

The knowledge exchanged at the Rich Lectures throughout the series's 10-year history has been invaluable to the research efforts of the Department of Ophthalmology.

A Rich Resource for Research

The Loris and David Rich Lecture Series in Visual Science

Prior to each lecture, Loris Rich would arrive half an hour early to visit with Alston Callahan, M.D., and then take her seat beside him in the first or second row of the auditorium. One evening, as the speaker concluded, she turned to Callahan and said, "Who would have ever thought that a little girl from Selma, Alabama, would someday help bring together such an amazing group of scientists!"

Such was the humility of a woman who, with her husband, made a million-dollar endowment to establish the Loris and David Rich Lecture Series, which has been housed in, and hosted by, the UAB Department of Ophthalmology for more than a decade. "That was part of her charm," says Callahan. "This kind, intelligent woman never lost sight of her good fortune in being able to do so much good for others."

Since the lecture series was founded in 1993, it has brought scores of retinal practitioners and researchers to the Callahan Eye Foundation Hospital—nearly 70 at last count—to talk about their own work and to learn more about the studies being conducted by the research faculty in the Department of Ophthalmology. Callahan says this focus is just what Loris Rich wanted: "Loris developed macular degeneration fairly late in life, but even before that time she understood that conditions such as cataracts had mostly been addressed, and that the big questions—and answers—were to be found in the retina."

This understanding prompted Loris and David Rich, a dentist who practiced for many years in Birmingham, to help fund the International Retinal Research Foundation, Inc., of which Callahan is founder and president. The foundation already has made grants of more than \$2.5 million to retinal researchers around the country, with about half of those funds being awarded to scientists who work in the department at UAB. Many of the guest lecturers are chosen by the

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department's research faculty, with input provided by Callahan and Lanning Kline, M.D., chair of the UAB Department of Ophthalmology.

One recent lecturer was Ruth Caldwell, Ph.D., a professor of cell biology, anatomy, and ophthalmology at the Medical College of Georgia. "My topic was related to the potential role of oxidative stress in causing reduced blood flow to the retina," she says. "I was honored to be asked to visit UAB because of its excellent reputation and also the caliber of the researchers who are working in the department. It had been about 15 years since I'd visited Birmingham, and I was amazed by how much the university—and especially the department—had grown. During my two-day visit, I had the opportunity to meet about 10 members of the faculty and to have lunch with the residents, so it was just a wonderful experience."

She says that she also took away new knowledge in addition to sharing her own. "From my conversations with the research faculty—many of whom I already knew personally, such as Ray Dacheux, and by reputation, such as Christine Curcio, Clyde Guidry, and Cynthia Owsley—I was able to develop some fresh ideas that I'll be able to introduce into my own research. That's a big part of the value of these face-to-

face encounters that visiting other institutions and lecturing can provide."

In light of all the information that has been shared—and the collaborations created—by the lecture series, Alston Callahan enjoys recalling the beginnings of his relationship with the Rich family. "Abe Rich, who was a social acquaintance, called me one day and said that his wife, Sadie, was having problems with her eyes, but she was deathly afraid of hospitals, so I agreed to visit their home and see what I could do to help her." He found Mrs. Rich had dry-eye syndrome, which he was able to treat—with her daughter-in-law, Loris, standing by as an assistant. "That began a long association, and a friendship, that lasted for many years."

Even though Loris wasn't formally trained in financial matters, Callahan says, she had worked for many years in the trust department of the Bank of Alabama, now AmSouth. Much to her surprise, both she and her husband eventually realized that they made better investment decisions than many professionals trained to handle investments for a living.

"She really believed in learning everything she could about a company, buying shares in the ones that she felt strongly about and then holding onto those shares rather than diversifying," Callahan says. "One of those companies was Coca-Cola, and another was Hewlett-Packard, so that proves she had pretty good business instincts. And David was quite astute himself, simply for allowing her to handle their invest-

Loris Rich (below) and her husband, David, first became acquainted with the Department of Ophthalmology when Alston Callahan successfully treated David's mother, Sadie, for dry-eye syndrome. The relationship that resulted paid huge dividends for the department and for UAB.



ments and finances, because she made them quite wealthy."

