UAB Ophthalmology and the Alabama Eye Bank

One of the top-five eye banks in the country, the AEB is a national—and international—treasure

When considering the word “bank” in its financial sense, many of us envision a repository of riches that, should we have access to them, would enable us to meet our personal and professional goals. In the same way, the Alabama Eye Bank contains a wealth of tissue that allows corneal surgeons to perform vision-saving transplants, academic ophthalmologists to teach residents, and researchers to work toward unlocking the secrets of devastating eye diseases such as glaucoma and age-related macular degeneration, or ARMD. Christine Curcio, Ph.D.—a professor in the UAB Department of Ophthalmology—is one of those researchers.

“When I joined the department in 1991, one of the first things I did was to contact the Alabama Eye Bank to see if they would be able to provide me with the donor eyes that I needed for my work in the area of age-related macular degeneration,” she says, “and I was amazed by what I found. I felt like Birmingham’s early steel producers must have when they found iron ore in Red Mountain, because it was really that important of a discovery to me, in terms of continuing my research.”

ANSWERING THE CALL

While eye banks have operated in the state since the 1950s, the Alabama Eye Bank (AEB) has existed since 1969, although it was reorganized into its current form in 1984. Once located in the Calhahan Eye Foundation Hospital—and run in affiliation with Lions Club International—the AEB is now a freestanding entity, accredited by the Eye Bank Association of America, and with 16,000 square-feet of space at its Birmingham headquarters. It has three satellite locations, in Mobile, Huntsville, and Montgomery, with experienced technicians also located in Dothan and Auburn. Employing some 50 individuals in total, it is poised to act on incoming calls from hospitals and other establishments throughout the state when donor eyes become available.

“The wheels are set in motion the instant one of our coordinators receives a call in our Communications Service Center,” according to Doyce Williams, executive director of the Alabama Eye Bank. “These individuals have been trained extensively to handle a number of roles, including working with the family, nurses, and doctors to make the necessary arrangements while also gathering the donor’s social and medical history. They also contact dispatch personnel to alert a recovery technician at the nearest AEB location of the availability of the tissue so that they can get there as quickly as possible. While we have from six to eight hours to recover tissue for corneal transplantation, we have less time to procure the tissue for Dr. Curcio’s stud-

(continued on page 2)
ies, because some tissue components, like mRNA, degrade at longer periods of time. That’s why her tissue is only recovered in the Birmingham area.”

While this provides a snapshot of how the recovery process is conducted, there are many additional challenges to be considered. One involves the issue of “first-person consent,” in which someone may sign up to be an eye or organ donor when they obtain their driver license, but has the right to change their mind afterwards according to state law. “That’s why we always contact the donor’s family or next of kin,” Williams says, “just to make sure we’ve explained everything very carefully so that they understand what we’re doing. And our coordinators, as well as our recovery technicians, have all been trained in how to discuss these sensitive matters with people who have just experienced such a huge loss, so we’re very mindful of what they’re going through.”

A FIRM FOUNDATION
Considering the fact that the AEB receives about 22,000 calls each year, and that the staff is on call 24 hours a day, seven days a week, the need for a streamlined, efficient operation is readily apparent. This has been achieved, in part, by the development of an information technology system specifically tailored to meet the eye bank’s needs, and also by a board of trustees to help guide its structure and growth. One man who has played an active role in the creation of this system over the years is Robert Phillips, M.D., a clinical associate professor in the UAB Department of Ophthalmology who has been on the AEB’s board of trustees since 1977 and chairman since 2002.

“As a corneal surgeon, I felt that it was important for me to be involved with the Alabama Eye Bank,” he says, “and it’s been quite gratifying to have lent a hand in its tremendous growth over the years. As an example, when I first came to UAB our eye bank was 88th in the nation in terms of donor recoveries. Now we’re fifth—and that’s in a field of 90 or so eye banks across the country. In the beginning we had no full-time employees and no director, and now we have both, obviously, along with a significant career ladder for eye banking professionals. We’ve even trained eye-bank directors who are now serving in other countries, so we’re definitely making a global impact.”

The board of trustees has been crucial in the development of the firm foundation necessary to achieve such growth. “And it’s important to understand that this is a board of trustees, rather than directors,” Phillips explains, “which means that they serve in an advisory capacity. And we’ve also made a point of including business people in addition to ophthalmologists, which has allowed us to create a very sound structure, from a financial standpoint—especially since we receive no funding from the state or federal government.”

While the AEB has benefited from this professional guidance, it’s those in need of corneal transplants—both here in Alabama and in some 20 countries around the world—who have gained the most. “At one time I had a two-year waiting list for corneas,” Phillips says, “but now we can schedule the surgeries knowing the tissue will be available. So that’s better for the hospital, better for the surgeon, and much better for the patients, in terms of achieving quality outcomes.”

