract and Refractive Surgery and the International Society of Refractive Surgery in Florence, Italy, and at the inaugural Harvard Medical School Intensive Cataract Surgical Training Course in Boston.



Gordon Klintworth, MD, PhD,

Research, lectured at a meeting of The Eye Bank Association of America in San Diego on the current classification of corneal dystrophies and other inherited disorders of the cornea. He also served on a study section of the National Eye Institute that evaluated grant applications for training grants for clinician-scientists. As a collaborating member of a multidisciplinary research team, he published with scientists in Aarhus, Denmark, the first characterization of the proteome of the human cornea. The group identified 141 distinct proteins, 99 of which had not been recognized previously in mammalian corneas. The results of this research may open the door to future therapies of corneal disorders.



Paul Lee, MD, JD,

Glaucoma Service, presented "Standard of Care in Glaucoma" and "Risk Management in Glaucoma" at the 27th Annual Midwest Glaucoma Symposium and presented "Improving Quality of Care" at the Women in Ophthalmology meeting. He co-authored and presented papers on empirical evidence in malpractice at the American Association of Law and Society. Also, Lee presented "Innovations in Glaucoma Diagnosis" at the Association of International Glaucoma Societies and participated in the Glaucoma Eye Care Project Committee of the AAO Foundation.



Brooks McCuen, MD,

Vitreoretinal Diseases and Surgery Service, presented seven papers about various aspects of vitreoretinal surgery at the Colombian Association of Retina and Vitreous Surgeons in Cartagena, Colombia, in September. He attended the 38th annual scientific meeting of the Retina Society in Coronado. And in October, he gave several presentations at the annual meeting of the American Academy of Ophthalmology in Chicago.





Stuart McKinnon, MD,

Glaucoma Service, has settled in after his move in June from the University of Texas in San Antonio. With R01 funding from the National Eye Institute, his laboratory is now well established on the fourth floor of AERI, the Eye Center's new research building. He has been initiating collaborations with many DUEC research scientists and looks forward to taking care of his new glaucoma patients.



Eric Postel, MD,

Vitreoretinal Diseases and Surgery Service, published new findings about phenotype in AMD, in May, in the *American Journal of Ophthalmology*. He recently spoke on "Complement Factor H in AMD" at the American Society of Retina Specialists in Montreal.



Cynthia Toth, MD,

Vitreoretinal Diseases and Surgery Service, co-authored four articles that were published this summer. She and Mark Cahill, MD, and Prithvi Mruthyunjaya, MD, published, "Recurrence of Retinal Pigment Epithelial Changes After Macular Translocation with 360 Degree Peripheral Retinectomy for Geographic Atrophy" in *Archives of Ophthalmology*. Toth was a member of the writing committee for the National Institutes of Health-sponsored Submacular Surgery Trials group that published "Histopathologic and Ultrastructural Features of Surgically Excised Subfoveal Choroidal Neovascular Lesions: Submacular Surgery Trials Report No.7" in the same journal issue. Toth and Mruthyunjaya's article "Impact of Fluorescein Angiographic Characteristics of Macular Lesions on Outcomes after Macular Translocation 360 Degree Surgery in Eyes with Age-related Macular Degeneration" was published in *Retina* in July. Toth co-authored a paper with Catherine Bowes Rickman, PhD, and Goldis Malek, PhD, on "Apolipoprotein E allele-Dependent Pathogenesis: A Model for Age-related Retinal Degeneration" which was published in the *Proceedings of the National Academy of Sciences* in August. Toth and learners from the Eye Center co-authored eight presentations at ARVO.



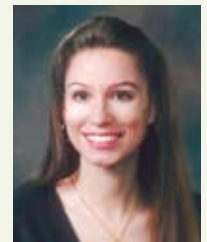
Robin Vann, MD,

Comprehensive Service, lectured at Duke's Vision Symposium in March, served on a dry eye panel in April, and lectured at the Harvard Intensive Cataract Surgical Training Conference. Vann recently received the Globe Award, given by the residents in recognition of outstanding teaching during the 2004-2005 academic year.



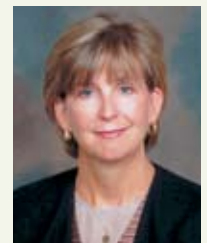
Julie Woodward, MD,

Oculoplastic and Reconstructive Surgery, is conducting a clinical trial for the use of a topical gel to enhance the growth of eyelashes. This is the first randomized, double blinded, control study using prostaglandins for the express purpose of inducing hair growth.



Carol Ziel, MD,

Glaucoma Service, is participating in a Duke-sponsored diabetic study. She spoke at the 17th Annual Duke Glaucoma Symposium this fall on "Cataract Surgery for Uncontrolled Treated Angle Closure Glaucoma" and the "Use of the Express Shunt in Glaucoma Surgery." She spoke at the Fall McKinley conference for area optometrists on her experience using the newly released ReSTOR lens that corrects distance and reading vision after cataract surgery.



AWARDS & RECOGNITION

RAO RECEIVES MASTER CLINICIAN TEACHER AWARD

P. Vasantha Rao, PhD, associate professor of ophthalmology, pharmacology and cancer biology, was one of three Duke Medical School faculty members honored with the prestigious Master Clinician Teacher Award at the annual faculty meeting in May. He joined the Duke faculty in January 1998.

