

# EMORY | eye

WHICH  
RESEARCH  
PROJECTS  
STAND AT THE  
TOP OF THE  
LIST, AND WHY?



WHAT IS THE

RESEARCH MATRIX?

## From the director | Success through teamwork



**Welcome to a new and exciting edition of *Emory Eye magazine*.** We hope that you enjoy the fresh new approach to vision research described here. In this issue, we attempt to simplify the complex process of improving the way we are able to help you see better—through research. Don't just think of test tubes and lab mice, but visualize a novel and fresh approach to conducting research at the Emory Eye Center.

We call it the Research Matrix: it's a focused, transparent, open, and ever-changing concept that is able to flex and mold to ever-changing knowledge and priorities. The engine of research is the funding that supports our program and its infrastructure. Our greatest resource is our knowledge. That knowledge originates not only from our scientific team, but also from our clinical faculty as well as our highly talented students, residents, fellows, post-docs, and other trainees. Bringing these forces together to translate knowledge into vision is the purpose of the Research Matrix.

As you read about the impressive work of our faculty and the contributions they have made to help your vision, I trust that you'll also be excited about the future work and potential of our program. It is a program to help you and others in this world *see as well as you can see*.

**Timothy W. Olsen**



Emory Eye Center's Advisory Council

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— EMORY EYE Magazine —

DIRECTOR: TIMOTHY W. OLSEN, MD  
 DIRECTOR OF DEVELOPMENT: KATE MYERS  
 EDITOR: JOY H. BELL  
 CONTRIBUTORS: JOY H. BELL, GINGER PYRON  
 DESIGN: LINDA DOBSON  
 PHOTOGRAPHY: DONNA PRICE (COVER & LEAD),  
 DAVID WOOLF  
 WEB SITE: [eyecenter.emory.edu](http://eyecenter.emory.edu)  
 E-MAIL: [eyecenter@emory.edu](mailto:eyecenter@emory.edu)

# What is the RESEARCH MATRIX?

**Focused, transparent, flexible, and cohesive:** characteristics of living eye tissue, the vitreous, that serve as a metaphor for the Emory Eye Center's research matrix.





FACULTY MEMBERS AT THE EMORY EYE CENTER HAVE BEEN ASKING THEMSELVES A CRITICAL QUESTION:

**In a world of competing priorities, how do we focus our research efforts?**

To find and maintain the right balance among research strengths, societal needs, and fiscal constraints, the team has devised a strategy to help advance their work of protecting, improving, and prolonging vision. They call it their “research matrix,” and they are using it to keep themselves focused—to **continually optimize their potential to help people see as well as they can see.**





Pathologist/oncologist Hans Grossniklaus works with Georgia Tech colleagues to study the use of microtechnology to treat choroidal melanoma and retinoblastoma, among other projects.

**MATRIX: A PLACE OR MEDIUM IN WHICH SOMETHING IS DEVELOPED**

**Questions directing the Emory Eye Center's research matrix**

1. Where is our greatest expertise?
2. Where is our current and future funding being directed?
3. And what eye-related illnesses create the greatest disease burden worldwide?

**Current top five research priorities in the Emory Eye Center**

1. Retinal degeneration and optic nerve disease
2. Global ophthalmology (GO-Emory)
3. Systemic disease and vision
4. Ocular oncology (eye cancer)
5. Refractive disease



Translational research in collaboration with Yerkes Primate Center and Georgia Tech focuses on novel surgical approaches for end-stage age-related macular degeneration.



Mabelle Pardue (seen here, forefront), whose research focus is diabetic retinopathy, has a dual appointment at the Emory Eye Center and the Atlanta VA Medical Center. She collaborates with a number of Emory ophthalmology colleagues.

With Iuvone and doctoral student Moe Aung, Pardue has studied use of dopamine to improve vision in animal models of diabetes. “This could lead to a new treatment,” she says. The results suggest that dopamine-restoring drugs—commonly used to treat Parkinson’s disease—may also be beneficial for diabetic retinopathy, a leading cause of blindness in adults. The results were published recently in *Journal of Neuroscience*.

**The research process in search of new or better tools for diagnosis and therapy is often, by nature, meandering and unpredictable.** An idea may originate in informal conversation, attract interest from other colleagues, and engender additional trails of inquiry, which in turn may yield more questions than answers. Some research findings, including extremely important ones, are simply serendipitous, providing answers to questions that weren’t even being asked by those involved.

Research takes time, creativity, patience, imagination, fortitude, confidence, determination and money. It also takes discipline to maintain a steady course as well as flexibility and open-mindedness to know when to change course in the face of new need or opportunity.

At their annual retreat this past fall, Emory Eye Center faculty assessed the direction of their research, with the goal of articulating formal guidelines that could help steer their research priorities for both the short and long term.

“We affirmed, first, that our research must center on translational initiatives, those that offer a direct benefit to patients,” says Timothy Olsen, director of the center. “Then we sought ways to determine the relative priority of current and future research efforts.”

The group wanted to make the most of our existing resources, says Olsen, so they asked three questions:

1. Where is our greatest expertise?
2. Where is our current and future funding being directed?
3. And what eye-related illnesses create the greatest disease burden worldwide?

The group then assessed research topics to see which rose to the top.

“A top-priority project, for example,” says Olsen, “would be one with strong departmental expertise and strong external funding that addressed a vision problem causing blindness both locally and throughout the world.” Examples include diabetic retinopathy, age-related macular degeneration, neuroretinal degeneration and cataracts.

A somewhat less common disease, however, could also qualify as a research priority. Olsen cites eye cancer as an example. The center has extraordinary expertise in this area, led by pathologist/oncologist Hans Grossniklaus, whose work is complemented by that of the ocular oncology team: retinal specialists Chris Bergstrom and Baker Hubbard and comprehensive



physician Jill Wells, who also has training in ocular pathology.

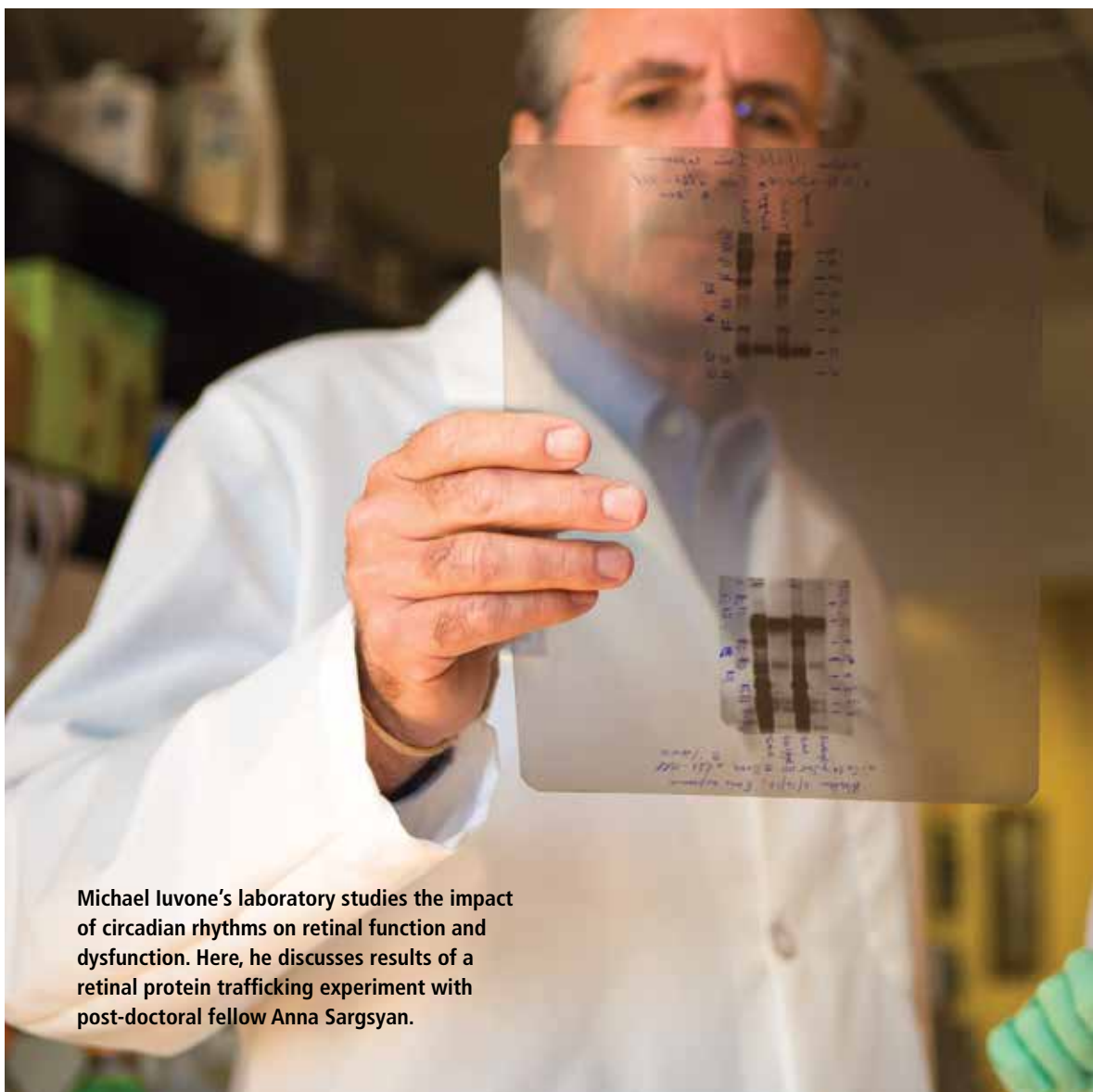
In addition, says Olsen, the center's team in orbital oncology (for cancer that occurs around the eye) includes oculoplastics specialist Ted Wojno, Brent Hayek and Joon Kim.