Again, this increased availability is due to the AEB’s incredibly efficient structure, which allowed for the employees needed to recruit hospitals and other health-care institutions to notify the eye bank of recovery opportunities. “We’d visit hospitals, hospices, and give talks to civic groups around the state, and awareness eventually grew to the point where we had enough tissue on hand for transplants, teaching, and research, which is an incredible advantage. And this hasn’t happened because of me or any individual person,” he says. “It’s due to the collective efforts of the eye bank staff and the board in working toward a common goal. We owe many people a huge debt of gratitude for their help in saving and preserving vision here in the state, and around the world.”

RESPONDING TO RESEARCH
Christine Curcio acknowledges this debt, as well, describing a situation in which there was once the chance she would no longer be able to easily obtain the tissue she requires for her research into age-related macular degeneration. “There was a time when eye banks were considering recovering the corneas alone, which is a much easier process—and one that many eye banks have adopted—but I need the whole eye for my work,” she says. “So I was able to go to Doyce and others at the eye bank and explain my situation, and they agreed to continue recovering whole eyes in the Birmingham area, for which I am very grateful. When I prepare grant applications I tell them exactly how many eyes I’ll need over a given period of time, and they’ve always been able to fulfill that request. And since I know the cost in advance, I’m able to write that into my grant proposals so that the expenses they incur recovering the eyes are met.”

Curcio says that this is a very important point, and one that she has actively made to her fellow vision-science researchers, specifically in an editorial titled “Declining Availability of Human Eye Tissues for Research,” which was published in the July 2006 issue of Investigative Ophthalmology & Visual Science (Vol. 47, No. 7).

“I’ve been involved with helping recruit donor sites for the AEB, and I wanted to
convey why that was both important and time well spent,” she says. “But I also wanted to address the conviction among some of my colleagues that there should be no cost for these tissues since they were donated to the eye bank. While that’s true, there are significant costs associated with actually recovering them effectively. Having a call center that’s open around the clock, every day of the week, is expensive, just as it is to send the technicians out to perform the recovery and transport the tissue to the lab. None of this is free, and it should be factored into the cost of doing research by way of the funding we receive.”

EXTENDING THE MISSION

In addition to fulfilling its mission to provide tissue for transplants, teaching, and research, the AEB is involved in a host of related activities that benefit clinical ophthalmologists and researchers regardless of where they are found. “While our priority will always be providing these tissues to those who need them in Alabama, we have entered into a collaboration with a number of organizations—including Project Orbis, Vision Share, the Pan American Association of Eye Banks, the Eye Bank Association of America, and the European Eye Bank Association—to help those in need who live in other countries,” Williams says. “We’ve been able to provide corneas preserved in glycerin to vision-care specialists in more than 20 countries, among them Africa, Cambodia, Vietnam, and Guatemala.”

The AEB also has created a Center for Vision Research, housed in its Birmingham headquarters, in order to provide vision scientists with the tissue they need to develop new treatments for glaucoma, retinal degenerative and infectious pathologies, and diabetic retinopathy. “For some time we’ve sought to expand our international distribution of corneal tissue, and to provide the best research tissue possible for certain types of debilitating eye diseases as well,” according to Alan Blake, the AEB’s technical director, “and through these two service extensions we can now realize these goals.”

No matter how large the organization grows, it will always remain focused on what really matters, according to Doyce Williams. “It’s not about the growth of our services, or any set of statistics,” he says. “It’s about people who need care, compassion, and restored sight. And whether that involves an adult in Birmingham, or a child in Israel, our focus is the same—restoring vision.”

To learn more:
Call (800) 423-7811, send e-mail to info@alabamaeyebank.org, or go online to www.alabamaeyebank.org.

THIS STATE IS VERY FORTUNATE to have a “team” of organizations dedicated to the preservation of sight and advancements in vision science. As in previous issues of Vision, our cover story deals with yet another “member of the team,” The Alabama Eye Bank (AEB). Included in this group are: Alabama Lions Sight Conservation Association, EyeSight Foundation of Alabama, International Retinal Research Foundation, Alabama Academy of Ophthalmology, and the UAB Department of Ophthalmology. Each group brings a different focus to achieving these goals, and the AEB is no exception.

While the AEB has a long and rich history in this state, it is only in the past 20 years that it has become a major player, both nationally and internationally. The agenda has been set by a progressive and innovative Board of Trustees with outstanding leaders such as Pete Field, Hayes Parnell, Ray Smith, George Hackney, Neil Glausier, and Bill Blackwell. Medical leadership has also been outstanding, provided by Drs. Roswell Pfister, Robert Phillips, Andrew Velazquez, Barry Dabbs, and Hal Helms. Transforming words into action has been the task of an outstanding executive director, Doyce Williams. Striking the correct balance of service, humanity, research, education, and philanthropy, Doyce has guided the AEB to a level of lofty achievement. The AEB is positioned for even greater achievements in the future. The UAB Department of Ophthalmology is grateful for the support of the AEB, and we know we can count on an ongoing “win-win” relationship for both organizations in the years to come.

