The year was 1996, and the Kurlands wanted to give something back to Columbia Ophthalmology. After all, it was here, under the care of the late Algernon B. Reese, M.D., where R. Duff Kurland had undergone surgery and treatment as an infant for bilateral retinal blastoma, emerging with vision in one eye. To demonstrate his profound appreciation, he and his wife Carol Nusinow Kurland decided to give the Department a multimillion-dollar gift, named for Mr. Kurland’s grandmother, Anne S. Cohen. But the gift had an unusual twist: It would arrive in payments for 10 years.

Stanley Chang, M.D., Department Chairman at the time, proposed an alternative: Instead of giving the Department a lump sum every year for a decade, why not create an endowment for a nationally recognized, clinician-scholar-researcher who could lead the Division of Pediatric Ophthalmology? The Kurlands liked the idea and thus, the Anne S. Cohen Professorship of Pediatric Ophthalmology was born. The Professorship will be renewable each decade for a century.

Breakthroughs in molecular and genetic science have played increasingly important roles in ophthalmologists’ understanding of eye disorders and diseases in the past two decades. This fall, Columbia Ophthalmology welcomed to its faculty Gülgün Tezel, M.D. and Andrei V. Tkatchenko, M.D., Ph.D., two scientists whose research has greatly contributed to this understanding.

Dr. Tezel, Professor of Ophthalmic Sciences (in Ophthalmology) and the Homer McK. Rees Scholar in Glaucoma Research, began her clinical career in 1989, after graduating from the Hacettepe University School of Medicine in her native Ankara, Turkey, where she also completed her ophthalmology residency. Determined to better understand and treat glaucoma, she left clinical practice in 1994, and has since dedicated herself to researching this neurodegenerative disease.

Glaucoma is a leading cause of blindness worldwide, but very little is known about the reasons for its occurrence, or about its potential cures. A rise in intraocular pressure is one known cause of the condition, and lowering this pressure is the standard treatment. Therapies for other risk factors, however, have not been found, and millions of patients currently suffer from this blinding disease. “Improved treatments are strongly needed to prevent progressive injury to specific nerve cells, and continuous loss of visual function,” Dr. Tezel says.

To better understand the disease-causing molecular mechanisms and develop a cure for glaucoma, Dr. Tezel’s laboratory studies cell culture and animal models of glaucoma, and also analyzes human donor eyes. Her research team induces glaucoma in experimental animals, then isolates specific nerve cells, namely retinal ganglion cells, and their neighboring supportive cells, namely glial cells, and analyzes them using an advanced technology called proteomics. “We isolate these specific cell types and analyze what happens in glaucoma at the molecular level,” she says. “Only when the molecules responsible for glaucoma are identified, can we develop treatments to inhibit those that are harmful or provide those...”
Dear Friends,

Every Viewpoint highlights a particular theme, and I am pleased in this issue to focus on pediatric ophthalmology, the unsung hero of our subspecialty. Pediatric ophthalmologists play a vital role in children’s lives, sometimes from the moment they are born. Their ability to correct or prevent ophthalmic problems affects children’s vision, not to mention their success in school, as well as their social lives, careers, and self-esteem.

Pediatric Ophthalmology is thriving at Columbia. For this, we owe much gratitude to R. Duff Kurland and his wife Carol Nusinow Kurland, who endowed the Anne S. Cohen Professorship of Pediatric Ophthalmology. This Professorship supports a leader who directs the Pediatric Ophthalmology Division while also caring for patients, conducting research, and teaching. As the most recent professor, Steven E. Brooks, M.D. has been vigorously revitalizing the Division by building its practices at the Harkness Eye Institute, the Robert Burch Family Foundation Eye Center, and now, the Stephen Ross Pediatric Eye Center.

The Ross Center, which is dedicated to children’s vision care, has been made possible by the generosity of Stephen Ross, a Trustee of New York–Presbyterian Hospital and a member of the Department of Ophthalmology’s Advisory Board. Located in the Morgan Stanley Children’s Hospital, it will provide a full spectrum of ophthalmic services for infants and young children, including those who are simultaneously undergoing treatment for complex illnesses.

Our Retinopathy of Prematurity (ROP) Screening Program is another vital pediatric resource. ROP, common among extremely premature or low-birthweight infants, is a frequent cause of childhood vision loss.

Unfortunately, its gradual onset makes timely diagnosis difficult and critical. Therefore, the program is taking important steps to ensure that all at-risk infants are monitored so they have every opportunity to receive treatment when they need it most.