"All of this work," he says, "is supported by both internal and external funding. So even though eye cancer affects a much smaller segment of the overall population and has a lower disease burden in the world, it remains a priority for us because of our extraordinary expertise."

Another such example is trachoma, which is uncommon in the United States but highly problematic in developing countries. "Our global program, Global Ophthalmology at Emory [GO-Emory], with Danny Haddad, Colin Beckwith, Paul Courtright, and Susan Lewallen, extends our existing areas of expertise into high-impact international work."

Olsen says the research matrix helped the group list its current top five research priorities (see box, page 4). Retinal degeneration and optic nerve disease are logical as first priority, for example, because of growing societal need, with age-related macular degeneration currently the leading cause of vision loss in Americans 60 years and older.

Ultimately, the research matrix helps us be good stewards of our resources, whether funding or talent, and helps us keep focus on where we need to be.

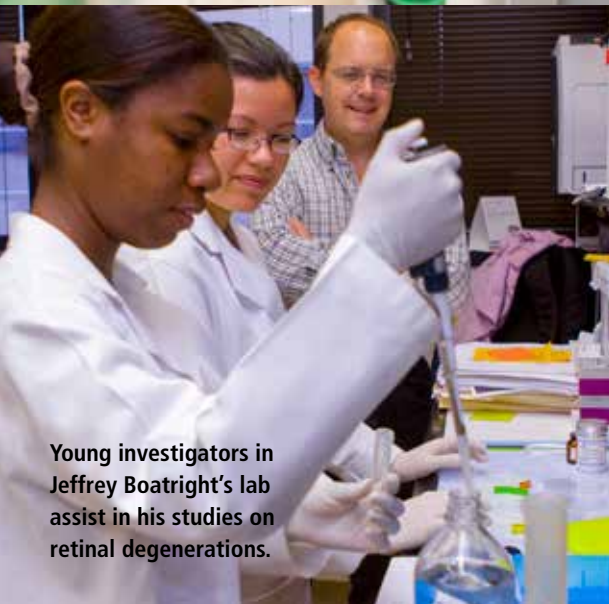


**Michael Iuvone's laboratory studies the impact of circadian rhythms on retinal function and dysfunction. Here, he discusses results of a retinal protein trafficking experiment with post-doctoral fellow Anna Sargsyan.**



**Nancy Newman instructs on the neurological aspects of vision.**





Young investigators in Jeffrey Boatright's lab assist in his studies on retinal degenerations.

# MATRIX FUNDAMENTALS

## Traits that capture key objectives of Emory Eye Center's research matrix

### FOCUSED

The Emory Eye Center research matrix is designed to focus the center's research. Faculty pursue research explicitly to benefit patients. Everything they do—research, clinical care, teaching, collaboration, publications, conferences, outreach—should contribute to the work of helping people see.

### TRANSPARENT

The center's research matrix makes its priorities transparent for all to see.

Andy Garrard, center administrator, says, "Patients, providers, funding agencies, and donors are looking at health care to see if we're using our resources wisely. The federal government demands that we demonstrate value—that we prove we're doing the right things for the right patients at the right time. Our strategy is to be transparent, translational, global, and flexible, generating high-quality care with efficient use of resources. The research matrix helps us demonstrate our accountability for all to see."

### FLEXIBLE

By bringing faculty back continually to a consistent set of questions, the research matrix underscores the need for flexibility. Danny Haddad, director of the Global Ophthalmology at Emory (see page 12), says "Every time you develop a plan like this, it focuses you in a certain direction. But movement in that direction invariably creates new changes. It's a process of continual adaptation."

### COLLABORATIVE

Faculty would be unable to do the greatest good for the greatest number of people without working together to share expertise and resources. According to Beau Bruce, medical director of clinical trials, the Emory Eye Center's setting offers uncommon opportunities: "We're tucked right into a major research university campus and academic medical center. I can walk down the hall and talk with our biomedical researchers. I can walk across the street to the hospital ER. And I can interact with colleagues in public health, anthropology, law, or economics to create something that goes far beyond what an eye center alone would be capable of."

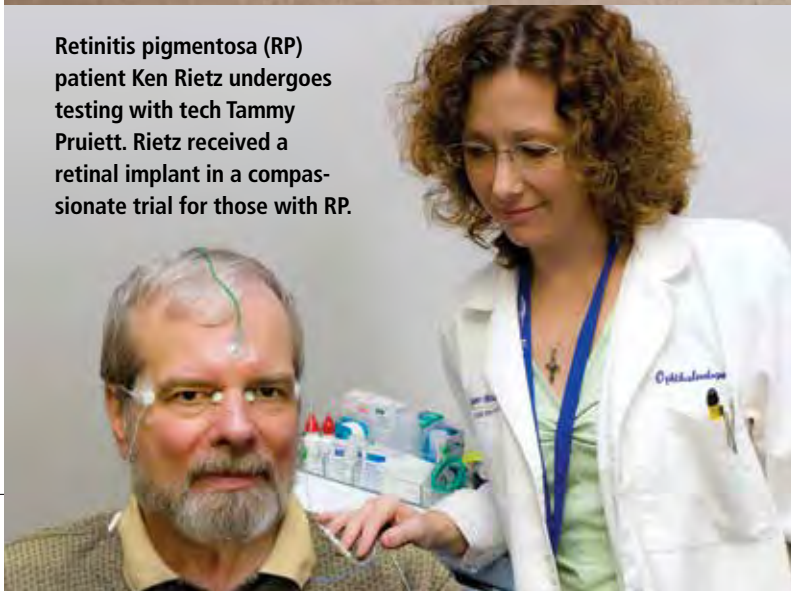


**Neuro-ophthalmologist Beau Bruce and Emory medical student Phillip Garza use a portable camera to evaluate a research subject at Emory Hospital.**



**Ocular oncologist Hans Grossniklaus with cancer patient Marvin Croft, who had a successful outcome with an innovative treatment of interferon injections and eye drops.**

I see the research matrix concept as a way of helping us focus our department's entire research portfolio toward a common vision. It's an opportunity to consider our strengths, within a larger context of what is a priority outside of Emory. To me it's an extraordinarily interesting concept—a bold way of dealing with our conflicting pressures in terms of research, and with the need to synergize our strengths so we can go a lot farther with our limited time and money. —Beau Bruce, MD



**Retinitis pigmentosa (RP) patient Ken Rietz undergoes testing with tech Tammy Pruiett. Rietz received a retinal implant in a compassionate trial for those with RP.**







Researcher  
Eldon Geisert  
at the confocal  
microscope.

## THANKS TO THOSE WHO MAKE EMORY EYE CENTER RESEARCH POSSIBLE:

**PRIVATE GIFTS**- which have always been vital to the progress of healthcare- are more critical than ever to maintaining excellence and supporting singular accomplishments in research at Emory Eye Center. Such funds help break new ground in educating future ophthalmology care givers, in eye research that pushes the boundaries of knowledge, and in enabling tools and resources for providing cutting-edge care to our patients. Endowed gifts help sustain Emory Eye Center's prominence as one of the nation's leading academic eye institutes. To learn more about endowed giving, please contact Kate Myers, director of development for the Emory Eye Center at 404-778-4121 or [kate.myers@emory.edu](mailto:kate.myers@emory.edu).

### **PATIENTS**

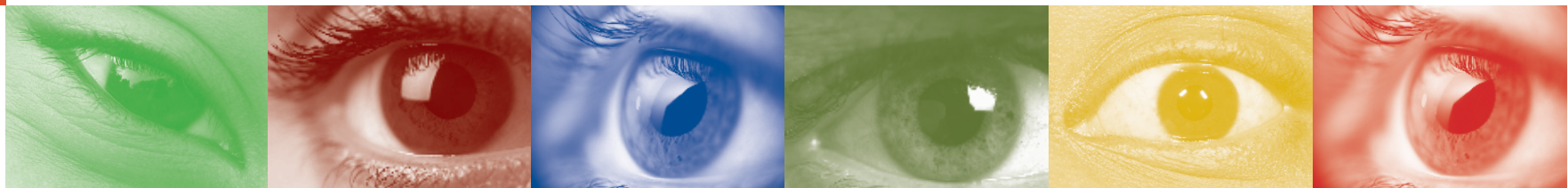
Every time Emory Eye Center doctors and medical trainees meet with patients, hear about their symptoms, and watch the progress of their condition, they gain knowledge that affects not only their research, but the future of ophthalmic medicine.