Rao and the other two recipients—Kenneth W. Lyles, MD, of the Department of Medicine and Thomas J. McIntosh, PhD, of the Department of Cell Biology—each will receive \$15,000 from the Duke Medical School for the next two years.

“It is an extremely noteworthy honor for Dr. Rao and the Department of Ophthalmology to be recognized at this very highest level by the Duke University School of Medicine. There were only a total of three such teaching awards made by Duke for all the clinical and basic science departments in the School of Medicine,” says David Epstein, MD, chairman of ophthalmology. “It connotes, therefore, the very highest level of praise from the Duke University School of Medicine. The award recognizes our commitment to medical student education in the Eye Center and I am very proud of Dr. Rao for being such an outstanding teacher and mentor.”

Dean R. Sanders Williams, MD, and Vice Dean Edward Halperin, MD, of the Duke’s Medical School, established the award in 2004 to honor and reward excellence in both clinical care and student education. Nominations are solicited from the faculty, house staff, and student body. A three-member faculty committee recommends suitable candidates to the dean of the Medical School.



EYE CENTER'S WINSTON-SALEM OFFICE RECEIVES AWARD



The Duke University Eye Center’s Winston-Salem office received a Patient Advocacy Award during Duke’s National Patient Advocacy week. Sponsored by Duke’s PDC/PRMO, the Winston-Salem team was recognized for consistently “lending their voices to patients and families.”

AHMAD RECEIVES THE MACHEMER AWARD

During the Annual Residents’ and Fellows’ Day symposium, Saad Ahmad, MD, third-year resident, received the prestigious Robert A. Machermer Research Award for his work “Photodynamic Therapy for Predominantly Hemorrhagic Choroidal Neovascularization Lesions in Age-related Macular Degeneration.”

The annual Robert A. Machermer Research Award recognizes a resident, clinical fellow, or research fellow whose clinical or basic science research proposal demonstrates high intellectual curiosity, outstanding scientific originality, and has a high impact on the clinical management of persons with ophthalmic disease. The award honors Robert Machermer, MD, a former chair of the Department of Ophthalmology. For more information on this award, contact Sharon Fekrat, MD, chair of the award committee.



Machermer Award winner Saad Ahmad, MD, and Robert Machermer, MD



Strength Hope and Caring Award presentation. (L to R) Judith Margolis, MD, Reyna Evangelista, OA, Erica Scott Wiley, staff assistant, Robin Vann, MD, Marsha Seaton, CRNA, and Kevin Sowers, Duke Hospital chief operating officer.

EYE CENTER TEAM RECEIVES STRENGTH, HOPE AND CARING AWARD

Robin Vann, MD, chief of Comprehensive Service, Reyna Evangelista, OA, Erica Scott Wiley, staff assistant in Comprehensive Service, Judith Margolis, MD, and Marsha Seaton, CRNA received the Strength, Hope and Caring Award in the Team category for July 2005. Kevin Sowers, chief operating officer, presented the award in August at the Eye Center. The team was nominated by a patient's family.

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

REEVES RECEIVES THE 2005 OCULAR INNOVATION AWARD

Sherman W. Reeves, MD, MPH, chief resident and clinical associate, received the Duke Eye Center's Ocular Innovation Award during the Annual Residents' and Fellows' Day. His research for the award involved helping create and test an instrument to open clogged glaucoma tube valves.

The Ocular Innovation is a cash award given annually to the department and the resident who has been judged to have produced the best published article in a national eye journal (peer or non-peer reviewed) during the year for an original concept, operation, instrument, or invention in ophthalmology. In the judging, less weight is given to papers that do not represent an innovation such as reviews of the literature, reports on a series of operations, descriptions of diseases or cases, or quantification of former concepts. The award is sponsored by a former Eye Center resident.



RAMSEUR RECEIVES FRIENDS OF NURSING AWARD

Priscilla Ramseur, RN, MSN, CNOR, clinical operations director, Perioperative Services at the Duke Eye Center, has been awarded the Stryker Award for Excellence



in Perioperative Nursing, sponsored by the Friends of Nursing Program. She received a plaque and a \$1,000 education award at the Friends of Nursing Gala in November.

Ramseur graduated from North Carolina Central University and received a masters of science in nursing from Duke University School of Nursing. She has worked in the nursing profession for 19 years and at the Eye Center for 10.

The Eye Center's Wadsworth Building Gets a Facelift

For more than 30 years, the Joseph A.C. Wadsworth building on the Duke Medical Center campus has been **the** Duke University Eye Center. Now that the state-of-the-art 75,000-sq.-ft. Albert Eye Research Institute (AERI) is up and running, it's time for Wadsworth to get a \$1.5-million facelift to keep pace with the Eye Center's ever-increasing patient flow. Most doctors' offices, Research Programs, Educational Resources, and the Pediatric and Strabismus Clinical Service have moved from Wadsworth to AERI—creating space for renovation.

"We are very excited about this project," says Charles Mansfield, Duke Eye Center's administrative director. "The Wadsworth building was built in 1973, and we completed an addition in 1990. Since that expansion, our faculty has more than doubled. These renovations are long overdue and will support a 20 percent increase in the annual number of patient visits and will accommodate our projected clinical program growth for at least the next five years."

The original facility was designed to support 20,000 patient visits per year. Today, the Eye Center has approximately 70,000 patient visits at Wadsworth and another 30,000 visits in satellite locations.