We hope you will enjoy reading of other exciting aspects of the department. In “Patient’s Perspective,” the clinical expertise of the faculty is highlighted. Glaucoma is a blinding disorder that, at times, must be dealt with immediately. Christopher Girkin, M.D., chief of the glaucoma service, recognized and treated a patient with acute angle-closure glaucoma aggressively and successfully. In “Ophthalmic Insights” Laura Dreer, Ph.D., discusses her role in helping patients deal with the psychological aspects of adapting to vision loss. This is an underserved area of clinical care, yet one of tremendous importance. Dr. Dreer’s clinical expertise and research programs add an important and unique dimension to the UAB Center for Low Vision Rehabilitation.

Finally, this issue of Vision reviews accomplishments of the faculty and resident staff for 2007. Once again, the department is “firing on all cylinders,” making important contributions in the areas of research, education, and patient care. We are unwavering in our commitment to remain a center of excellence in all aspects of our mission, and with other members of “the team” the future has never looked brighter!

Lanning B. Kline, M.D.
EyeSight Foundation of Alabama Chair and Professor
UAB Department of Ophthalmology

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AS DIANE HILL DESCRIBES IT, in December of 2006 her whole life changed. She began experiencing severe, non-stop headaches, which her primary care physician thought might be migraines. The results of an MRI were inconclusive, and the pain she was feeling had only increased.

“That’s when my right eye began to turn red and to swell, which my doctor treated as pink eye with drops. When that didn’t help I decided to see my optometrist,” Hill says, referring to Susan Day, O.D., “and she immediately realized that I had glaucoma and needed to see a specialist.”

That specialist was Christopher A. Girkin, M.D., director of the Glaucoma Service in the UAB Department of Ophthalmology. “They returned the call in about 10 minutes,” Hill says, “and he fit me into his schedule that same day.”

According to Girkin, Hill “presented with a lot of pain and vision loss in her right eye. On examination it looked like she’d had some interruption of the blood supply to the optic nerve,” he says, “and it was determined that she had acute angle closure glaucoma. We admitted her immediately and performed a procedure called a laser iridotomy, which wasn’t as effective as we’d hoped it would be. So we proceeded to the next standard step, which was a surgical procedure to replace the lens and open the drainage angle of the eye.”

Since time is of the essence in such cases, the Glaucoma Service has established an emergency response system for glaucoma in both the UAB Emergency Room and within the department, itself. “When patients are having acute visual problems like angle closure and need immediate treatment, this system makes sure they’re seen as quickly as possible,” Girkin says. “In this instance, we performed the glaucoma surgery the very next morning.”

As a regional referral point for glaucoma cases, Girkin says the emergency service sees a wide variety of conditions, but that angle closure glaucoma—with which Hill was suffering—is relatively uncommon in the United States. “Narrow angle glaucoma is very common among certain Asian populations,” he says. “But in people of African and European ancestry, which are the bulk of our population here in the United States, angle closure glaucoma is rare.”

Hill admits she was a little nervous about the surgery, but that she quickly came to grips with its necessity. “Dr. Girkin told me that, because the pressure in my right eye was so high, surgery was the only way to lower the pressure and stop the swelling and the pain. By then I had almost no vision in that eye, so I agreed to be admitted for the procedure the following day.”

A primary concern for both Hill and Girkin involved how much damage had been done, and how much of her vision could be saved, especially since Girkin had found an intraocular pressure of 60 in both of her eyes during her examination, with normal being less than 21. “The optic nerve and retina were really swollen when I first saw her, so I wasn’t sure how much of her vision she was going to get back,” he says, “especially in her right eye.”

As it turned out, the results were all that could be hoped for, with Hill’s vision returning to 20/20 in both eyes, and with the intraocular pressure lowered to 10. “I was very happy with the result, considering the shape she was in when she presented,” Girkin says. “And I also think this is a good example of the important role our emergency glaucoma service plays when physicians or optometrists encounter a patient who requires urgent care. Immediate treatment is the key to preserving as much of the patient’s vision as possible.”

Hill, as can be expected, is delighted by the outcome. “I have my vision back, and the headaches have disappeared,” she says. “Dr. Girkin is a wonderful doctor, and I am very grateful for everything that he has done to restore my vision.”

To learn more:
Call (205) 325-8620, or go to www.uab.edu/eyedoc.
The 2007 Alumni Reception (shown in top two photos and at bottom left) at the American Academy of Ophthalmology’s annual meeting in New Orleans was held at the Ritz-Carlton on Sunday November 11, 2007. In attendance were several UAB alumni, residents, faculty members, and guests such as Mike Merrill, Esq., executive director of the Alabama Academy of Ophthalmology. We will meet again next year at the AAO meeting in Atlanta, and we hope to see you there!