### **PARTICIPANTS IN CLINICAL TRIALS**

The volunteering spirit of patients who generously participate in clinical trials can help make good vision a possibility for many people who desperately need it.

### **REFERRAL SOURCES**

Thanks to those who have recommended the Emory Eye Center to a friend or relative with eye-related problems, encouraged someone to sign up for a clinical trial, mentioned an Emory doctor whose care helped them, or know someone who would like to support vision research.



## Electronic medical record just for ophthalmology

**When pediatric ophthalmologist Amy Hutchinson volunteered to represent ophthalmology faculty on a small task force almost two years ago, she and others were charged with identifying an ophthalmology-specific electronic medical record (EMR) for the Emory Eye Center.**

Because of the proliferation of EMR technology on the market and the unique needs of a large eye center like Emory's, the task required substantial time and effort.

The software had to interface seamlessly with Emory Healthcare's existing EMR platform, which required additional functionality to include drawings, photography, visual acuity testing, prescription information for glasses or contact lenses, and other ophthalmology-specific records. The system also needed to track

discrete data elements from each exam as well as diagnosis and treatment plans. These elements were needed to begin building a database for health care analytics, centered on providing quality care, feedback for self-assessment, and risk-stratified data to benchmark outcomes.

When Emory Healthcare initially entered the world of electronic medical records in 2005, Emory ophthalmology staff modified existing EMR digital records by scanning and uploading handwritten notes, images, and other hard-copy documents at the end of each day, a tactic that was impractical and unsustainable over the long term.

Hastening the need for implementation of an ophthalmology-specific EMR was a new federal mandate, passed in 2009, requiring that physicians attest to

"meaningful use" of EMRs by 2015 or face penalties. "We could not fulfill those requirements in ophthalmology using the hybrid system," Hutchinson says.

The team carefully evaluated ophthalmology products in the marketplace and eventually chose a product called Modernizing Medicine's EMA (electronic medical assistant) Ophthalmology. The system is fast, nimble and cloud-based,

and enables physicians to access records via multiple devices, from tablets to desktop computers. Patient information is exchanged between EMA and the Emory-based system through Emory's health information exchange (HIE), a system that serves to provide accurate data and a large capacity to mobilize electronic information in a secure and regulatory-compliant network. The system reduces need for paper and scanning,

enables automatic delivery of patient information and records, and reduces the possibility of lost charts.

The new system has important features, such as an "eye log" that graphs eye pressure and visual acuity data recorded in patient visits over time, thus eliminating the need for doctors to page back through each individual records to track specific data. The system is able to learn the preferences of each physician and adapt to them, automatically generate letters to referring physicians, include relevant patient education handouts, and assist with billing. The system also will help facilitate transition to a new coding system (ICD-10), whose use is currently set to become mandatory on October 1, 2015.

"This is a powerful system that will improve efficiency, communication and overall patient care," says Hutchinson.







Hans Grossniklaus in RPB research

## Recent funding news

**The Emory Eye Center has received the following funding in the past year:**

### From the Knights Templar

- \$20,000 to support the Georgia 2020 Trachoma Initiative to abolish avoidable blindness by the year 2020
- \$10,000 for a pediatric ophthalmology fellowship at Emory
- \$6,000 for the Learning Resources Center
- \$3,000 for a visiting professor in pediatric ophthalmology
- \$3,000 in support of the online publication Molecular Vision

### From Research to Prevent Blindness

- \$150,000 unrestricted grant to support departmental research

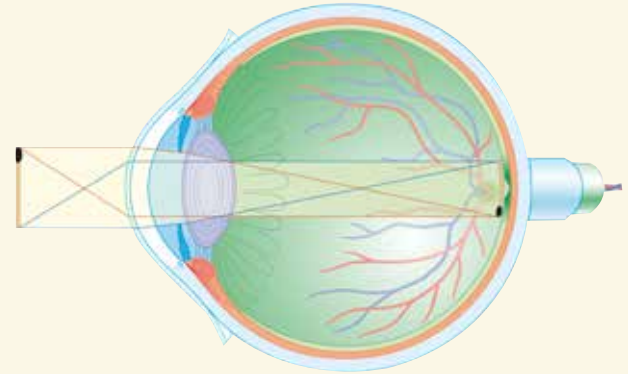
## Treatment for corneal bulging and weakness

Following a multi-center, phase 3 clinical trial, the Emory Eye Center is awaiting FDA approval for the Avedro KXL Accelerated Cross-linking treatment, a procedure to address corneal problems such as keratoconus (bulging or steepening of the cornea that can lead to scarring) and corneal ectasia (a similar condition that can occur after refractive surgery).

“Cross-linking” works to strengthen the cornea’s collagen fibers to help the cornea retain its normal shape. In the cross-linking procedure, riboflavin is dripped onto the cornea and then exposed to ultraviolet light. The light causes the riboflavin to fluoresce, a process leading to formation of bonds between collagen molecules. The KXL procedure can be performed in just minutes.

“Corneal collagen cross-linking gives us an opportunity to treat a condition that previously we could manage only with visual aids and hope that it would not progress to the point that the patient would need a corneal transplant,” says cornea specialist Brad Randleman. “Now we can prevent such disease progression for the vast majority of patients with keratoconus, if we can diagnose the disease and treat them early enough in their course.

“Cross-linking serves as the cornerstone for other future treatment options, and we are excited about the possibility to offer our patients this expanded spectrum of management options for keratoconus.”



KXL can alleviate some corneal issues previously difficult to treat, such as keratoconus.

### The cornea

The cornea is the clear or transparent cover to the front of the eye, directly over the iris and pupil. It allows light to enter the eye, and its curvature causes light to bend, providing the eye’s focusing or refractive power. With keratoconus or corneal ectasia, a typical patient has moderate to severe blurred vision from the irregular curves that develop in the cornea. Keratoconus and corneal ectasia together account for 15% of corneal transplants in the United States.

### Past treatments

In the past, managing keratoconus has included prescription of corrective lenses (glasses and/or rigid gas-permeable contact lenses). When the condition progresses, corneal scarring may occur and a corneal transplant may be necessary. About half of keratoconus patients have no past effects on their lifestyle other than wearing corrective lenses. The condition may even stabilize. For others, the condition is treated with a corneal transplant. In some cases, keratoconus recurs in the transplanted cornea.



## Global Ophthalmology Emory

**T**he idea for what is now called Global Ophthalmology at Emory (GO-Emory) originated in 2009 when Danny Haddad, then director of the International Trachoma Initiative (ITI), joined Emory Eye Center Director Timothy Olsen and faculty member Paul Courtright in a seminal conversation about building a global vision initiative at Emory.

The idea took hold, aided by some dedicated advocates and partners. Courtright and fellow faculty member Susan Lewallen helped provide framework and architecture for the program early on. Emory Global Health vice president Jeffrey Koplan and world-renowned epidemiologist William Foege provided guidance to help the program take shape. The group sought partnerships with Atlanta organizations such as ITI, The Carter Center, and the CDC and with

vision-focused groups such as the Lions Lighthouse and Center for the Visually Impaired.

Haddad joined the faculty as the program's full-time director in 2013 and continues the work of those who helped get it off the ground, working with local, national, and international organizations, including the International Coalition for Trachoma Control, Helen Keller International, the Kilimanjaro Centre for Community Ophthalmology and Sightsavers, to advance vision-related public health goals.

"Dr. Haddad brings a wealth of knowledge and global connections to Emory," says Olsen. "He is a well-respected international leader in trachoma and has created a remarkable track record in effective public health strategies to help eradicate this blinding disorder. We are very fortunate to have him as our first director of Global Ophthalmology at Emory."



## LOCAL EFFORTS

Haddad's vision for GO-Emory focuses considerable attention on local needs in Georgia. His goal is to eliminate avoidable blindness through GO-Emory's Vision 2020 Georgia project, which aligns with Vision 2020, the right-to-sight initiative of the World Health Organization (WHO) and the International Agency for the Prevention of Blindness, to eliminate avoidable blindness globally by 2020. Locally, GO-Emory will work in partnership with the Georgia Vision Collaborative.

WHO and some 20 international non-government organizations provide guidance and technical and resource

screened 177 children for vision problems and eye disease and found problems in 25% of the children. Lenhart and Russ saw 40 children in follow-up exams; 68% subsequently received glasses from the Georgia Lions Lighthouse.