"Our goal is to accommodate the increase of our patient volumes. We want our patients to have easier access, comfortable waiting areas, and state-of-the-art examination facilities when they come for appointments," says Mansfield. Already, the Eye Center has recruited six new physicians this year.

The current renovations, which began in September, include converting old faculty office space into new exam rooms, expanding wait



areas, relocating the Age-related Macular Degeneration Center with an AMD patient education room, and replacing all carpet and waiting area seating. A fifth operating room and an additional procedure room opened in October.

The size of the 50,600-sq.-ft. Wadsworth will not change, according to Robin Woods, administrative coordinator and department project manager for the renovations. "The changes will focus on new uses for old spaces. For example, an administrative suite for a service could become an exam lane space or expanded waiting room space," she says.

"One of our goals is to move all of the administrative offices from the second floor clinical space," says Woods. "Recently, we moved central appointments from MSRB (Medical Science Research Building) and the switchboard from the second floor lobby to the former cornea administrative suite on the first floor."

When Wadsworth is completely renovated, most patients, with the exception of oculoplastics and pediatrics, will continue to be seen on its second floor, according to Woods. But all patients will arrive at the reception area in Wadsworth.

The building was named for Joseph A.C. Wadsworth, MD, the first chairman of the department. He served as chairman from 1965 until his retirement in 1983.



Jennifer Caldwell, research coordinator, enjoys her new office that was previously part of the Retina Service.



Christine Speer, MD



Lawrence Buono, MD



Stuart McKinnon, MD, PhD

The Duke University Eye Center of North Durham Provides Better Access for the Community

Earlier this year, seeing a Duke ophthalmologist became easier—when the Duke Eye Center opened a satellite office in north Durham.

The new office is part of Duke's 3116 N. Duke Street location and offers free parking in front of the building. With easy access from I-85 and U.S.15-501, the facility is convenient for residents along these corridors.

"The Eye Center has experienced phenomenal growth—with the number of patient visits at the main campus on Erwin Road, doubling in the past 15 years," says Brett Moran, associate administrative director.

Already the Eye Center has expanded to accommodate patients in other communities—Cary, Winston-Salem and southern Durham. But Moran says there was a need to provide better access for those living between northern Durham and southern Virginia. Patients living in these areas are often seen at the main campus location on Erwin Road.

"The new location is more convenient for existing patients, and others who want to see a Duke ophthalmologist closer to their home," says Moran. "We have a beautiful new facility, new equipment, and usually appointments are available within a couple of days."

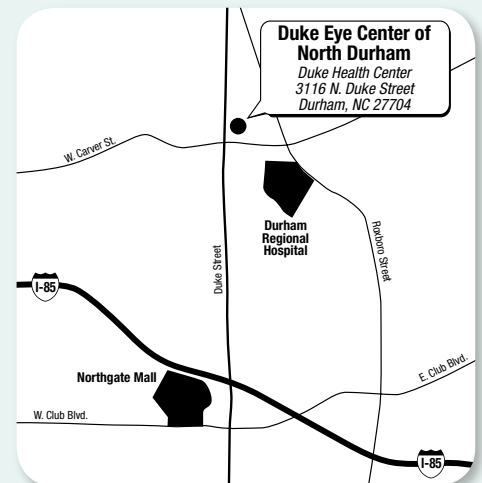
The Eye Center's newest location is staffed by three Duke ophthalmologists who see patients at both the North Duke office and the main campus Eye Center location on Erwin Road. Christine Speer, MD, assistant

clinical professor in Duke's Comprehensive Service, Lawrence Buono, MD, assistant professor, also from Comprehensive Service as well as the Neuro-ophthalmology Service, and Stuart McKinnon, MD, PhD, associate professor from Duke's Glaucoma Service, are the North Durham physicians.

Speer, an Arkansas native, joined the Eye Center faculty in 2003. She provides comprehensive care including general eye examinations and sees patients for the diagnosis and treatment of glaucoma and cataracts. Speer received her medical degree at the University of Arkansas for Medical Services, and she completed an internship at Georgetown University/The Fairfax Hospital and a fellowship at Wills Eye Hospital.

Buono also joined the Duke Eye Center faculty in 2003. He provides general eye exams and sees patients for the diagnosis and treatment of glaucoma and cataracts. Born in New York, he received his medical training at Jefferson Medical College in Philadelphia, completed an ophthalmology residency at New York Medical College, and returned to Jefferson Medical College for a neuro-ophthalmology fellowship.

McKinnon, the third member of the team, is a glaucoma specialist and researcher who was recruited to Duke from the University of Texas at San Antonio. He joined the Duke Eye Center faculty as an associate professor of ophthalmology in June. At North Durham, he sees patients for the diagnosis and treatment



of glaucoma and cataracts. As a physician-researcher, he is pursuing research on the treatment of glaucoma, including research on the link between Alzheimer's and glaucoma. Growing up in New Orleans, he completed medical school and a residency at Louisiana State University and a PhD program in physical chemistry at the University of New Orleans. Then he completed a clinical research fellowship at the Wilmer Eye Institute at Johns Hopkins.

In addition to the Eye Center's Triangle and Winston-Salem offices, Duke retina specialists also see patients at clinics in Danville, Va., Raleigh, Wilson and Wilmington, N.C. For additional information, visit the Web site at www.dukeeye.org.