It takes a special type of physician to become a pediatric ophthalmologist, and we are exceptionally fortunate to have Lauren Yeager, M.D., the Peter Jay Sharp Pediatric Ophthalmology Scholar, on our faculty. An expert in strabismus, Dr. Yeager works with Dr. Brooks in each of our pediatric settings, where she also practices cataract, anterior segment, lacrimal system, and eyelid surgery. In addition, she teaches residents and fellows in the departments of Ophthalmology and Pediatrics, and conducts clinical research.

Several highly accomplished physicians and researchers have recently joined the Department, including Jonathan Chang, M.D. and Royce Chen, M.D., both retina experts (and sons of retina experts!), and Guldyn Tezel, M.D. and Andrei V. Tkatchenko, M.D., Ph.D., whose respective studies of glaucoma and myopia are pointing toward potentially promising therapies.

In pediatrics, as in all areas of ophthalmology, the Department attracts the best and brightest clinicians and scientists. In these tough economic times, we rely more than ever on the generosity of donors like R. Duff and Carol Kurland and Stephen Ross, who enable us to support our outstanding faculty. At the end of the day, it is their philanthropy that helps us continue to flourish.

Sincerely,

G.A. (Jack) Gioffi, M.D.
Jean and Richard Deems Professor
Edward S. Harkness Professor
Chairman, Department of Ophthalmology

Two New Scientists Join the Faculty at Columbia Ophthalmology

that are needed.” The recent molecular outcomes of Dr. Tezel’s pioneering studies have indicated oxidative stress and inflammation as important components of neurodegeneration in glaucoma.

“We now test specific drugs and specific genetic modifications to inhibit the harmful effects of oxidative stress and inflammation in mouse models of glaucoma,” she says. Additionally, Dr. Tezel is working on developing a blood biomarker test that will identify patients’ risk for glaucoma in advance and allow for early diagnosis and treatment of this blinding disease.

While Dr. Tezel focuses on molecular approaches to understanding glaucoma, Dr. Tkatchenko studies the genes of monkeys and mice to learn about myopia, or near-sightedness. A 1988 graduate of the Russian National Research Medical University, and of the Engelhardt Institute of Molecular Biology at the Russian Academy of Sciences in 1992, Dr. Tkatchenko has long been interested in genetics. But it wasn’t until 2000, when he accepted a fellowship at Harvard Medical School to research the gene expression profile of myopia, that he began applying this interest toward ophthalmological science.

The study led to the identification of 119 genes linked to the development of myopia in monkeys. Dr. Tkatchenko later found that one of these genes, APLP2, is involved in the regulation of refractive eye development in mice, and that removing this gene from the mouse genome protects mice from myopia. In collaboration with the Consortium for Refractive Error and Myopia (CREAM), he also found that the APLP2 gene is linked to myopia in children. “This provides hope for a cure,” says the Assistant Professor of Ophthalmology and William Acquavella Scholar.

“If we can find a way to block the signaling from APLP2, we can actually block the development of myopia in children.”

Because few ophthalmic experiments can be conducted on humans, Dr. Tkatchenko’s research uses transgenic mice that have been genetically engineered to possess specific traits.

“For the targeted deletion of specific genes can only be done in mice,” he says. “You can also introduce new genes into the mouse genome, or you can replace specific versions of a gene.”

Since his arrival in August, his lab has been managing several projects, including the analysis of the remaining 119 genes foundin the monkey model for their association with myopia in humans. He continues to partner with CREAM, which has identified a number of candidate genes for myopia using human genetic linkage studies. He is currently using mouse models to investigate these candidate genes.

“We are several years away from being able to conduct these studies on humans,” he says. “My goal is to develop genetic screens that will identify people at risk for myopia, and to produce specific pharmacologic treatments that will successfully treat them.” With the research of Drs. Tkatchenko and Tezel, greater knowledge and potential treatments for myopia and glaucoma could be on the horizon.
Clinical Spotlight:
Stephen Ross Pediatric Eye Center Opens

In the year since Columbia Ophthalmology began revitalizing its Division of Pediatric Ophthalmology, there have been many exciting developments. Most prominent among them is the Stephen Ross Pediatric Eye Center. The funding for the center was provided in large part by the generous philanthropy of Stephen Ross, a Trustee of New York Presbyterian Hospital and member of the Department of Ophthalmology’s Advisory Board. Mr. Ross’s interest in creating a facility dedicated to the care and treatment of children with diseases affecting vision has culminated in the construction of the Ross Center, which recently opened.