In other work close to home, Haddad leads a course in Emory's Rollins School of Public Health to teach students about the burden of eye disease in this and other countries. The course, "Vision Health: A Global Perspective," now in its third year, continues to grow in enrollment. Representatives of Prevent Blindness Georgia and the Georgia Lions Lighthouse, among others, join Haddad, Courtright, Lewallen, and other ophthalmology faculty in contributing to the course.



As part of Global Ophthalmology at Emory, Emory clinicians work locally and globally, treating patients in south Georgia, Vietnam (above left) and Madagascar (above right) and teaching public health students at Emory (above center).

support to countries whose people are affected by trachoma and other preventable and/or treatable eye diseases. Through GO-Emory initiatives, Haddad's five-year plan is to bring the same kind of resources to Georgia, where considerable challenges exist to provide vision care to populations who desperately need it, yet are left out because of vast disparities in access. Many Georgians who have a potentially blinding disorder may be unaware of their condition. Glaucoma, for example, has no early symptoms. It is typically detected during a comprehensive eye exam. Haddad stresses that a plan to fill in the gaps for provision of eye care is absolutely necessary in Georgia for adults and children in at-risk populations.

One such population is migrant farmworkers in rural Georgia, near Bainbridge and Valdosta. Last summer, pediatric ophthalmologist Phoebe Lenhart and Emory medical student Rebecca Russ organized a two-week pediatric vision screening initiative, the Farmworker Vision Project, as part of a rural migrant farmworker's project organized each year by Emory schools of medicine and nursing. She and others

## EFFORTS ABROAD

Over the past year, GO-Emory physicians have traveled to various destinations around the globe to treat patients and provide training to clinicians there. More than 80% of blindness in developing countries is avoidable or curable.

**Madagascar**—A team of four Emory Eye Center physicians traveled to this country this year, for the second year in a row, with a dual mission of fact finding and helping train local ophthalmologists in clinics in Antsirabe and in Antananarivo (Tana), the capital. The team included oculoplastics surgeon Brent Hayek, glaucoma expert Annette Giangiacomo, and pediatric ophthalmologist Phoebe Lenhart. Hayek says conditions there are a challenge for those needing eye care: there are only 25 to 35 ophthalmologists in Madagascar to serve some 20 million people.

Hayek taught local ophthalmologists practical oculoplastic procedures by performing and supervising more than a dozen surgeries. Giangiacomo worked with local ophthalmologists to train them in current glaucoma



(left photo) A vision health course at Emory's Rollins School of Public Health gives students insight into the complexities of eye surgery and the burden of eye disease on populations around the world.

(right photo) Pediatric ophthalmologist Scott Lambert, who co-directed the International Congenital Cataract Symposium of 2014 with colleague Phoebe Lenhart, updates attendees about current methods and differing treatments for children with cataracts throughout the world. Childhood cataracts are a leading cause of preventable childhood blindness in many developing countries. Participants discussed ways of improving cataract management and visual outcomes in these children.

treatments, and Lenhart performed surgeries on children in the region.

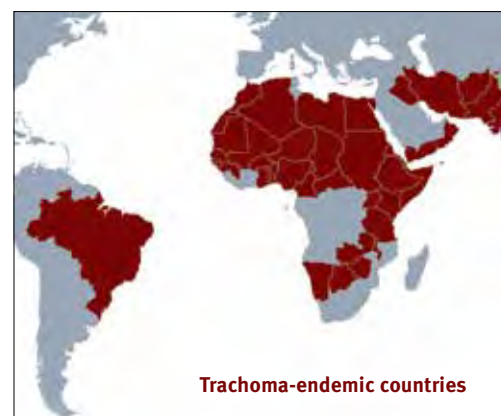
Hoping to make this a long-term initiative, GO-Emory made meaningful connections with governmental and academic organizations, including the Malagasy Ophthalmology Society, the Residency Eye Program in Tana and the non-communicable disease department of the Ministry of Health.

*Note: Funding for the trip to Madagascar was made possible by Emory Eye Center Advisory Board member Gordon Knight and by Marguerite Kimball, of Atlanta. Advisory Board member Charles Ginden also provided support for the project.*

**Ethiopia**—Third-year ophthalmology resident Christopher Skelton joined previous residency program director Paul Pruett in a medical rotation at the University of Addis Ababa in Ethiopia's capital city. Pruett and Skelton taught in the government hospital—not unlike Grady Memorial Hospital in Atlanta—

in hopes of forging a partnership with the department of ophthalmology. Teaching some 18 residents in the university's four-year program, they observed a scarcity of resources in the clinics. Privacy was not possible: often 10 patients were in one exam room, and teaching occurred in front of everyone—physicians, patients, family members, and others. All surgical instruments were sterilized and re-used, whereas in developed countries like the United States, such instruments are largely disposable. "These physicians have learned how to do a lot with very little," says Pruett.

**Vietnam**—Haddad recently traveled to this country, where historically women have had little access to health care. As a result, trachoma has been very prevalent, many children having contracted it from their mothers or vice versa. Today's outlook is far better than in the past. As Haddad says, "We're closing in on eliminating blinding trachoma in Vietnam."



Trachoma-endemic countries

**What is trachoma?** An infection of the eyelid that can sometimes lead to blindness, trachoma is caused by unsanitary conditions. Early stages are best addressed with use of antibiotics, good facial hygiene, and environmental improvements, such as availability of clean water. Later, blinding stages of the disease can be managed effectively with surgery.





## Neuro-ophthalmology across the globe: 50 fellows gather from around the world

It was a significant and meaningful year for Emory Eye Center neuro-ophthalmology faculty members. Nancy Newman, director of the neuro-ophthalmology section, was named as the 12th Hoyt Lecturer by the North American Neuro-Ophthalmology Society (NANOS) and the American Academy of Ophthalmology.

The lecture's namesake, William F. Hoyt, MD, world-renowned clinician, scholar, and educator in San Francisco, promoted the importance of educating the next generation of teachers of neuro-ophthalmology.

As Newman presented the named lecture in fall of 2013, she described the projects and key publications of her 50 former Emory neuro-ophthalmology fellows and reviewed advances in the field over the past 25 years, highlighting common and uncommon disorders affecting the afferent (receiving information from the outside) and efferent (receive information from other neurons) visual systems.

The fellows are now practicing across the globe, yet they remain a close-knit family of clinicians, scholars, researchers, and educators. Their camaraderie was evident at the NANOS meeting in Puerto Rico, where Emory neuro-ophthalmology faculty relished the opportunity to reminisce and share knowledge.

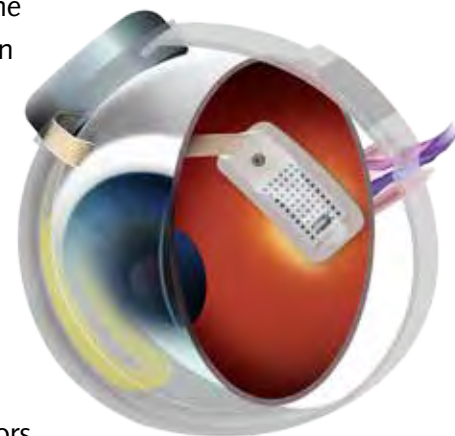
The LeoDelle Jolley Professor of Ophthalmology, Newman is also professor of neurology and instructor in neurological surgery at Emory School of Medicine. She joined Emory in 1989.

## Argus II Retinal Prosthesis System

The Emory Eye Center is recruiting patients in a study for the new retinal prosthesis system for those over 25 with severe retinitis pigmentosa and minimal or no light perception. The device provides electrical stimulation of the retina to induce visual perception in blind patients, by-passing damaged photoreceptors.

### HOW IT WORKS

A miniature video camera housed in a patient's glasses captures a scene. The video is sent to a small patient-worn, computerized video processing unit (VPU), where it is processed and transformed into instructions that are sent back to the glasses via a cable, then transmitted wirelessly to an antenna in an implant. The signals then pass to an electrode array which emits small pulses of electricity. These pulses bypass damaged photoreceptors and stimulate the retina's remaining cells, which then transmit the visual information along the optic nerve to the brain.



The portion of the Argus II device that surrounds the patient's eye includes an electronics case, an electrode array (inside the eye) and the antenna.

This process is intended to create the perception of patterns of light that patients can learn to interpret as visual patterns.

After acceptance for use of the prosthesis, patients will be studied for five years to collect information about the performance and safety of the system. Retina surgeon Jiong Yan is the study's principal investigator at Emory.



## Renovations complete in Emory Clinic Building B

Final clinical renovations for Building B on Clifton Road were completed in 2014, culminating a three-year project. All clinical spaces were redesigned and streamlined, providing fresh, new spaces for both patients and staff. In 2011, initial renovations included educational spaces on the tunnel level, followed by a third-floor renovation, the busiest of the Emory Eye Center clinics. The fourth-floor redo in 2014 included services in neuro-ophthalmology, glaucoma, oculoplastics, and visual field testing, as well as administrative offices.