In addition, the Alabama Eye Bank and the Alabama Academy of Ophthalmology have each provided funds (bottom right) to help endow a corneal fellowship honoring Matthew W. Mosteller, M.D. The Matthew Mosteller Endowed Fellowship in Cornea and External Disease will honor his contributions to the field of corneal disease and refractive surgery, and it will provide training and education for future cornea specialists who will practice in Alabama and elsewhere. The University of Alabama Board of Trustees requires a minimum of $200,000 to establish an endowed fellowship, and although we’re nearing that mark, we still need your support. The funds will be invested and protected in perpetuity, with the earnings used to support research and educational missions in corneal disease within the UAB Department of Ophthalmology. To learn more, or to contribute, please contact:

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The UAB Department of Ophthalmology invites you to attend the Annual Clinical & Research Symposium

GUEST SPEAKERS: HELEN KELLER LECTURE LAWRENCE YANNUZZI, M.D. New York, New York Topic: Retina

OPHTHALMOLOGY ALUMNI SPONSORED LECTURE KARL GOLNIK, M.D., M.ED. Cincinnati, Ohio Topic: Neuro-ophthalmology

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Sponsored by the University of Alabama School of Medicine, Division of Continuing Medical Education. For more information contact Lindsay Knox at lknox@uab.edu or (205) 325-8526.
Ophthalmic Insights

Whether it’s due to injury, eye disease, or aging, dealing with vision loss is difficult for patients and their caregivers alike. Helping both deal with this challenge from a psychological standpoint is gaining credence in ophthalmic practice. How can a psychologist help patients deal with vision loss? Laura E. Dreer, Ph.D., an assistant professor in the UAB Department of Ophthalmology and psychologist who sees patients in the Low Vision Rehabilitation Center, discusses the issue and provides helpful suggestions for clinical ophthalmologists.

V: When should a patient be referred to you?
LD: Whatever the reason for a person’s loss of vision, it’s most likely going to have an impact on their functioning in everyday living. It’s a very troubling experience for someone to go through, to be facing the unknown and not really know what’s going to happen to them in the future. This can spur an emotional reaction which can, in some cases, lead to depression or fearfulness and anxiety about the future, and a sense of simply being overwhelmed by their situation. So when an ophthalmologist is making a diagnosis that will understandably be difficult for the patient to accept, it’s a good idea to monitor their reaction in order to detect any potential problems with adjustment, such as despair over their condition or fear regarding how their life may be changed or how they will cope. If the ophthalmologist has any concerns about the patient’s ability to cope effectively with their eye disease in a healthy way, from a psychological standpoint, that would be a good time to refer them to me—or to make the patient aware that this service exists within the department, at the very least. Just knowing that help of this nature is available can give a person who is frightened a sense of hope, and that can result in a more successful adjustment.

V: What is your approach once a patient has been referred?
LD: I initially start with a clinical interview. I’ll listen to what they have to say, in part to gauge where they are in terms of dealing with their situation, and also to let them vent a little if that’s what they need to do. I also utilize a standardized screening measure known as the CES-D, which stands for the Center for Epidemiologic Studies Depression scale. This is a list of about 20 questions that helps me determine how they’re dealing with their vision loss and if it’s had an impact on their emotional functioning. One question asks how often they’ve felt depressed over the past week, and the choices include not at all, rarely, occasionally, sometimes, or most of the time, with seven days out of seven topping the scale. So this gives me some idea of whether or not they’re feeling depressed and, if so, the severity of their symptoms. But depression is just one reaction. Others might include anxiety, frustration, and problems with relationships, etc. Therefore I might use other empirically-based psychosocial instruments to get a sense of the patient’s problems. Once I’ve learned more about what they’re experiencing and their general outlook, I discuss their options and goals for treatment with them. I try to instill a sense of hope that, while they might not be able to change their vision, they can learn how to change their reactions to their unique situation and also develop new and meaningful goals in life. If the patient agrees to short-term treatment, I work to tailor the treatment to meet their specific needs. But one of the most important things I do is to get them engaged in the work we’ll be doing together as quickly as possible. I want them to feel motivated, and to know that they play an active role in their treatment, so we’ll discuss some of the things they may be fearful about—not being able to do some of the activities they’ve taken for granted in the past, or having to learn how to do them differently—and how they can deal with those situations in a productive manner should they arise. I’ll often use the analogy of trying to lose weight, which is something that most people have tried to do at some point in their lives. I tell them that, in the same way, they won’t see results overnight, but if they work hard with the skills they’ll learn, over time they will start to see changes. I tell them there are treatments—both medical and psychological—that are effective and available for people in their situation, and that we in the department will be working on both fronts to help them manage and cope with their vision loss. I want them to understand that nothing’s wrong with them mentally, and that these are normal issues that anyone in their situation might experience.