Located on the fifth floor of the Morgan Stanley Children’s Hospital, the Center is a cornerstone of the Division’s efforts to establish itself as a regionally and nationally recognized resource for pediatric vision and ophthalmology services, says Dr. Brooks, the Anne S. Cohen Professor of Pediatric Ophthalmology, and Director of Pediatric Ophthalmology at Columbia University. The Ross Center will significantly expand the scope of pediatric ophthalmology services that can be provided at the ColumbiaDoctors waiting area with medical personnel. It will allow patients to access to the division’s services that can be provided at the Center, and allow for training programs at all levels. As the Center grows and develops, Dr. Brooks envisions it as a place for advanced pediatric ophthalmic testing, complete with the latest diagnostic equipment, such as optical coherence tomography (OCT), visual evoked potentials (VEP), and genetic analysis.

As Dr. Brooks states, “When people think of pediatric eye care in New York, we want the Stephen Ross Center to be the first place people think of, and also recognize that it is only through the generous philanthropic support of individuals like Mr. Ross that such opportunities exist.”

In MEMORIAM
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Louis Flanzer
Martin S. Kimmel
Seymour Milstein
Gloria Flanzer
Dorothy Eweson

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Columbia, as well as the unique opportunity to develop a robust research program in pediatric ophthalmology. “The Center will be a focal point for the development of cutting edge treatments and research discoveries,” Dr. Brooks remarks. The Center will also be at the core of the teaching mission for the division, and allow for training programs at all levels. As the Center grows and develops, Dr. Brooks envisions it as a place for advanced pediatric ophthalmic testing, complete with the latest diagnostic equipment, such as advanced retinal and optic nerve imaging, electroretinography (ERG), visual evoked potentials (VEP), and genetic analysis.

As Dr. Brooks states, “When people think of pediatric eye care in New York, we want the Stephen Ross Center to be the first place people think of, and also recognize that it is only through the generous philanthropic support of individuals like Mr. Ross that such opportunities exist.”

Addition to providing a dedicated space for pediatric eye care, this new Center is ideally positioned to treat children with more complex illnesses such as cancer, diabetes, sickle cell disease, or rheumatoid arthritis, who require the care of many pediatric specialists. Although eye disease is often an isolated problem, it may also occur in conjunction with systemic disorders and their treatment, for example with bone marrow transplantation and chemotherapy, Dr. Brooks says. The Ross Center’s proximity to the hospital’s many pediatric specialists helps to promote the integration of children’s ophthalmic care with other care they may be receiving. Although the Ross Center shares a waiting area with ColumbiaDoctors pediatric ENT, it has its own dedicated examination and treatment areas.

The establishment of the Ross Center is a critical step in developing the full potential of the services that can be provided at the Children’s Hospital, and together with the recently opened Robert Burch Family Eye Center located on New York’s upper west side, close to Lincoln Center, it allows patients much needed access to the division’s services and providers.

Being situated at Children’s Hospital has many advantages. In addition to providing a dedicated space for pediatric eye care, this new Center is ideally positioned to treat children with more complex illnesses such as cancer, diabetes, sickle cell disease, or rheumatoid arthritis, who require the care of many pediatric specialists. Although eye disease is often an isolated problem, it may also occur in conjunction with systemic disorders and their treatment, for example with bone marrow transplantation and chemotherapy, Dr.
Imagine a child who has strabismus, an abnormal alignment of the eyes that results in impaired vision and a pronounced squint. He endures humiliation when classmates tease him about his crooked gaze, resulting in embarrassment, isolation, and a lack of self-esteem. Now imagine the ability to help the child suffering from this impairment. The desire to help children with ophthalmic abnormalities, such as strabismus, inspired Lauren Yeager, M.D. to become a pediatric ophthalmologist. She wanted to watch her young patients grow and heal, to follow them throughout and after treatment, and to witness how by straightening their eyes, she could help improve not only their vision, but also the quality of their lives.

“There is nothing better than being able to help children see,” affirms Dr. Yeager, the Peter Jay Sharp Pediatric Ophthalmology Scholar. “When you straighten their eyes, you increase their chances of doing better in school, getting a job, and having stronger relationships as they mature,” she attests.