## Five physicians named “Top Docs”

The *Atlanta Magazine* “Top Doctors” issue of July 2014, which listed 315 physicians in the metro area, ranked five Emory Eye Center physicians among the top doctors in Atlanta: Allen Beck (glaucoma), Valérie Biousse (neuro-ophthalmology), Nancy Newman (neurology and neuro-ophthalmology), Scott Lambert (pediatric ophthalmology), and Timothy Olsen (retina).



## U.S. News & World Report rankings

In 2014, the Emory Eye Center again ranked among the top ophthalmology centers in the country in *U.S. News & World Report's* guide to America's top medical institutions. The Emory Eye Center placed at #14, up two slots from the previous year.

The 2014-2015 edition of the “America's Best Hospitals” guide ranks the top hospitals in various medical specialties. The top hospitals ranked in ophthalmology were named as among the “best for challenging cases and procedures” by at least 5% of ophthalmology specialists who responded to *U.S. News'* surveys in 2012, 2013, and 2014.



## J-Wing: coming soon!

The faculty and staff of the Emory Eye Center on Clifton Road have been eagerly watching the progress of the proverbial “hole in the ground” for the past several months. Construction crews and impressive machinery have reached the bottom of what will be four levels of parking for a new hospital tower. Called the “J-Wing” of Emory University Hospital (EUH), the nine-story tower will house additional beds, allowing EUH's main building, just across the street, to repurpose some 80 older rooms. Adding 210 inpatient beds, the J-Wing will also house an ICU, general medical and surgical rooms; diagnostic and treatment spaces, and approximately 500 parking spaces. The tower is scheduled to open in 2017.







## An Emory Eye doctor near you

In 2015, many patients of the Emory Eye Center will be able to see an Emory ophthalmologist closer to their homes. Spaces in Emory Clinic B on Clifton Road have been renovated and streamlined, and the center has branched out more fully into the metro communities, providing a significant reach into the northern suburban areas. At present, the center offers the following locations in addition to the main campus:

- **JOHNS CREEK** Comprehensive eye care, evaluation of patients for surgery, and high-level diagnostics connect this location with the northern sector and Emory campus locations where patients may go for further treatment or surgery.
- **EMORY AESTHETICS CENTER AT PACES** Oculoplastic surgery and cosmetic treatments including Botox, facial fillers and peels, laser treatments, and Latisse are available in a Buckhead location, off Northside Drive.
- **EMORY AMBULATORY SURGERY CENTER AT DUNWOODY** Easy-in, easy-out ambulatory surgery center on N. Shallowford Road in Dunwoody provides cataract surgery and Descemet's stripping endothelial keratoplasty (DSEK) for cornea patients.
- **EMORY CLINIC PERIMETER MOVES TO THE EMORY SAINT JOSEPH'S AREA** Perimeter Clinic ophthalmology has relocated to the Emory Saint Joseph's Hospital campus, providing retina, cornea, comprehensive, and refractive surgery.
- **EMORY UNIVERSITY HOSPITAL MIDTOWN MEDICAL OFFICE TOWER** Beautifully remodeled location on the 18th floor, providing comprehensive, glaucoma, oculoplastics, pediatric, and neuro-ophthalmology services.
- **AND, IN OTHER AREAS** Emory retina specialists also see patients in offices in Athens, Gainesville, Griffin, LaGrange, and Lawrenceville.

Please visit the Emory Eye Center website for the latest information: [eyecenter.emory.edu/locations.html](http://eyecenter.emory.edu/locations.html)

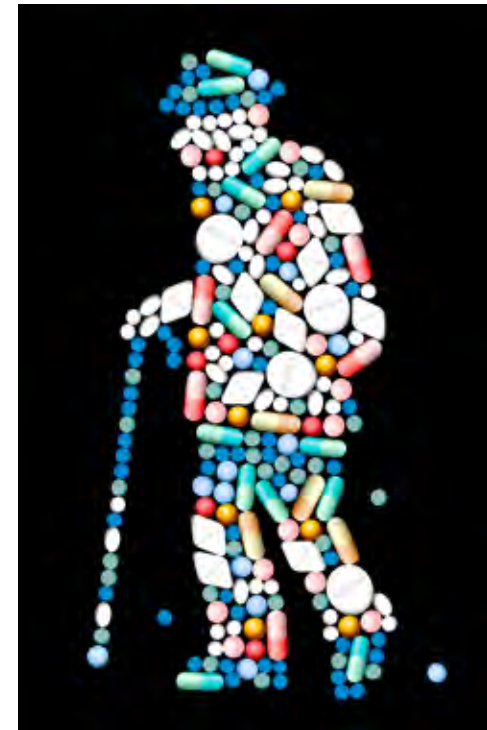
## Keep your eye on dopamine: Parkinson's drugs could provide new avenue to treat diabetes-related vision problems

**D**iabetic retinopathy affects more than a quarter of adults with diabetes and threatens the vision of more than 600,000 people in the United States. Doctors previously thought most of the impairment of vision in diabetic retinopathy came from damage to the blood vessels induced by high blood sugar, but also knew that dopamine, a vital neurotransmitter in the brain, was important in the retina.

"There was some evidence already that dopamine levels were reduced in diabetic retinopathy, but what's new is that we can restore dopamine levels and improve visual function in an animal model of diabetes," says ophthalmology researcher Mabelle Pardue.

Vision was assessed by putting mice on a platform and measuring whether they moved their heads in response to a rotating pattern of vertical lines projected on a cylinder around the mouse. The width and contrast of the lines can be modulated to test the mouse's vision.

"This is important because it shows that treatments targeting dopamine could be beneficial to patients with established diabetes," says fellow ophthalmology researcher Michael Iuvone.



## For intracranial hypertension, new findings with an old drug

**F**or patients with idiopathic intracranial hypertension (IIH), national study findings have shown that an inexpensive drug, acetazolamide, when combined with a weight loss plan, improves vision for patients who have mild visual loss.

The trial was funded by the National Eye Institute and was conducted at the Emory Eye Center and 27 other sites across the country. The study sought to assist with the management of IIH, also known as pseudomotor cerebri, which causes increased pressure around the brain.

IIH predominantly affects women of reproductive age who are overweight. It is estimated that some 100,000 Americans have it, with the number rising as the proportion of the population who is overweight grows. Symptoms include headaches and

visual problems, including blind spots, poor side (peripheral) vision, double vision, and temporary episodes of blindness. Some 5% to 10% of women with IIH experience disabling vision loss.

“The study provides the necessary evidence that acetazolamide, which neuro-ophthalmologists have used off-label for years, is indeed a beneficial part of our treatment plans for IIH,” says neuro-ophthalmologist Bruce Bruce, principal investigator for the trial at the Emory Eye Center.

IIH’s high pressure around the brain can lead to swelling and damage of the nerves that connect the eye to the brain. A weight reduction of 5% to 10% can help improve symptoms. The drug acetazolamide is known to



reduce fluid production in the brain and is often used as an add-on therapy for IIH. In severe cases, surgical procedures may be used to relieve pressure on the optic nerve.

## Exercise also good for our eyes?

**It is well known that exercise helps both mind and body.** Emory Eye Center research suggests it can also protect vision by delaying the death of light-sensing photoreceptor cells in the retina, which occurs in many forms of blindness in the elderly.

Researchers Mabelle Pardue and Jeffrey Boatright exposed mice to bright enough light to harm their photoreceptor cells. They found that mice that ran daily on a tread-

mill suffered less cell loss and retained retinal and visual function compared with sedentary mice. “This is the first report of simple exercise having a direct effect on retinal health and vision,” says Pardue, lead author of this report in *The Journal of Neuroscience*. The research has garnered significant attention, including *The New York Times*.

So while you work out in your



personal exercise program, know that it might help your vision over time. Keep moving!



# Cataracts and babies: a new finding after a five-year study

**A landmark, five-year nationwide study, based at the Emory Eye Center, reported new findings for babies who have undergone cataract surgery.** Results of the clinical trial, which was led by principle investigator Scott Lambert, suggest that use of contact lenses for several years, followed by an eventual lens implant, may be a better solution for most infants who have had cataract surgery than implantation of an intraocular lens (IOL) immediately after surgery, previously the standard of care for both adults and children. The Infant Aphakia Treatment Study found that for babies, use of a contact lens initially was preferred.

The Emory Eye Center, one of 12 selected sites in the U.S., was the lead center for the study. The nationwide trial, conducted at Emory by a team of 10, was funded in part by the National Eye Institute, part of the National Institutes of Health.

“When we began this study, the prevailing theory was that IOLs would be the better option for infants following cataract removal because IOLs correct vision constantly, while contact lenses can be removed or dislodged from the eye. But our data suggest that if the family can manage it, contact lenses are the better option until the child gets older,” said Lambert.