What Does a Biostatistician Do?

For research taking place at the Eye Center, Sandra Stinnett makes sure the numbers add up.

When a physician studies what medication works best for patients, or what medical device is most effective, it's essential that the data are analyzed correctly. If not, then it is impossible to know if the results are accurate—and impossible to know if promising new treatments and techniques are, in fact, beneficial for patients.



For this reason, a biostatistician is an essential part of any medical research team. At the Duke University Eye Center, Sandra Stinnett, DrPH, is that biostatistician. Stinnett works closely with Eye Center faculty, fellows, and residents, helping them plan and implement research projects by setting up systems to collect and manage data, conducting statistical analyses, and interpreting the results. She also applies her expertise in statistics to help colleagues compile their research results for publication and to draft proposals for grant support for new projects.

Although Stinnett mainly operates behind the scenes, her role is so essential that she's often listed as an author on research publications. In fact, medical journals will not publish a paper without an accurate statistical analysis.

Stinnett, who hails from Louisiana, earned a master's in biometry at the University of Texas School of Public Health and a doctorate of public health in biostatistics at UNC-Chapel Hill (UNC-CH). She was directing statistical operations at the Duke Clinical Research Institute

when a potential opportunity surfaced to work on a grant proposal with Sharon Fekrat, MD, at the Eye Center. While that project didn't work out, Stinnett was intrigued by the research taking place at the Eye Center, and by fall 2001 she was named Duke Eye Center's sole, dedicated biostatistician. She holds joint appointments as an assistant research professor of biostatistics and ophthalmology.

In addition to her contributions to research, Stinnett lectures Duke ophthalmology residents on sound study design and teaches an on-line course on introductory statistics for otolaryngologists. She also teaches a course on consulting for master's and doctoral students in UNC-CH's Department of Biostatistics to help them learn to work with clients and explain complicated statistics in ways that non-statisticians can understand. She is active in several national statistics organizations.

"I enjoy working at the Duke Eye Center," Stinnett says. "I get to be involved in exciting, cutting-edge research, and I appreciate the recognition I get as part of the research team. The faculty and staff here are wonderful—it's like working with a great family."

Each morning, Stinnett walks through the clinic on the way to her office. "Seeing patients in the hallways reminds me that the work I'm doing really makes an impact on people's lives. I feel that I'm making a contribution here, and that's one of the things I enjoy most about working at the Eye Center."

Jill Bryant, OD Staff Optometrist

For Jill Bryant, OD, providing her patients with quality eye care is imperative.

“It’s not just a pair of eyes,” she says. “There is a person behind those eyes and each person has his or her own unique set of needs. I try to remember that at all times.”

She joined the Duke Eye Center staff in August as a clinical associate in Comprehensive Service.



Bryant is a comprehensive optometrist. Her education and clinical training have prepared her for work in clinical diagnosis, treatment and management of ocular disease and vision anomalies.

She provides general and urgent eye care that includes glasses and contact lens fitting and co-management of surgery patients. She evaluates patients for such conditions as diabetic retinopathy, glaucoma, cataracts, and macular degeneration. Bryant also has a special interest in the treatment and management of low-vision patients.

“It is such an exciting time to be in optometry,” Bryant says. “There are always new and better techniques and procedures to learn. What better place to grow professionally and practice eye care skills than at the Duke Eye Center? At Duke, I have the privilege of being surrounded by some of the most innovative minds in eye care today. There is exciting research going on here as well as outstanding clinical care.”

Bryant said she knew early that she wanted to work in the medical field. “As an undergraduate student, I had the opportunity to ‘shadow’ several different types of doctors,” she says. “This gave me insight to better understand what was involved with each field. One of the doctors had such a contagious passion for his work and his patients that it made a huge impression on me. From the moment that I began watching him practice his skills, I knew that optometry was the field for me.”

A native of Marion, N.C., she graduated from Appalachian State University where she majored in biology. It was there that she met her future husband, Steve Bryant, also a biology major. After graduation, both left to attend Nova Southeastern University in Fort Lauderdale, Fla., where she received a doctor of optometry degree (OD) from the College of Optometry, and her husband earned his DMD from the College of Dental Medicine. He is now in private practice in Burlington, N.C.

For her residency, Bryant worked in primary care optometry at the W.J.B. Dorn Veterans Affairs Medical Center in Columbia, S.C, while completing her residency studies through the Southern College of Optometry in Memphis, Tenn.

“We are happy to have Dr. Bryant join the Comprehensive Ophthalmology Service at the Duke University Eye Center,” says Robin Vann, MD, service chief of the Comprehensive Ophthalmology Service. “Her expertise in complete eye exams with contact lens fittings will complement the needs of our patients in this growing community. We are glad to have her join our group.”

She’s a firm believer in providing excellent patient care.

“Quality patient service is a foremost priority, and clinical excellence is the foundation of a successful practice.”

Bryant concludes, “I believe in the power of individual commitment. I believe that one person with a goal, a person who expends the energy, and takes the time to learn the skills can make a difference to another. I am constantly striving to be one of those persons.”

Michael Kelly

The Eye Center's New Manager of Clinical Imaging

If a Duke ophthalmologist needs photographs or other images to help diagnose conditions or manage a patient's eye care, Michael Kelly is the person to call. In April, Kelly joined the Eye Center as manager of clinical imaging.