V: How do you help the patient’s caregivers deal with their added responsibilities?
LD: Again, I try to make everyone involved as comfortable with the process as possible. If I meet with both the patient and the caregiver initially, I’ll watch how they interact with each other. Sometimes you’ll pick up on something in the caregiver’s attitude—whether that be facial expressions or responses to questions—that will make it clear that an individual session with them might be helpful as well. So I might meet with them together in the beginning, then separately if needed. It’s totally up to the patient and their family caregiver. I just make clear that we can approach this in a number of different ways, depending on what they as a family are open to. Usually I find that family members who serve as informal caregivers—as opposed to professional caregivers—are concerned about how they will balance their own life and responsibilities with taking care of their mother, or father, or whoever the patient may be. They also have other concerns...
related to their relative's future, their own finances and relationships, etc. And this is very important, because research is finding that caregivers often experience difficulty in terms of coping with the pressures associated with providing this type of daily, ongoing support. I'll train them in effective strategies they can use that will help them balance these duties with their personal and professional lives, and sometimes educate them about the patient's eye condition. Sometimes addressing the issue at that basic level provides the starting point from which the caregiver can begin understanding what's really going on, and that's when you can start providing them with the tools they'll need to navigate these waters more successfully.

V: What advice do you have for ophthalmologists, in terms of providing a positive atmosphere for patients dealing with difficult news regarding their vision?

LD: The most important thing is to show that you care and are concerned, and that you understand what this means to the patient and how it will affect their lives. At the same time you're caught between the desire to give the patient hope without promising too much, in terms of what can actually be accomplished, so that can be quite a tightrope to walk across. That's why I think on-site psychological resources can be so helpful to ophthalmologists; allowing them to remain focused on the medical aspects of the case with the security of knowing that there are psychological services within the department that can help their patients and families more effectively cope with other equally important concerns such as their mental state and overall psychological well-being. My main suggestion would be that if someone has received a diagnosis of macular degeneration or diabetic retinopathy—just to name a few—that they monitor their patient's reaction. If the patient seems particularly distressed, the ophthalmologist or their technician might want to consider briefly discussing their concerns and explain why they are making a referral for psychological services. They might even want to call me if the patient is here in the hospital so that I can come to their clinic and meet the patient, just to introduce myself and extend an invitation for them to call for an appointment. The most important thing is for the patient to know that they'll be treated medically, of course, but also that we have the resources in place to help them in other important ways as well. When you’re providing patients with the best ophthalmic care that's currently available, and bolstering that by also paying attention to their emotional needs, then you’ll have a patient who is better equipped to meet the challenges of vision loss in the most positive way possible.
2007 Year in Review

AS THE FOLLOWING MATERIAL ILLUSTRATES, the faculty of the UAB Department of Ophthalmology continues to expand its scope of basic and clinical research, engaging in the latest techniques in patient care, and continuing to commit significant time to educational projects. We take great pride in our past accomplishments, and we are excited about the opportunities the future holds. Some noticeable achievements in 2007 include:

- Cynthia Owlsley, Ph.D., professor and vice chair for clinical research, was awarded the N.E. Miles Chair in Ophthalmology at UAB.
- Special recognition including the Secretariat Award from the American Academy of Ophthalmology to Michael Vaphiades, D.O., and Martin Cogen, M.D., being recognized as one of the “The Best Doctors in America.”
- Continued philanthropic support from our alumni and friends totaling more than $280,000 in gifts and pledges.
- Partnering with the Alabama Eye Bank to create the unrestricted grant from Research to Prevent Blindness (RPB), the world’s leading voluntary organization supporting eye research. Research grants and awards to faculty members totaled approximately $3.6 million. Funding sources and project titles are described as follows.

Grants and Awards

THE UAB DEPARTMENT OF OPHTHALMOLOGY received grants from the National Institutes of Health totaling more than $2.6 million for the fiscal year 2006-2007. The department received an unrestricted grant from the EyeSight Foundation of Alabama for $1,060,900 and a $110,000 unrestricted grant from Research to Prevent Blindness (RPB), the world’s leading voluntary organization supporting eye research. Research grants and awards to faculty members totaled approximately $3.6 million. Funding sources and project titles are described as follows.

- **BEST DOCTORS IN AMERICA:**
  - Michael Callahan, M.D.; Martin Cogen, M.D.; Frederick Elias, M.D.;
  - Christopher A. Girkin, M.D.; Lanning Kline, M.D.; John Long, M.D.;
  - Marc Nicholns, M.D.; Robert Morris, M.D.; Robert Phillips, M.D.;
  - Russell Read, M.D.; Michael Vaphiades, D.O.; Milton White, M.D.;
  - C. Douglas Witherspoon, M.D.