## Amazing 6-year-old dons own contacts

Briana Schwartz, who participated in the Infant Aphakia Treatment Study, received a diagnosis of cataract at 1 day of age. She was prescribed a contact lens following her cataract surgery at 1 month of age. Over the next few years of her young life Briana’s mother, Erin, was tasked with putting in and removing the contact lens, something she took very seriously. But at the tender age of 4, Briana told her mother she wanted to put in her lens herself. And so she did—an amazing skill for a child of any age.

When Briana is older, she and her parents will decide if she wants an intraocular lens or prefers to stay with a contact lens. Until that day, she remains a fortunate girl in having been diagnosed and treated at such an early age.





## *By way of Chicago — A young family's journey*

**W**hen young mother Ashley Petroczyk describes the journey she and her family took to arrive at the Emory Eye Center, the telling of it takes a while. For good reason.

While readying for a family trip to Chicago in spring 2014, Petroczyk, a pediatric nurse by profession, noticed that her baby daughter's eye looked a little strange. But she was a "worrywart," as she says, and didn't think a lot more about it that evening. When she mentioned it to her husband the next day, they decided it was probably nothing, continued packing, and left Tallahassee, Fla., to board a plane to Chicago.

### **DAY 2**

Later, in Chicago, under the dim light of an elevator, Petroc-

zyk again noticed that same "white" pupil when gazing into her baby daughter Olivia's face. This time her husband saw it too. They instinctively knew something wasn't right. Mom and dad independently Googled what they had seen. Both came up with retinoblastoma or RB, which, as she said, was not what they wanted to find.

Petroczyk hurriedly called their sister-in-law, an optometrist in Chicago, who suggested taking a photo of Olivia to show the typical red reflex of the eye. Petroczyk relates that she was reluctant. But she did take it and sent it to the sister-in-law. Olivia's photo indeed showed the classic white pupil, which can be an indicator of RB. Without even seeing Olivia, the optometrist quickly made an appointment with an ophthalmologist colleague for the next day, a Saturday.





That call initiated a flurry of medical visits. The ophthalmologist in Chicago expressed the possibility of RB but did not make a formal diagnosis. He called a colleague, Vikram Setlur, a fellow who specialized in retinal disease and asked him to see Olivia that same day.

The family then went to the University of Illinois at Chicago, where Setlur, who was on call, saw Olivia. He thought it could be RB, but an exam under anesthesia was needed to accurately diagnose RB in a baby or young child, he explained.

Setlur offered to help arrange care for Olivia in Chicago but noted that Chicago might be inconvenient for the family. He advised the Petroczkys that there was a very good doctor in Atlanta, Baker Hubbard, who treated children with RB.

So the decision was made to come to Atlanta, a relatively short four-hour drive from their home. Phone calls were made and a clinic visit was secured.

## TO ATLANTA

By Wednesday, the family was meeting with Hubbard on his first available clinic day. He let them know that he needed to do his exam under anesthesia, and Monday was the first available time. He also said that an MRI would be needed, as well as consultation with Emory pediatric oncologist Thomas Olson.

The MRI was stepped up to that same week, and after the scan on Friday, Olson let the couple know by Saturday that the scan was clear, a wonderful thing. That meant chemo might not be needed, pending more examination.

On Monday, following Olivia's exam under anesthesia, Hubbard gently explained to the couple that the tumor had extensively invaded much of Olivia's eye, so removal of the entire eye (enucleation) was necessary. Filled with emotion and ultimately, relief, Petroczky and her husband remember Hubbard's and Olson's patience and thoroughness during their difficult and emotional time.



Olivia's grandparents have provided funding for RB research at Emory.

Following the removal, pathology results showed that none of the tumor had invaded the optic nerve and, further, genetic testing showed that it was a non-inheritable tumor, very good news for everyone.

"Our entire family has been grateful for the thorough, supportive, and kind care we've received at Emory," says Petroczky. "Being young parents, we were naturally very concerned about Olivia's

diagnosis, but from start to finish, we had such good help, it made the situation so much better."

Because of their awareness of the importance of medical research, Petroczky's parents, Bonnie and Steve Anderson, have provided funding for Hubbard's RB research. Petroczky's mother, Bonnie, works in cancer research herself.

This year, in May, members of the Petroczky family, with little Olivia in arms, journeyed again to Atlanta to be part of the Emory Eye Center's 16th annual RB Kids Day, a celebration of the lives of children who have had RB. Mom Ashley and dad Mike joined other remarkable parents of the center's "RB Kids." Each year, these parents have the chance to meet each other, and the RB kids get to meet and befriend each other as well.

This family's journey, which began at home in Tallahassee, traveled north and ended up in Atlanta, was filled with special helpers and medical professionals all along the way.

Today, at the tender age of 1, Olivia "is a happy, spirited girl," says mom, even though she went through a serious medical issue in her very first year of life. Walking and talking with gusto now, Olivia will no doubt have an inspiring story to tell in her future. And she will serve as an inspiration to other RB families and to the medical team who treated her.

## So that the GOOD WORK can go on

**Sharyn Dowd is a busy associate pastor, ministering to numerous church members and working in various mission activities.** Every day brings a set of challenges and ongoing involvement with community and outreach organizations. She constantly sees to the needs of others—checking on the sick, the bereaved, the impoverished, and those who are seeking community and connection.

Dowd knows very well how to take care of others in her multiple roles. She currently serves as Pastor for Caring and Serving Ministries at Decatur’s First Baptist Church. But during

*Keratoconus and corneal transplants affect the front curvature of the eye and therefore have significant impact on how light focuses into the eye. Specially designed contact lenses can substantially improve visual acuity beyond what is possible with spectacles. Sclera lenses are fluid-filled and can be used therapeutically to treat severe dryness as well as correct high degrees of irregular astigmatism. These lenses offer very good comfort and maximize a person’s visual potential for conditions with irregular cornea shapes.*

—Michael Ward

her second year in Emory’s Graduate Division of Religion PhD program in 1981, Dowd was diagnosed with bilateral keratoconus by specialists at the Emory Eye Center. She needed, at that point, for others to take care of her.

As her keratoconus progressed, Dowd was told she needed corneal transplants, a significant inconvenience for any student undergoing the rigors of graduate school, particularly for a student with limited funds. With financial help, first from the surgeon who dropped his fee and then from the Georgia Lions Lighthouse Foundation, she was able to cover the costs not covered by her student insurance. She was most grateful.

Dowd was able to go on with her studies and to an impressive career in academics as a professor of New Testament at Lexington Theological Seminary (Kentucky) and Baylor University (Texas). While at Baylor, she was also a member of the pastoral staff of Calvary Baptist Church, where she was responsible for leading ministries in the church’s lower-income, racially mixed neighborhood.



Life was fulfilling, and Dowd was able to make a difference to those she taught and ministered to throughout three decades of serving.

Fast forward to 2013, and Dowd was again living in Atlanta. She developed severe dry eye problems that were not corrected by lubricating and medicated eye drops. The dryness was significant enough that she was in pain each day, and the pain limited her ability to wear contact lenses and therefore, to see.

At Emory, cornea specialist John Kim suggested that she see contact lens specialist Michael Ward about the possibility of scleral contact lenses. She did, and, as she says of the lenses, “they are rather expensive,” but “they have completely solved my eye problem.”

“Dr. Dowd was becoming contact lens intolerant. Therefore, she was visually handicapped and incapable of functioning on a day-to-day level,” says Ward. “With the new scleral lenses, she was again able to attain her normal level of activity.”

“I can say that had it not been for the successful transplants initially and the various specialized contact lenses that I have worn during the past 33 years, I would not have been able to pursue a 21-year career in New Testament scholarship and teaching. I am still able to read and write, for which I am thankful every day.”

With the gift of good sight, given not once but many times over the past years, a remarkable human being has been able to continue her gift of ministering to others.



# A blessing of the birds—and of the families

**First-grader Holly Slavin stopped reading, something she normally loved.** It aroused no real concern, as her family was on Christmas vacation with lots of other distractions. Only later did Holly's mother put together the hints that something was wrong with her daughter's eye.

A few days went by, and mom noticed redness and swelling, then a definite protruding of Holly's eye. This was serious. She was taken to the ER, and the physician on call thought Holly might have had trauma. But that was not the case.

When she called Holly's pediatrician, mom Janice Slavin was told to take Holly straight to Children's Healthcare of Atlanta at Egleston. There, the team biopsied tissue, found a malignancy, and started chemotherapy right away.

Oculoplastics specialist and orbital tumor surgeon Brent Hayek was wonderful, says Slavin. "He sat knee to knee with our family and told us quietly and slowly about Holly's diagnosis, embryonal rhabdomyosarcoma or rhabdo, a cancer of the connective tissue and muscles, such as those of the head and neck." It is rare—with only 350 cases each year in the U.S.—mostly in children ages 1 to 5.