"Even Duke's world-renowned ophthalmologists cannot treat what they cannot see," says Kelly. "Our role as imagers is a pivotal one: using the best equipment and latest technology, we capture changes in the eye so our physicians can target and treat disease and preserve vision."

Kelly and his fellow imagers use state-of-the-art technology such as digital fluorescein angiography, ocular coherence tomography (OCT), and high-speed indocyanine green (ICG) angiography to document changes in the eye caused by diabetic retinopathy, age-related macular degeneration, glaucoma, and other diseases.

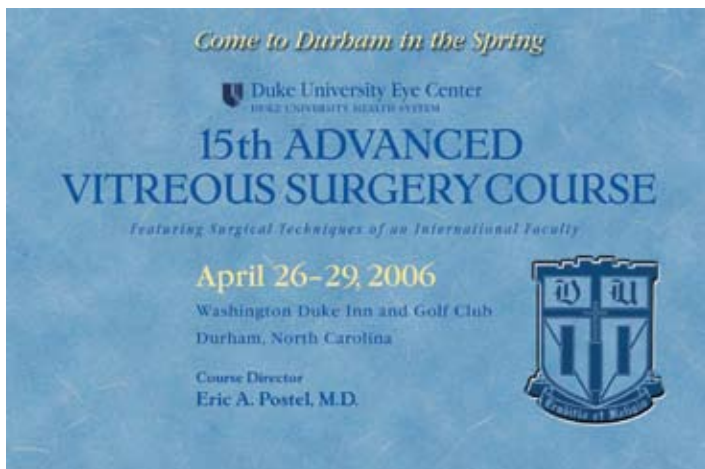
Back in the 1970s, Kelly watched as his father lost his vision due to a retinal detachment. "Seeing what my father went through, then also having my mother, who was a nurse, made me aware of how much a career related to medicine could be helpful to people. At the same time, I had a great interest in architectural and advertising photography and went to school for that. I moved to San Francisco, then took a job at an ophthalmologist's office and learned the craft of ophthalmic photography. I quickly realized that it was exactly what I wanted to do."



Kelly was recruited to Duke with his wife Evelyn, the Eye Center's new health care administrator (See article on page 23). "We've always been a team," he notes. "First, we were at a private retina practice in San Francisco, then at the Cleveland Clinic, and right before coming to Duke, we were at the Cincinnati Eye Institute, the largest private ophthalmology group in the country."

At Duke, Kelly is impressed that "the staff and physicians are truly dedicated—not only to helping patients with their vision—but are also very sensitive to how vision loss impacts each person's quality of life. Duke Eye Center is also a special place because of Dr. Epstein's vision of 'translational research,' which brings basic research discoveries to the clinical side—and vice versa—in a collaborative effort to preserve vision for our patients."

In addition to working with Eye Center patients, Kelly is excited about working on a program, along with his team, to take imaging equipment to underserved communities in remote areas of North Carolina to screen for diabetic retinopathy and glaucoma. "I have been so impressed with Dr. Dzau's (Victor Dzau, MD) commitment to 'serve the under-served,' and this is our way of helping to fulfill that commitment."



Come to Durham in the Spring


Duke University Eye Center
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April 26-29, 2006
Washington Duke Inn and Golf Club
Durham, North Carolina

Course Director
Eric A. Postel, M.D.



Evelyn Kelly

The Eye Center's New Health Center Administrator

In April, Evelyn Kelly joined the Duke Eye Center as health center administrator. Recently, we asked her to introduce herself and tell us about her new role.

Her main responsibilities:

"As health center administrator, I oversee the Eye Center's day-to-day operation. I bring my prior experience, working with both teaching hospitals and private practices, to evaluate and to streamline the Eye Center's processes and to find ways to work more efficiently as a team to support our physicians and to provide great quality care for our patients."



Where you might meet Evelyn: "Most of the time I work behind the scenes to maintain a liaison between all levels of administration, physicians, patients, and outside organizations to coordinate clinic business, to accomplish directives, and to facilitate the resolution of problems. However, you may meet me as I walk around the building monitoring our operations and ensuring that our patients have a positive experience at the Eye Center."

Why she came to Duke: "I have been a national speaker for the American Academy of Ophthalmology (AAO) for many years, teaching billing and practice management to physicians around the country. I was contacted by the Eye Center after an administrator attended one of the courses and asked me to consult on some billing issues. After 10 months as a consultant, the health center administrator position became available at the same time a position in ophthalmic imaging, my husband's field, also became available. Both of us were recruited to Duke, and I was interested because I knew the position would be challenging, and it would be an incredible opportunity to work for another world-class eye center." (See article on Michael Kelly on page 22.)

The career path that led her here: "I started in the field of ophthalmology over 20 years ago—first working with a prestigious retina practice in San Francisco. As my interest in ophthalmology grew, I looked for a position that would broaden my scope of knowledge. I was hired by the American Academy of Ophthalmology as the program manager for the practice management department. Opportunity came knocking at the door when my husband and I were recruited to the Cleveland Clinic. A few winters later, we moved to Cincinnati, Ohio, where I took a job as director of reimbursement and compliance for the Cincinnati Eye Institute. Now that we have been recruited to Duke, I am extremely excited to be part of the team here at the Eye Center. Ophthalmology is a passion of mine; it's an exciting field that constantly changes. It is a field that restores the quality of life for so many people; the gift of sight. However, it is also the field that has enabled me to travel around the country, author articles and publications, perform consulting, and meet so many talented wonderful people. It is, after all, the field that has enabled me to meet my husband of 15 years. We have been fortunate to work together at the same organizations for most of our careers."