Dr. Yeager graduated Phi Beta Kappa in 2003 from the University of Michigan, where she earned a Bachelor’s Degree with High Distinction in Biopsychology and Cognitive Science. She received her medical degree from the Boston University School of Medicine in 2007. After completing an internship in internal medicine at Mount Sinai Hospital in New York City, she performed her residency in ophthalmology at the State University of New York–Downstate Medical Center. A one-year fellowship in pediatric ophthalmology and strabismus followed at the Children’s National Medical Center in Washington, D.C. As soon as her fellowship ended, her appointment with the Harkness Eye Institute at Columbia commenced in December 2012.

Dr. Yeager is the beneficiary of the Peter Jay Sharp Pediatric Ophthalmology Fund, which the Peter Jay Sharp Foundation established in 2010. The Fund supports the recruitment and career development of a pediatric ophthalmologist over a five-year period. Thus, it covers the salary and research efforts of Dr. Yeager, whose duties include providing patient care, teaching residents and fellows in the departments of Ophthalmology and Pediatrics, and conducting research.

In addition to treating strabismus, Dr. Yeager practices all aspects of pediatric ophthalmology, including cataracts, anterior segment disorders, lacrimal system disorders, and eyelid surgery. She works alongside Steven E. Brooks, M.D., who directs the Division of Pediatric Ophthalmology, which encompasses the pediatric services at the Harkness Eye Institute, the Robert Burch Family Eye Center, and the Stephen Ross Pediatric Eye Center (see pg. 3). Helping Dr. Brooks build the pediatric practices at these locations, and collaborating with him at the Ross Center to care for children with multiple medical needs, are among the challenges that drew Dr. Yeager to Columbia Ophthalmology.

“Columbia is a world-renowned institution and the opportunities are limitless,” she explains. “There is groundbreaking research taking place, excellent clinical care, the most advanced technology, and the chance to teach in a setting with doctors who are passionate about what they do.”

Dr. Yeager is also dedicated to teaching. She takes delight in introducing first-year medical students to ophthalmology and pediatric ophthalmology as they rotate through the many departments at Columbia University Medical Center. She also enjoys directing the week-long clerkship for third-year medical students and designing its curriculum, as well as organizing the lecture series and instructing students as they shadow her in the clinic and operating room. Additionally, she is passionate about training and mentoring ophthalmology residents, who learn how to examine children and perform eye exams and surgical procedures with her guidance. “We were all students at some point,” she remarks. “I would not be the doctor that I am today if not for the doctors who took the time to teach me and guide me.”

In her teaching as in her patient care, Dr. Yeager finds great fulfillment in helping people feel better about themselves. She recalls one patient, a 60-year-old woman who had lived with strabismus her entire life, believing it was an irreparable condition. Dr. Yeager corrected the woman’s condition, restoring her appearance and her self-esteem. “To be able to straighten anyone’s eyes is extremely rewarding,” she remarks.
Columbia Steps Up ROP Screening Program

When it comes to diagnosing and treating retinopathy of prematurity (ROP), timing is everything. ROP, a condition that is common among prematurely born or low-birth weight infants, is one of the most common causes of childhood vision loss. It occurs when abnormal blood vessels grow throughout the retina – the light-sensitive layer of tissue, which lines the inner surface of the eye – causing it to detach from the back of the eye, damaging or impairing sight.

Catching the disease too late can mean a life of visual impairment, even blindness, for a newborn or young child. To ensure that no infant misses the narrow window of opportunity for detecting and treating the condition, Columbia Ophthalmology’s ROP screening program has, for the first time, hired a full-time coordinator to closely track every at-risk infant, from birth until the infant no longer shows symptoms. Additionally, the program has begun using a RetCam 3, a powerful camera that provides for immediate and highly detailed images of a premature baby’s retina, which aids in the detection of the condition. The RetCam 3 increases pediatric ophthalmologists’ ability to provide timely treatment because it enables them to email images to colleagues for consultation in situations in which diagnoses or treatments are unclear. According to Jason Horowitz, M.D., Associate Professor of Ophthalmology and Director of the ROP screening program, “Treatment decisions are very critical in these infants.”

While not all premature infants develop ROP, the National Eye Institute estimates that of the approximate 28,000 infants born annually who weigh 2¾ pounds or less, 14,000–16,000 acquire some level of the disease. Of these infants, only 1,100–1,500 develop the condition severely enough to require treatment. Most infants with ROP have a mild form of the disorder, which eventually resolves over time. It is the most severe cases that, when left untreated, may cause prolonged or permanent damage to an infant’s vision, sometimes resulting in total blindness.