- **MARTIN COGEN, M.D.**
  - Prevent Blindness America/Fight for Sight: Enhancing the pediatric clinic used for training ophthalmology residents

- **CHRISTINE CURCIO, Ph.D.**
  - NIH: Bioengineering of transport across Bruch’s membrane
  - National Eye Institute: Quantitative analysis of aging retina
  - Macula Vision Research Foundation: Lipoproteins in human retina: role in age-related maculopathy
  - International Retinal Research Foundation: Lipoproteins and age-related maculopathy: morphologic and genotyping studies
  - EyeSight Foundation of Alabama: Apolipoprotein gene expression in normal and ARM eyes
  - International Retinal Research Foundation: Technology enhancement for retinal research

- **DAWN DECARLO, O.D., M.S.**
  - EyeSight Foundation of Alabama: Predictors of successful optical rehabilitation in age-related maculopathy

- **LAURA E. DREER, Ph.D.**
  - Equity and Diversity Enhancement Program (EDBP) Award: University of Alabama at Birmingham National Eye Institute: Problem solving training and low vision rehabilitation
  - EyeSight Foundation of Alabama: Problem solving training and low vision rehabilitation

- **ANDREW EVERTT, M.D.**
  - Crystal Apple Outstanding Faculty Member Award

- **CHRISTOPHER A. GIRKIN, M.D.**
  - Alabama Eyesight Foundation Eminent Scholar Award
  - Selected as Section Editor, Glaucoma, Ophthalmic News and Education Network, American Academy of Ophthalmology
  - Chair, Communications and Education Committee, American Glaucoma Society
  - Editorial Board American Journal of Ophthalmology
  - Elected to Fellow of the American College of Surgeons
  - National Eye Institute: Quantification of glaucomatous optic neuropathy
  - Research to Prevent Blindness: Physician-Scientist Award
  - Acon: Determinants of compliance with topical treprostinil
  - SOLQ: Randomized, controlled multicenter correlative trial to evaluate the SOLQ Gold Shunt for the reduction of intraocular pressure (IOP) in glaucomatous eyes following failed medical and conventional surgical treatments
  - Glaucoma Research Foundation: Development of a tree shrew model for the study of the role of the laminar cibosis in development and progression of glaucoma
  - EyeSight Foundation of Alabama: Development of a tree shrew model for the study of the role of the laminar cibosis in development and progression of glaucoma
  - Pfizer: A Phase 2, 28-day parallel-group double-masked, dose finding study comparing the safety and efficacy of PF-03187207 (0.003%, 0.006%, 0.012%, 0.024%, and 0.04%) to Latanoprost (0.005%)
  - Carl Zeiss Meditec: Collection of normative data for retinal and retinal nerve fiber layer thickness and volume measurements using the Cirrus HD-OCT
  - Optovue: Collection of normative and glaucomatous data for the RTVue-100

- **CLYDE GUIDRY, Ph.D.**
  - National Eye Institute: The insulin-like growth factor system and Muller cells
  - International Retinal Research Foundation: Retinal pigment epithelial cells and the insulin-like growth factor system
  - Research to Prevent Blindness: James S. Adams Scholar Award

- **JUDITH KAPP, Ph.D.**
  - National Eye Institute: Retinal cell transplantation tolerance and rejection
  - Research to Prevent Blindness: RPB Senior Scientist Investigator Award
  - Elected to Nominating Committee of the American Association of Immunologists

- **LANNING B. KLINE, M.D.**
  - America’s Top Ophthalmologists Award
  - Research to Prevent Blindness: Departmental Award

- **GERALD McGWIN, Jr., Ph.D.**
  - NIH: Improving the quality of diabetes eye care
  - AAA Foundation for Traffic Safety: Medication use and motor vehicle collisions among older drivers
  - EyeSight Foundation of Alabama: Protective eyewear and work-related eye injury: a case-crossover study

- **CYNTHIA OWLSLEY, Ph.D.**
  - Nathan E. Miles Chair of Ophthalmology, UAB
  - National Institute on Aging: Visual dysfunction and aging: underlying mechanisms
  - National Eye Institute: Clinical Vision Research Unit at UAB
  - National Eye Institute: Center for Translational Research on Aging and Mobility-Core B
  - National Eye Institute: Planning a clinical trial on low vision rehabilitation
  - Pfizer: Investigation of macugen treatment on vision under low luminance in age-related macular degeneration
  - EyeSight Foundation of Alabama: Project IMPACT: Developing eye health educational curricula for older African Americans and the eye care providers serving their communities
  - NIH: Age-Related Eye Disease Study II (AREDSII)
  - EyeSight Foundation of Alabama: Pivotal Validation Trial of the Adapt Dx.
  - Pfizer: Project CHARGE: increasing the rate of comprehensive eye care utilization by older African Americans through a community-based health education program
  - EyeSight Foundation of Alabama: Continuation—Clinical Vision Research Unit

- **RUSSELL W. READ, M.D.**
  - National Eye Institute: Complement inhibition in experimental autoimmune uveitis
  - Allergan Sales: A 4-week, multicenter, masked, randomized trial (with a 20-week masked extension) to assess the safety and efficacy of 700 pg and 350 pg Dexamethasone posterior segment drug delivery system (DexPS DDS) applicator system compared with Sham DexPS DDS applicator system
in the treatment of non-infectious uveal inflammation of the anterior segment in patients with anterior uveitis.