What she enjoys most about Duke: "I love the fact that Duke is a very diverse and challenging organization. They talk the talk, and they walk the walk. They stand behind their convictions and realize that our patients and customer service are of the utmost importance."

Life outside of work: "I love cooking and entertaining—and eating! I attended culinary school in San Francisco, so cooking is my stress reliever. Michael and I love Durham, and the wonderful weather here was a big draw after winters in Ohio!"

Duke University Eye Center Ranks in the Top Ten U.S. News & World Report

Ophthalmology #8



Ghana Update

Searching for Answers to Glaucoma Questions



From left: Stephen Akafo, MD, faculty member at the University of Ghana, Rand Allingham, MD, Erin Allingham, Pratap Challa, MD, Taineisha Sledge and Cecilia Santiago-Turla, MD, (Leon Herndon, MD, was performing surgery when the photo was taken).

Glaucoma is the world's leading cause of irreversible blindness. It affects about 2 percent of Americans over 40, but for some reason African-Americans are afflicted at a rate nearly four to five times as high as Caucasians.

For the past eight years, Rand Allingham, MD, chief of Glaucoma Service at the Duke Eye Center, and a team of Duke researchers have been studying glaucoma in Ghana, West Africa. In addition to providing eye care and teaching local health care providers to treat eye disease, the team is conducting extensive research into the genetic causes of glaucoma.

In August, Allingham and Eye Center colleagues Pratap Challa, MD, and Leon Herndon, MD, also faculty from the Glaucoma Service, returned to Accra, the capital of Ghana, to continue their work with the genetics of glaucoma. Recently, in order to carry out their research more efficiently, Allingham organized a genetics research team at the University of Ghana, the first of its kind in West Africa.

"Under the direction of Dr. Stephen Akafo, families and individuals with open-angle glaucoma, the most common type found in West Africa, are being enrolled in ongoing genetic studies designed to identify the underlying cause of this form of glaucoma," says Allingham.

Albert Amoah, MD, the provost of the University of Ghana Health System, heads a laboratory that is in charge of extracting DNA from participants' blood samples. DNA, unlike blood samples, can be shipped unfrozen. (Shipping frozen blood samples is a very expensive process.) More than 400 glaucoma patients and controls without glaucoma have been enrolled to date. The researchers will compare the DNA samples of the glaucoma group to those without the disease, hoping to find a gene that is common to those with glaucoma.

During the one-week trip, Allingham and his colleagues examined individuals who were participating in the study and met with research collaborators.

Allingham and his team hope the lack of outsiders in the population (Ghana is more than 98 percent African) will help them isolate the gene or genes that lead to glaucoma in that nation—and likely the same genes are responsible for glaucoma in African-Americans in the United States because many trace their ancestry back to Ghana and other regions in West Africa.

The research is being sustained by a three-year \$450,000 grant from the National Eye Institute. The researchers are preparing another grant to continue their research in Ghana.

The Duke research team traveling to Ghana was composed of the three glaucoma faculty, Cecilia Santiago-Turla, MD, project research coordinator, Taineisha Sledge, a UNC-CH medical student, and Allingham's daughter Erin Allingham, a former eye research assistant and now a scientific editor at the Duke Clinical Research Institute.

Annual Residents' and Fellows' Day



Chairman David Epstein, MD, poses with incoming chief resident Sherman Reeves, MD, MPH, outgoing chief resident John Denny, MD, and the program director Challa Pratap, MD.

Following an Eye Center tradition, faculty, residents, and fellows celebrated the culmination of a year of research with a two-day scientific symposium. In June, fellows, residents, and Duke medical students who were participating in a one-year research program presented their research to fellow learners and Eye Center faculty in the AERI auditorium. Key note speaker Paul R. Lichter, MD, F. Bruce Fralick Professor of Ophthalmology and Visual Sciences, chair of the Department of Ophthalmology and Visual Sciences and director of the W. K. Kellogg Eye Center at the University of Michigan presented "How Clinical Trials Inform Proactive Decisions in Glaucoma." The symposium was followed by a dinner, recognition of fellows and residents who had completed their respective programs, and a viewing of the annual video produced by residents.

Ophthalmic Medical Technician Graduates Honored



Ophthalmic Medical Technician Program graduates pose in front of AERI.

Following a graduation ceremony, the Duke Eye Center honored the seven new graduates of its Ophthalmic Medical Technician Program at a tea in the lobby of the Albert Eye Research Institute on June 24. Lea Anderlini, Sharlene Clark, Leila Davies, Reginald Mapson, Ellen Martell, Jennifer Riley and Karen Sternbergh received certificates. Having completed the one-year program, the graduates are now eligible to take the national Certified Ophthalmic Technician exam. Three of the recent graduates, Anderlini, Riley and Sternberg, have now begun their new careers at the Eye Center. Karen Summerville, BS, COMT, was the director of the program.

The program is being reorganized and will accept students for the class that starts July 2007.