Yet, ROP’s gradual development makes it difficult to diagnose, explains Dr. Horowitz, because an incompletely vascularized retina – or one in which blood vessels grow abnormally within the retina of a prematurely born infant – is a sign of immaturity, but not necessarily an indication of disease. “Just having continued on page 7...
Faculty Spotlight: Returning to Columbia

Jonathan Chang, M.D. and Royce Chen, M.D.

Jonathan Chang, M.D. shares familial fascinations with the retina. And that is just part of what Columbia Ophthalmology’s newest faculty members have in common: Both briefly worked in areas far afield from medicine; both identified ophthalmology as the career that would allow them to make the greatest contribution to people’s lives; and both have joined the Department because it is unrivaled in clinical care, research, teaching, and mentorship.

Dr. Chen’s career plan had always included medicine. But after graduating from Yale with a bachelor’s degree in music, he began working in classical music production. It was a short-lived job. “I felt I could make a greater impact on people’s lives through medicine than music,” explains the classically trained pianist and violinist, now Assistant Professor of Ophthalmology at Columbia University Medical Center and Attending Ophthalmologist at NewYork-Presbyterian Hospital. The son of an ophthalmologist and retina expert who is chairman of the ophthalmology department at the University of Mississippi, Dr. Chen attended Tufts University School of Medicine with the specialty in mind. “My research year at Tufts solidified my interest in ophthalmology and in retina.”

Dr. Chang also grew up with an ophthalmologist father: the renowned retina expert Stanley Chang, M.D., former Department Chairman and the K.K. Tse and Ku Teh Ying Professor of Ophthalmology. Yet, after earning his bachelor’s in biology (with a minor in music) from the Massachusetts Institute of Technology, he entered the field of advertising, where he worked as a media buyer. It wasn’t for him. “I realized that as an ophthalmologist, I could do something more meaningful. I could really influence the quality of people’s lives,” he recalls. He earned his medical degree at Columbia, and served as a vitreoretinal surgical fellow, and then as chief resident and co-director of ocular trauma at the Bascom Palmer Eye Institute in Miami.

Assistant Professor of Ophthalmology and NewYork-Presbyterian Hospital Attending Ophthalmologist says. Dr. Chen agrees: “Being in the Department with Stanley Chang, hearing how he gives advice, and just having him as a role model is an incredible opportunity.”

Also incredible, the ophthalmologists declare, is the retina. “The retinal exam is the most beautiful exam in all of medicine,” Dr. Chen comments. “There’s nothing as striking.” Among the many characteristics that intrigue him is the way the retina reflects systemic diseases, including diabetes, lupus, sarcoidosis, hypertension, and some infectious diseases. “The diagnoses you can make are fascinating.” Moreover, he is awed by what he calls “the elegance” of retinal surgery. “You’re in such a limited space, like an amphitheater within the eye, and you’re peeling back membranes only microns thick and hopefully making a major impact on a patient’s life.”

Dr. Chang appreciates the subspecialty’s complexity, especially the challenges of repairing retinal detachments, performing macular hole surgery, treating diabetic retinopathy and high myopia, and assisting Jason Horowitz, M.D. in the Retinopathy of Prematurity Screening Program.

Each clinician has received numerous honors and awards, and is pleased to be working with the other. “This is the best retina department in New York City and one of the best in the country, and there’s a lot of room for me to learn,” Dr. Chen says. Dr. Chang adds, “There’s a great balance between world-class research and mentorship in the Division. It’s a great way to start a career.”

Kurland Gift Sponsors Resurgence of Pediatric Ophthalmology Division

“…Continued from page 1”

“The Cohen Professorship supports a faculty member who can perform research, teach, provide excellent clinical care, and also direct Pediatric Ophthalmology,” Dr. Chang says. “It has made a huge impact on the Division.”

The Kurland’s philanthropy has drawn talented physicians to Pediatric Ophthalmology, which is particularly important since the field is not as remunerative as some other subspecialties, according to Dr. Chang, the K.K. Tse and Ku Teh Ying Professor of Ophthalmology. The time it can take to examine a child, coupled with low insurance reimbursement rates, make pediatric ophthalmology financially unrewarding, he says. In fact, many pediatric ophthalmologic fellowships go unfilled because the subspecialty is not attractive to young doctors, he notes. “Pediatric ophthalmologists are not particularly well-compensated for their work, even though it is very important work.”