**EyeSight Foundation of Alabama:** Role of complement anaphylatoxin receptors in experimental autoimmune uveitis

LX211-02-UV, "A Double-Masked, Placebo-Controlled, Multi-Center, Dose-Ranging Study To Assess The Efficacy And Safety Of LX211 As Therapy In Subjects With Active Sight Threatening, Non-Infectious Uveitis"

LX211-03-UV, "A Double-Masked, Placebo-Controlled, Multi-Center, Dose-Ranging Study To Assess The Efficacy And Safety Of LX211 As Therapy In Subjects With Clinically Quiescent Sight Threatening, Non-Infectious Uveitis"

**Role of complement anaphylatoxin receptors in experimental anterior uveitis**

**EyeSight Foundation of Alabama:** Inducing retinal ganglion cell genesis from RPE cells

**International Retinal Research Foundation:** A potential genetic link between diabetes and retinopathy

**National Eye Institute:** Cell communication in retina

**National Eye Institute:** Molecular biology of retinal development

**Publications**


**Research to Prevent Blindness:** Physician-Scientist Award

**Michael Vaphiades, D.D.**

American Academy of Ophthalmology Secretariat Award

America’s Top Physicians Award

**Shi-Zhen Wang, Ph.D.**

EyeSight Foundation of Alabama: Inducing retinal ganglion cell genesis from RPE cells

International Retinal Research Foundation: A potential genetic link between diabetes and retinopathy

National Eye Institute: Cell communication in retina

National Eye Institute: Molecular biology of retinal development

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definitive care.


2007 Year in Review

AS THE FOLLOWING MATERIAL ILLUSTRATES, the faculty of the UAB Department of Ophthalmology continues to expand its scope of basic and clinical research, engaging in the latest techniques in patient care, and continuing to commit significant time to educational projects. We take great pride in our past accomplishments, and we are excited about the opportunities the future holds. Some noticeable achievements in 2007 include:

- Cynthia Owelsy, Ph.D., professor and vice chair for clinical research, was awarded the N.E. Miles Chair in Ophthalmology at UAB.
- Special recognition including the Secretariat Award from the American Academy of Ophthalmology to Michael Vaphiades, D.O., and Martin Cogen, M.D., being recognized as one of the “The Best Doctors in America.”
- Continued philanthropic support from our alumni and friends totaling more than $280,000 in gifts and pledges.
- Partnering with the Alabama Eye Bank to create the

Grants and Awards

THE UAB DEPARTMENT OF OPHTHALMOLOGY received grants from the National Institutes of Health totaling more than $2.6 million for the fiscal year 2006-2007. The department received an unrestricted grant from the EyeSight Foundation of Alabama for $1,060,900 and a $110,000 unrestricted grant from Research to Prevent Blindness (RPB), the world’s leading voluntary organization supporting eye research. Research grants and awards to faculty members totaled approximately $3.6 million. Funding sources and project titles are described as follows.

BEST DOCTORS IN AMERICA: Michael Callahan, M.D.; Martin Cogen, M.D.; Frederick Elsas, M.D.; Christopher A. Girkin, M.D.; Lanning Kline, M.D.; John Long, M.D.; Marc Nichelson, M.D.; Robert Morris, M.D.; Robert Phillips, M.D.; Russell Read, M.D.; Michael Vaphiades, D.O.; Milton White, M.D.; C. Douglas Witherspoon, M.D.

MARTIN COGEN, M.D.
Prevent Blindness America/Fight for Sight: Enhancing the pediatric clinic used for training ophthalmology residents

CHRISTINE CURCIO, Ph.D.
NIH: Bioengineering of transport across Bruch’s membrane
National Eye Institute: Quantitative analysis of aging retina
Macula Vision Research Foundation: Lipoproteins in human retina: role in age-related maculopathy
International Retinal Research Foundation: Lipoproteins and age-related maculopathy: morphologic and genotyping studies
EyeSight Foundation of Alabama: Apolipoprotein gene expression in normal and ARM eyes
International Retinal Research Foundation: Technology enhancement for retinal research

DAWN DECARLO, O.D., M.S.
EyeSight Foundation of Alabama: Predictors of successful optical rehabilitation in age-related maculopathy

LAURA E. DREER, Ph.D.
Equity and Diversity Enhancement Program (EDEP) Award: University of Alabama at Birmingham National Eye Institute: Problem solving training and low vision rehabilitation
EyeSight Foundation of Alabama: Problem solving training and low vision rehabilitation