Molly O'Neill and Edward Buckley Present at the Science of Disease Lecture

The Eye Center welcomed Molly O'Neill, vice president, Business Development, vice chancellor for Integrated Planning, and chief strategic planning officer at the Duke University Health System, July 14, to participate in the Science of Disease Lecture Series. She joined the Eye Center's



Edward Buckley, MD, Molly O'Neill, and David Epstein, MD

Edward Buckley, MD, professor of ophthalmology, chief of Pediatric Ophthalmology and Strabismus Service, chief of Neuro-ophthalmology Service, and associate dean for Undergraduate Medical Education, to present "Disruptive Innovation: Predicting the Future in Medicine." More than 100 faculty and staff attended the presentation in the AERI auditorium.



Herndon Honors Robert Dawson in Take a Seat Campaign

Leon Herndon, MD, associate professor of ophthalmology in the Glaucoma Service and medical director of the Duke Eye Center, recently honored his long-time mentor and friend, former Duke Eye Center faculty Robert Dawson, MD. As part of the Eye Center's Alumni "Take a Seat" fundraising campaign to name the seats in the auditorium of the Albert Eye Research Institute, Herndon named a chair in Dawson's honor.

On August 4, 2005, Dawson, accompanied by his wife Julie, daughter Melanie Dawson Jackson, and a granddaughter, came to the new state-of-the-art auditorium to view the Duke-blue chair that bears his name on a plaque. Dawson's named chair is located next to chairs that have been named for his former colleagues, Robert Machemer, MD, and Edward Isbey, Jr., MD.

Herndon expressed his appreciation and gratitude for Dawson's many years of service to the community. "Dr. Dawson was the first African-American ophthalmologist in this region and, as such, has always been an inspiration to me," says Herndon. "I heard Dr. Dawson's name all the time growing up, and I first met him 10-12 years ago during my residency at UNC. When he retired, he wrote a letter to his patients—referring them to me. Over the years, he has given me advice and guidance. He is a scholar and a gentleman, and my wife and I are happy to honor him in this fashion."

The "Take a Seat" campaign (a \$2,500 donation to name a chair) gives Duke Eye Center Alumni and others the opportunity to honor an alumnus or pay tribute to a mentor, leaving a legacy for this institution for years to come. As Herndon found, it serves as a reminder to the future ophthalmologists of the power of giving. For additional information about this campaign or ways in which you can contribute to the Duke Eye Center, please contact Becky Auman at the Eye Center Development Office at (919) 684-3182.

Duke University Eye Center Locations

Duke University Eye Center

Duke University Medical Center
Erwin Road
Durham, NC 27710
(919) 681-3937
1-888-355-0204

Duke Center for Vision Correction

Duke Center for Living Campus
1300 Morreene Road
Durham, NC 27710
1-888-429-0555

Duke Eye Center of North Durham

3116 N. Duke Street
Durham, NC 27704
(919) 681-3937
1-888-355-0204

Duke Eye Center of Southpoint

6301 Herndon Road
Durham, NC 27713
(919) 681-3937
1-888-355-0204

Duke Eye Center of Cary

2000 Regency Parkway
Suite 100
Cary, NC 27511
1-866-403-0900

Duke Eye Center of Winston-Salem

2025 Frontis Plaza Boulevard Greystone
Professional Center
Suite 100
Winston-Salem, NC 27103
1-888-642-0554

www.dukeeye.org



Dale Stasiewicz, a Duke Eye Center Volunteer, Likes to Take Care of all the Little Details that Help Work Flow More Smoothly

"I don't mind taking care of all those behind-the-scenes tasks," she says.

Whether it's lending a critical eye to proof copy for *VISION*, stuffing brochures or just making a few photocopies, "I know there are always time-consuming jobs that need to be done, and I enjoy helping in any way I can."

Each Wednesday, she works in the Marketing Department at the Duke Eye Center. She began volunteering in 2004, working with Mary Ward, former director of the Age-related Macular Degeneration Center. It was an article in *VISION* asking for volunteers that inspired her to come forward.

"And it just seemed like a natural fit. Both my parents have had eye problems. My mother even had eye surgery here," Stasiewicz says. "I had thought about taking on some sort of volunteer work for a long time, and when I saw the article in *VISION*, it just seemed the right place and time."

Dale grew up in Tennessee and graduated with a history degree from Furman University. Soon she decided to join the legal profession and completed course work to become a paralegal. She has worked in that field now for 28 years doing title searches—a career that uses her "attention to detail" skills. For the last 15 years, she has worked part-time for Maxwell, Freeman & Bowman, a Durham law firm.



Dale Stasiewicz

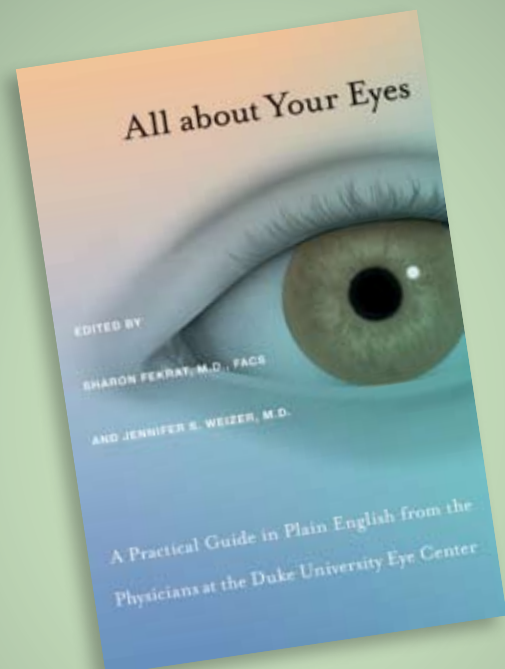
She and husband Stan have two sons. Greg is a senior at N.C. State University while David is a freshman at the University of North Carolina at Chapel Hill. In her free time, Stasiewicz enjoys cross stitch, all kinds of puzzles, and the opportunity to delve into a murder mystery.