"He was so caring and informative, it really helped us during a very frightening situation," says Slavin of Hayek. And, over time, he remained a calming presence in this family's life.

In spring 2009, Holly began radiation, in addition to her chemo. By June, treatments were complete, but in October, there was a new, larger tumor. By December, in order to save Holly's life, Hayek performed an exenteration, removing the eye and all the eye's orbital contents, including the eyelids.

Such a procedure is daunting for any patient, much less a child. But when it was time for her bandages to be removed, Holly wanted to do it herself. All by herself. At the tender age of 6, she was brave beyond her years.

"I do a lot of things as an oculoplastic and orbital sur-

geon, but providing the surgical care and being a part of Holly's medical team was truly a rewarding experience," says Hayek. "These conditions are life changing for Holly, her family, and all medical folks that played a role in her life."

The Slavin family had an array of caring people in their lives to help them in dealing with their situation as well as

resources to make frequent, fun outings with Holly while she was undergoing her treatments. This is not the case for many families. Many are stretched financially and simply lack the resources to provide needed downtime for their children. With a strong commitment to help others, the Slavins sought to help those families whose children must also undergo radiation treatments. They formed a foundation to raise funds for these special families.

Aptly named *Radiation Vacation*, it provides insider information for parents, tickets to special outings, and a special treasure box at Emory's Winship Cancer Institute. On the

day of each child's last treatment, he or she gets to ring a special bell lovingly placed at Winship, courtesy of *Radiation Vacation*.

As mom Janice says, we were becoming aware of these needs as Holly went through treatments. Holly's comment about losing her hair spurred the first fundraiser, "The Blessing of the Birds." When mom became sad about Holly's hair loss, Holly quickly replied, "Oh, we can give my hair to the birds for their nests!" Participants of "The Blessing of the Birds" fundraiser were area hair salons who donated \$1 per haircut to *Radiation Vacation*. Over time, several other events throughout Georgia have helped raise money.

Meanwhile, Holly is now a seventh grader, an honor roll student who won the citizenship award at her school last year. She had no idea when she made that heartfelt remark to her mother about her hair loss that a wonderful blessing for others would come out of it for years to come.

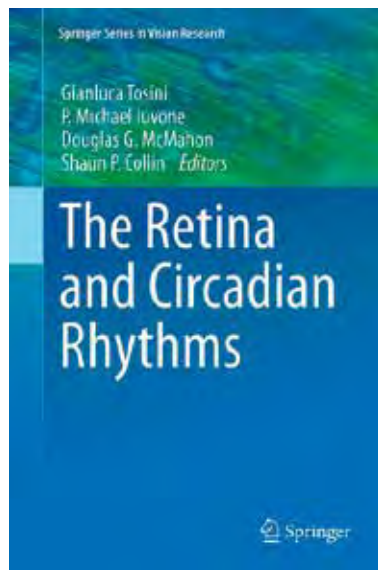
More information: [facebook.com/radiationvacation](https://facebook.com/radiationvacation).



*"We can toss my hair outside. The birds will feel blessed to find my hair and use it to make a soft nest for their babies." - Holly Slavin, two-time cancer survivor.*

## Circadian rhythms and us

Emory Eye Center  
Director of Research  
**P. Michael Iuvone** has published a new book, *The Retina and Circadian Rhythms* (Springer, 2014), along with fellow editors Gianluca Tosini (Morehouse College of Medicine), Douglas G. McMahon (Vanderbilt University), and Shaun P. Collin (University of Western Australia).



The book provides a comprehensive review of the retinal circadian rhythms and their roles in photoreception and visual function. Its aim is to further the study of retinal neurobiology by researchers and to provide a resource for clinicians about how daily changes in retinal function may influence treatment outcomes.

## Practitioner of the year

**Michael A. Ward, MMSc, FAAO**, director of the Emory Eye Center's contact lens service, was named the 2014 GPLI Practitioner of the Year, for "outstanding professional expertise in fitting customized contact lenses to benefit patients with improved vision and corneal health and to advance the contact lens field."



The award was presented at the annual meeting of the GP Lens Institute (GPLI), the educational component of the Contact Lens Manufacturers Association.

## A visionary award



Emory Eye Center director **Timothy W. Olsen** received the Visionary Award from the Foundation Fighting Blindness (FFB) during its spring "For the Love of Sight" event in Washington, D.C. The honor was given for his longstanding commitment to helping patients with eye diseases.

FFB is a national nonprofit that supports sight-saving research. The annual event benefits research into preventions, treatments, and cures for vision-robbing retinal diseases, including macular degeneration, retinitis pigmentosa, Usher's syndrome, and related conditions that affect more than 10 million Americans.





**NEW FACULTY:**

**Eldon Geisert, PhD**, joined the Eye Center's research section in winter 2014. He previously served as professor of ophthalmology, University of Tennessee Health Science Center, as the Hamilton Eye Institute Professor



of Anatomy and Neurobiology and Director of Research in Ophthalmology. He received his doctoral degree at the University of Wisconsin, Madison, in neuroscience, and his undergraduate degree in biology from the University of California, Irvine.

Geisert's primary research interests include defining the molecular mechanisms governing the retinal response to injury and study of a novel molecule that selectively kills the most virulent form of brain cancer, glioblastoma.

He holds a \$1 million grant from the U.S. Army Medical Research Acquisition Activity to study eye injuries from improvised explosive devices. He hopes to develop better ways to monitor the severity of such injuries and treat them. Geisert also has a \$1.5 million National Eye Institute grant to study the genetic differences that lead to glaucoma.

**Danny Haddad, MD**, joined the Eye Center in fall 2013 as the first full-time director of Global Ophthalmology Emory (GO-Emory). He previously served as director of the Atlanta-based International Trachoma Initiative (ITI), a partnership in support of the global effort to eliminate blinding trachoma by 2020.

Haddad is an international leader and a strategist in public health policy on trachoma. Born in the Netherlands, he received his medical degree from the State University of Groningen.

He was a Helen Keller International (HKI) volunteer, managing the Irian Jaya Eye Care Project in Indonesia. He also served in Africa with HKI in numerous capacities. He later worked at the Academic Medical Center of the University of Amsterdam, focusing on parasitic diseases, and he has more than 18 years of experience in blindness



prevention in developing countries.

Haddad holds memberships in the American Society of Tropical Medicine and Hygiene, the International Society of Geographical and Epidemiological Ophthalmology, and the Royal Society of Tropical Medicine and Hygiene.

**Rabea Janjua, MD**, joined the Eye Center in December 2014, in the section of Comprehensive Ophthalmology. She graduated from George Washington University *magna cum laude* and received her medical degree



from the University of Maryland School of Medicine in Baltimore. Dr. Janjua's internship and residency in ophthalmology were at the University of Maryland, where she was honored to serve as co-chief resident.

Dr. Janjua's clinical interests include comprehensive eye care, cataract surgery, glaucoma lasers,

the ophthalmologic manifestation of systemic disease (diabetes, dry eye syndrome, uveitis). Her research interests include tele-medicine and the sustainable eye health programs in underserved areas.

She is a member of the American Academy of Ophthalmology, the Maryland Society of Eye Physicians & Surgeons, the Islamic Medical Association of North America and the Association for Research and Vision in Ophthalmology.

**Petra Jo, OD**, joined the Eye Center in summer 2014 in Vision & Optical Services within the Comprehensive Ophthalmology section. She provides comprehensive eye care, with



emphasis on primary care and ocular disease. Jo performs low-vision exams as well. She earned her doctor of optometry degree at

Nova Southeastern University and completed her residency at the WJB Dorn VA Medical Center in South Carolina. She holds memberships in the American Academy of Optometry, South Carolina Optometric Physician Association, American Optometric Association, and the Beta Sigma Kappa International Optometric Honor Society.

**Yousuf M. Khalifa, MD, FACS**, joined the faculty in August 2014. He serves as chief of service for ophthalmology at Grady Memorial Hospital and in the cornea service at the Eye Center. Khalifa previously served at the University of Rochester, where he was cornea and external disease specialist and residency program director.

He earned his medical degree at the Medical College of Georgia, where he also completed an internship and ophthalmology residency. He



then went to the University of California, San Francisco's Proctor Fellowship as a Heed Fellow, followed by a fellowship in

cornea and refractive surgery at the University of Utah's Moran Eye Center.

Khalifa is a member of the American Academy of Ophthalmology, the Fredrick C. Cordes Eye Society, the Society of Heed Fellows, the Cornea Society, the American Society of Cataract and Refractive Surgery, and the Association for Research in Vision and Ophthalmology.

He serves as a peer reviewer for *JAMA Ophthalmology*, the *American Journal of Ophthalmology*, and *Acta Ophthalmologica*. He won the "Teacher of the Year" award each year at the University of Rochester.

His clinical interests are penetrating keratoplasty, deep anterior lamellar keratoplasty, endothelial keratoplasty, cataract surgery, and corneal infectious disease.