The professorship has also brought important leaders to the Pediatric Division, namely, its three directors, beginning with John T. Flynn, M.D., who is currently a special lecturer in the Department of Ophthalmology. When he headed the Division, Dr. Flynn was known for attracting bright young physicians to the discipline, and for his enthusiasm in working with residents. Dr. Chang says, “He piqued people’s interest in retinopathy of prematurity (ROP) and in neuroscience;” he recalls of the ROP expert. “Several of our residents became pediatric ophthalmologists because of him.”

Indeed, Dr. Flynn attracted Michael Chiang, M.D. to ROP, and ultimately recruited him to be the next Anne S. Cohen Professor. (Dr. Chiang left the post in 2010 to accept a position at Oregon Health & Science University in Portland.) “Dr. Flynn helped Mike Chiang secure an R01 grant to study ROP and develop the ROP screening program (see pg. 5) here at Columbia,” Dr. Chang adds. After Dr. Chiang’s departure, the Division lacked a director until last year, when Steven E. Brooks,
Microscope Opens New Window on Eye Disease

A microscope with a built-in digital camera that captures moving images of cells is the latest technological advancement at Columbia Ophthalmology, thanks to generous support from Research to Prevent Blindness (RPB). By taking time-lapsed pictures of cells as they grow and divide, this new microscope will deepen researchers’ understanding of the development of eye diseases and their potential therapies. “There’s so much more we can learn through live cell imaging than by looking at static pictures,” says Xin Zhang, Ph.D., the Jules & Doris Stein RPB Associate Professor of Ophthalmic Sciences in Ophthalmology, Pathology & Cell Biology.

Traditionally, studying cells under a microscope has required scientists to first destroy them, and then slice them into sections. This process allows for a close-up view of the structure of cells, but not for observing them as they move and change in their environment. “You can see cells in detail, but you lose the context and their movement,” Dr. Zhang says. “With the new microscope, scientists can see cells in real life. That’s what biology is about: life and movement.”

The new, inverted microscope features an incubator that sustains cells in a culture and balances oxygen, carbon dioxide, temperature, and humidity. Beneath this incubator there is a special camera that photograph cells every few minutes. “We can observe cells moving in real time and see how they grab onto surfaces and propel themselves forward,” Dr. Zhang comments.

Janet R. Sparrow, Ph.D., the Anthony Donn Professor of Ophthalmic Science, says the Department’s acquisition of the microscope is ideally timed. “Our other microscopes are at least ten years old, and digital cameras that interface with microscopes have been improved over that time period.”

Being able to witness ophthalmic cells in motion may shed light on their role in the eye’s growth, and in the development of eye disease. “When eyes start to form, all kinds of movements are necessary to give them shape and organization,” Dr. Zhang explains. “You can glean a lot of information by looking at a fixed section, but we can learn a great deal more by seeing how cells talk to each other, how they settle down, and how they change identity.”

Moreover, researchers’ ability to monitor live ophthalmic cells may advance their efforts to develop treatments for eye disease. For example, the new microscope will make it possible to view stem cells as they transform into different cell types. “You can use the microscope to see how stem cells give rise to the cells you want, either to treat retinal degeneration or to use for cornea transplantation,” Dr. Zhang notes.

The microscope also may provide new perspectives on retinopathy of prematurity (ROP), which occurs when abnormal blood vessels proliferate in the retina. Scientists will be able to study a live mouse eye and see how astrocytes—the cells responsible for vascularization of the retina—flourish. “This kind of movement is hard to examine in a fixed section,” Dr. Zhang says. “Now, we can see what happens when we change oxygen levels, or what we can do to prevent the formation of abnormal vessels.” Indeed, the microscope promises to enrich what scientists know about the eye, and treat or even prevent eye disease.
Envision A Legacy of Preserving Sight

The Department of Ophthalmology and the Edward S. Harkness Eye Institute are dedicated to providing the highest quality patient care and advancing innovative and groundbreaking research. The great strides we are making in these areas, as well as in our focus on training the next generation of ophthalmologists, will benefit patients now and in the future. You can leave a Legacy of Preserving Sight for generations to come by including the Department of Ophthalmology in your Will with a bequest. The bequest can be directed to any area of ophthalmology you wish to benefit—research, patient care, or education. Your estate will receive a tax benefit for the charitable bequest.

For more information about including the Department of Ophthalmology in your estate plans, please contact Jane E. Heffner, at 212-305-7827 or by email at jh2236@cumc.columbia.edu.