She looks forward to the time she spends weekly with members of the Marketing Department. They look forward to seeing her, too, and not just because she's always surprising them with a batch of her homemade cookies.

"Dale is absolutely the best and so dependable," says Alice Lockhart, marketing manager. "I don't know what we'd do without her. It doesn't matter what we ask her to do, she's always happy to help. She does it well, and she does it quickly."

Dale also enjoys the people in the Marketing Department as much as she enjoys the behind-the-scenes tasks. "They're a great group of people to work with. It's a real pleasure to go in there each week. When I leave there, I always feel like I've made a contribution."

For information about volunteer opportunities at the Duke Eye Center, contact Renee Wallace at Renee.Wallace@Duke.edu or (919) 684-6593.



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Founders Day



Founders Day: Ivan Suner, MD, Prithvi Mruthyunjaya, MD, Nikolai Skiba, PhD, Terri Young, MD, Paulo Ferreira, PhD, Vadim Arshavsky, PhD, Xinrong Lu, PhD, David Epstein, MD, and Frank Moya, MD.

Haskin Participates in National Arts Programs

Betty Haskin, BS, MA, arts coordinator for the Duke Eye Center and staff member of Health Arts Network at Duke, co-authored a white paper, "Arts in Healthcare Program and Practitioners: Sampling the Spectrum in the U.S. and Canada," a collaboration of the Creative Center Colloquium that has met in New York City annually for the last two years. The paper examines in depth 10 unique programs that share the common belief that the arts can enrich and support healing and the healthcare experience. Duke Eye Center's arts program, along with its parent, Health Arts Network at Duke, established in 1978, is presented as one of the oldest and largest programs in the world. The Colloquium and the white paper received support from Bristol-Myers Squibb.



Additionally, Haskin participated on a panel for the first Art Beyond Sight Symposium, a collaboration of Art Education for the Blind and the Metropolitan Museum of Art, in New York during Art Beyond Sight Awareness Month (October 2005).



Eye Center Rankings Rise in *Ophthalmology Times*
 The Duke Eye Center continues to rise in the *Ophthalmology Times*' annual Best Program survey. The Eye Center moved up in all four categories:

- **Best Overall – ranked 6th** - up from 8th
- **Best Clinical – ranked 5th** - up from 6th
- **Best Research – ranked 5th** - tied, up from 8th
- **Best Residency Program – ranked 7th** - up from 8th

The rankings are determined from a poll of 174 chairmen and residency directors of ophthalmology departments in the U.S.



Learners Updates

Claxton Baer, MD, vitreoretinal fellow, received a 2005 Ronald G. Michels Fellowship Foundation Award. The award recognizes an outstanding first- or second-year vitreoretinal fellow.



Chris Haggerty, MD, oculoplastics fellow, along with Julie Woodward, MD, is conducting a clinical trial for the use of a topical gel to enhance the growth of eyelashes. This is the first randomized, double blinded, control study using prostaglandins for the express purpose of inducing hair growth.



Gelareh Homayounfar, a Duke sophomore and recipient of a prestigious Bouncer Foundation Fellowship for 2005, worked in the laboratory of Dennis Rickman, PhD, this summer. As part of an eight-week mentored research fellowship, she studied novel techniques for the isolation and characterization of adult retinal stem cells.

Krishna Sanka, fourth-year Duke medical student, received an outstanding poster award at the Duke School of Medicine Alpha Omega Alpha Research Symposium for the same research he conducted at the Eye Center and presented at ARVO. Sanka spent his third year of medical school at the Eye Center performing research under the mentorship of David Epstein, MD, and P. Vasantha Rao, MD. His work was supported by a Research to Prevent Blindness Medical Student Eye Research Fellowship.

Joshua Stein, MD, MS, glaucoma fellow, received a 2005 Investigators Award from Prevent Blindness America. He won an award for "Variation in the Rates of Utilization of Services for Patients with Glaucoma."



Jim and Heather Gills Receive the Sower Award



David Epstein, MD, presents a replica of the University Sower to James P. Gills, Jr., MD, and Heather Gills for establishing the James Pitzer Gills, III, MD, and Joy Gills School of Medicine Professorship Endowment Fund for Ophthalmology and the James P. Gills, Jr., MD, Research Fund at the Duke University Eye Center.

The Founders' Society honors individuals who establish named, permanent, fully funded endowments thus providing for the future of Duke University. By reason of their generosity, these founders are ensuring that future generations will reap the harvest of their labor.

Eye Center's Annual Durham Bulls Night



Brett Moran, associate administrative director at the Eye Center, with his family at the Eye Center's annual Durham Bulls night.

Get the latest information!



www.dukeeye.org



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