ANDREW EVERETT, M.D.
Crystal Apple Outstanding Faculty Member Award

CHRISTOPHER A. GIRKIN, M.D.
Alabama Eyewitness Foundation Eminent Scholar Award
Selected as Section Editor, Glaucoma, Ophthalmic News and Education Network, American Academy of Ophthalmology
Chair, Communications and Education Committee, American Glaucoma Society
Editorial Board American Journal of Ophthalmology
Elected to Fellow of the American College of Surgeons
National Eye Institute: Quantification of glaucomatous optic neuropathy
Research to Prevent Blindness: Physician-Scientist Award
Allergan: Determinants of compliance with topical travoprost
SOLX: Randomized, controlled, multicenter comparative trial to evaluate the SOLX Gold Shunt for the reduction of intraocular pressure (IOP) in glaucomatous eyes following failed medical and conventional surgical treatments
Glaucoma Research Foundation: Development of a tree shrew model for the study of the role of the lamina cribosa in development and progression of glaucoma
EyeSight Foundation of Alabama: Development of a tree shrew model for the study of the role of the lamina cribosa in development and progression of glaucoma
Pfizer: A Phase 2, 28-day parallel-group double-masked, dose finding study comparing the safety and efficacy of PF-03187207 (0.003%, 0.006%, 0.012%, 0.024%, and 0.04%) to Latanoprost (0.005%)
Carl Zeiss Meditec: Collection of normative data for retinal and retinal nerve fiber layer thickness and volume measurements using the Cirrus HD-OCT
Optovue: Collection of normative and glaucomatous data for the RTVue-100

CYLDE GUIDRY, Ph.D.
National Eye Institute: The insulin-like growth factor system and Muller cells
International Retinal Research Foundation: Retinal pigment epithelial cells and the insulin-like growth factor system
Research to Prevent Blindness: James S. Adams Scholar Award

JUDITH KAPP, Ph.D.
National Eye Institute: Retinal cell transplantation tolerance and rejection
Research to Prevent Blindness: RPB Senior Scientific Investigator Award
Elected to Nominating Committee of the American Association of Immunologists

LANNING B. KLINE, M.D.
American’s Top Ophthalmologists Award
Research to Prevent Blindness: Departmental Award

GERALD McGWIN, Jr., Ph.D.
NIH: Improving the quality of diabetes eye care
AAA Foundation for Traffic Safety: Medication use and motor vehicle collisions among older drivers
EyeSight Foundation of Alabama: Protective eyewear and work-related eye injury: a case-crossover study

CYNTHIA OWESLEY, Ph.D.
Nathan E. Miles Chair of Ophthalmology, UAB
National Institute on Aging: Visual dysfunction and aging: underlying mechanisms
National Eye Institute: Clinical Vision Research Unit at UAB
National Eye Institute on Aging: Center for Translational Research on Aging and Mobility-Core B
National Eye Institute: Planning a clinical trial on low vision rehabilitation
Pfizer: Investigation of macugen treatment on vision under low luminance in age-related macular degeneration
EyeSight Foundation of Alabama: Project IMPACT: Developing eye health educational curricula for older African Americans and the eye care providers serving their communities
NIH: Age-Related Eye Disease Study II (AREDS2)
EyeSight Foundation of Alabama: Pivotal Validation Trial of the Adapt Dx.
Pfizer: Project CHARGE: increasing the rate of comprehensive eye care utilization by older African Americans through a community-based health education program
EyeSight Foundation of Alabama: Continuation-Clinical Vision Research Unit

RUSSELL W. READ, M.D.
National Eye Institute: Complement inhibition in experimental autoimmune uveitis
Allergan Sales: A 6-week, multicenter, masked, randomized trial (with a 20-week masked extension) to assess the safety and efficacy of 700 pg and 350 pg Dexamethasone posterior segment drug delivery system (BEXYS DDS) applicator system compared with Sham BEXYS DDS applicator system
Andrew W. Everett, M.D., an assistant professor in the UAB Department of Ophthalmology, was chosen to receive the Crystal Apple award by senior residents during their graduation ceremony last June. The award is bestowed each year upon a member of the faculty who the five seniors found particularly helpful during their residency. This is in addition to the Brass Apple award Everett received in 2001, when he was graduating from the department’s program, and which the first- and second-year residents awarded to a senior who had made a particular impact on them during their training.

Judith Kapp, Ph.D., professor and vice chair for basic research in the UAB Department of Ophthalmology, has been elected to the Nominating Committee of the American Association of Immunologists for 2007-2008. The American Association of Immunologists is a professional society representing more than 6,500 of the world’s leading experts on the immune system.

The American Academy of Ophthalmology recently announced its 2007 Secretariat Awards to physicians who have made significant contributions to the academy and the ophthalmology profession. Michael S. Vaphiades, D.O., professor in the UAB Department of Ophthalmology, was honored with the award in recognition of his professional contributions in the areas of “Quality Care and Knowledge Base Development; New Ophthalmic Information; Ophthalmic Knowledge; and Clinical Education.” The award was presented at the 2007 joint meeting held in New Orleans in November. Vaphiades is chief of the Neuro-Ophthalmology and Electrophysiology Services at UAB and also holds secondary appointments in the UAB Departments of Neurology and Surgery, Division of Neurosurgery.