**Sheryl Menacker, MD**, joined the Eye Center in January 2014 on a part-time basis within the pediatric service. She assists with special-needs patients and helps teach residents how to do this as well. She earned her undergraduate degree at LaSalle College, received her medical degree at the Medical College of Pennsylvania, and completed her residency at the University of Pennsylvania. Menacker completed a pediatric ophthalmology fellowship at the Chil-

dren's Hospital of Philadelphia, where she joined the staff.

She joined Tri-County Eye Physicians & Surgeons in 1992.



In addition to her full-time pediatric ophthalmology practice, Menacker was director of eye care at Woods Services, a

residential facility for people with disabilities, and she held a clinical appointment at the University of Pennsylvania School of Medicine.

Menacker is a diplomate of the American Board of Ophthalmology, a fellow of the American Academy of Ophthalmology, and a member of the American Association for Pediatric Ophthalmology and Strabismus. She is an active member of the Children's Eye Foundation's Board of Directors.

**Margi Patel, OD, FAAO**, joined the Eye Center in fall 2013 in Vision and Optical Services within the



Comprehensive Ophthalmology section. She provides primary eye care, including prescribing

glasses and managing ocular health. She received her undergraduate degree in neuroscience at the University of Miami, obtained her doctor of optometry from Nova Southeastern University College of Optometry in Davie, Fla. and served her residency at the University of Houston College of Optometry.

Patel holds memberships in the American Academy of Optometry

and the American Optometric Association. Her clinical interests include emergency eye care, ocular diagnostics, glaucoma evaluation, and diabetic eye screenings. Her research interests include glaucoma and diabetic eye disease.

**Joshua Robinson, MD**, joined the Eye Center in August 2014 in the section of Vitreoretinal Surgery and Diseases.



He graduated from the Massachusetts Institute of Technology and worked as an engineer at Intel Corporation prior to pursuing his

doctoral degree from the Robert Wood Johnson Medical School. He completed a transitional year internship and his residency in ophthalmology at Emory School of Medicine, where he also served as chief resident. He completed a vitreoretinal fellowship at Associated Retinal Consultants in Royal Oak, Mich.

His clinical and research endeavors focus on both adult and pediatric vitreoretinal disease with special attention to pediatric retinal vascular diseases, including retinopathy of prematurity and familial exudative vitreoretinopathy. He also focuses on medical education and plays an active role in training ophthalmology residents and retina fellows.

He is a member of the American Society of Retina Specialists, the American Medical Association, Alpha Omega Alpha Honor Medical Society, the American Academy of Ophthalmology, and the Association for Research in Vision and Ophthalmology, and he is a diplomate of the American Board of Ophthalmology.



# The extraordinary work of Alex Katz

*“part P.T. Barnum, part brains,  
part chutzpah”*

By Ginger Pyron | Photo by David Woolf



Alex Katz discussing retinal degeneration research with Jeff Boatright.

**S**omebody, somewhere, has probably said, “That Alex Katz, he’s a piece of work.”

That phrase could imply anything from insult to amusement to profound admiration. In reference to Alex Katz, however, one can safely assume that it indicates someone from whom one can expect surprises, at the very least.

Abraham Katz, Alex’s father, gave his children a good education, sturdy self-confidence, and a strong work ethic. He told them, “It doesn’t matter what work you do. Just do it” (*and do it well* went without saying). By the time Alex reached his early teens, he was a working photographer

earning \$100 to \$200 cash per week—good money for a kid in the mid-1960s. Today he’s the president of Kason Industries, known worldwide for its production of industrial hardware.

As trustees of the Abraham J. & Phyllis Katz Foundation, Alex Katz and his brother David still do many things well, specifically as they determine which organizations, innovative research projects, and life-enhancement programs will receive Katz Family Foundation support.

Katz is also a voracious reader and a passionate lover of the arts. In casual conversation he can rhapsodize about works that, for him, elicit what he calls “the *wow* factor”: a masterful octave leap by Pavarotti, for instance, or the pure simplicity and elegance in a Mozart piano sonata.

He recounts such examples to emphasize what most piques

his interest: *artistry*. Whenever Katz encounters something finely designed or deftly structured—whether a breathtaking performance, an advance in medical care, or cutting-edge research—it attracts him like a moth to a flame.

And when Alex Katz is attracted, he tends to act. For both Alex and David, the selective Katz Foundation philanthropy is based in projects that satisfy their desire to make life better and fuller for children, parents, and families everywhere, particularly projects mitigating conditions that cause deep suffering.

“We’ve always given significant amounts of whatever we earn to support charities,” Katz says. “It’s an inherent part of what we consider an appropriate way to live.”

Thanks to the Katz Family Foundation, many well-designed pieces of work are thriving at Emory and elsewhere. These include medical research, medical care, education, service programs and the arts. Katz family support to Emory ranges across departments, programs, and years. And the momentum shows no signs of slowing down.

In 2007, the seductive *wow* struck Katz when he read in the online journal *Molecular Vision* about Jeff Boatright’s research on synthetic bear bile (TUDCA) as a means of treating, possibly even preventing, retinitis pigmentosa (RP).

“Jeff put out this thing that said, here’s a folk remedy, used for thousands of years, and he wants to test its validity,” Katz recalls. “I thought it was cool, and I know it’s hard to get sustained funding for something like that. I love challenges, so I asked him, ‘How much do you need? Let’s play and see what happens!’”

Not content just to write a check,

Katz became what Boatright calls the project’s “chief cheerleader.” Over multiple years, Katz has encouraged and supported while Boatright, with colleagues John Nickerson and Mabelle Pardue, further investigated the role of TUDCA as a neuroprotector of mitochondria, the powerhouse of the cell.

#### KATZ FOUNDATION FUNDING AT EMORY UNIVERSITY

- Chamber Music Program and the Vega String Quartet
- Eye Research - Boatright/Nickerson/Pardue retina research
- Eye Research - Timothy Olsen retina research
- Urban Health Program, Project PACE
- Preventive Cardiology - Clinical and research fellowship
- Preventive Cardiology - HeartWise Risk Reduction Program
- Winship Cancer Institute - Patient and Family Assistance Fund
- Winship Cancer Institute - GI surgical oncology fellowship
- Winship Cancer Institute - Ned Waller’s bone marrow transplant research
- Emory University Hospital Midtown - Cord blood collection program

The Katz Foundation continues to fund the Boatright/Pardue projects, as well as other retina research led by Timothy Olsen. And Katz continues to be circumspect about his role: He wants to watch, to learn, to aid, and *not* to boss.

David Woolf, former senior director of development at the Emory Eye Center, notes that Katz’s approach to funding is atypical: “Many donors want to see a quick home run. Alex is more realistic; he knows that progress

can be slow and that it takes money to sustain the work.”

Katz says, “It also takes nerve. The donor has to accept the possibility of failure and how valuable that can be; it’s okay to fail, if that helps us move along. You’ve gotta be willing to take risks, to go on a wing and a prayer.

If you don’t *will the impossible*, what chance do you have of accomplishing anything?”

In his forthright way, Katz admits that he’s a showman: “I bring the circus, something outside the humdrum. At first people aren’t sure what to think, but then they begin to enjoy it. It’s the only way I know how to fit in. I’m part P.T. Barnum, part brains, and part chutzpah.”

To those who know Katz best, he’s also—in huge part—heart. Beneath his showmanship, his brilliance, and his capacity for decisive action, there’s an acute sensitivity to the joys and sorrows of life.

Fact is, there’s nobody like Katz. Quirky, fresh, funny, generous, he is constantly alert to the next big challenge that can further his vision of health and happiness for everyone who lacks them. “There’s so much grief in the world, and you can’t cure it all,” he says. “You can only focus on helping in small, tight areas and hope you leave the world no worse off than you found it.”

People who interact with him recognize that Katz is perpetually on a roll and that he will not rest until whatever he’s incubating at the moment is up and running at full, benevolent potential.

Once your mind trades sparks with this high-powered generator, you may catch *yourself* telling someone—shaking your head in amazement, but with an affectionate twinkle in your eye: “That Alex Katz, he’s a piece of work, all right.”



# Have a plan.



**A lifelong Atlanta resident,** Alex Cooley grew up around the Morningside and Glen Iris neighborhoods near Emory. Whenever anyone in his family needed medical care, “It’s always been Emory,” he says. He credits Emory for saving his vision and his life. In gratitude, Cooley has made a bequest to support the Emory Eye Center and the Division of Cardiology at Emory School of Medicine. The gift honors retina specialist Baker Hubbard, who treated Cooley when complications of diabetes threatened his sight, and cardiologist Gerard McGorisk, who Cooley says saved his life after a heart attack. “I feel like I owe a debt for everything they’ve done for me,” he says.

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Emory Masters in Public Health students learn how to perform eyelid surgery on a mannequin under the guidance of course director Danny Haddad. See page 12.

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