The fortune that she acquired as a result allowed her husband to retire from his practice, and gave the couple the opportunity to fund worthy ventures. "She asked me once if all the research she was funding resulted in a positive outcome, and I said, 'No, not necessarily,'" Callahan remembers. " 'But that means that others won't waste their resources going down that same road.' "

"She said, 'Well that's quite smart, then, isn't it?' " Callahan recalls with a laugh.

But there's a much larger issue to consider when research is involved, he adds. "When I was still practicing, there were times when patients would say things like, 'Oh, Dr. Callahan, I couldn't read the paper or even recognize my friends before, but now you've restored my ability to do all of that,' which was a reward far beyond any financial gains. And while that was all quite gratifying, to be completely honest with you, that just involved a single patient."

Vision research can lead to a much larger return. "Despite all the time and effort and the years of hard work

Rich Legacies

The International Retinal Research Foundation

The Rich Lecture Series in Visual Science

The Rich Retinal and Eye Disease Research Fund

The Pulmonary Care Unit at Children's Hospital

Recruitment of renowned retinal researchers to UAB

involved in conducting research, when a major discovery is finally made, then you've helped an unlimited number of people," he explains. "So the attraction and the lure of research is that it's always an investment in the future. When you help one patient, that's wonderful—but when you can help thousands or even millions avoid conditions such as age-related macular degeneration, or glaucoma, or diabetic retinopathy, then you're helping people wholesale rather than retail, in a manner of speaking."

David Rich passed away in 1993, just before the Pulmonary Care Unit they'd funded at Children's Hospital was officially dedicated. Loris continued an active life, traveling to Israel and to New York City with Callahan and his wife on two separate occasions. "I've been a member of the Explorer's Club for many years, and our visits would correspond with their annual meetings, which Loris fully enjoyed," Callahan says. "She'd never seen a city the size of New York, and it was a delight for my wife and me to serve as her guide."

Loris Rich's health began to fail in 1999, and she died in September of that year. In a publication written by Callahan, *Loris and David Rich: Their Legacies*, he writes, "How happy they would be to see the growing list of distinguished scientists who have lectured at the Eye Foundation Hospital over the years, and to know that the lecture series will continue indefinitely."

"We continue to be conscientious guardians of the legacy that Loris and David entrusted to us, and to make sure that their gift is used to further research into the wide variety of diseases that affect the retina," says Callahan.

(continued on back cover)

Excellence in education is a core mission of the UAB Department of Ophthalmology. Yet achieving that excellence requires a multitude of factors—highly motivated residents, outstanding faculty, a comprehensive library, and great educational programs. The Loris and David Rich Lecture Series in Visual Science is just such a program. Since its inception in the mid-1990s, the Department has hosted the best vision researchers from around the country, including Paul Sieving, M.D., Ph.D., currently the Director of the National Eye Institute. Because of this lecture series, members of the department hear firsthand about the latest breakthroughs in vision science. And as the cover story in this issue of Vision points out, these scientists interact with and learn from our own outstanding faculty. With the encouragement of Alston Callahan, M.D., the Riches have perpetuated a wonderful legacy—continuing to educate and support vision scientists at UAB as they engage in research to better understand and, hopefully, cure many blinding diseases.

You will read of another important educational program—teaching ethical standards to current and future ophthalmologists. This program is sponsored by the American Academy of Ophthalmology and now is a requirement for recertification by the American Board of Ophthalmology. Earlier this year, Charles Zacks, M.D., vice chair of the Academy's Ethics Committee, visited the department. He discussed in a comprehensive fashion a variety of important issues including informed consent, clinical competence, and maintaining high standards in delivery of patient care.

And who are the beneficiaries of these educational efforts? Certainly, current and past graduates of the program. One such example is Steve Hamilton, M.D., our featured alumnus. A product of our residency program, Dr. Hamilton now practices in Atlanta, Georgia, performing the latest in corneal and refractive surgical techniques. He is a leader in his field, and we take pride in contributing to his training. Also featured in this issue of Vision is Julio DeLeon-Ortega, M.D., currently a glaucoma research fellow in the department. Under the mentorship of Christopher Girkin, M.D., DeLeon-Ortega is completing his Ph.D. by investigating structural and functional correlates in glaucoma. Not only could his studies lead to earlier detection of glaucoma, but they also could provide a better understanding of the pathobiology of this disease.

We are committed to sustain excellence in our educational mission in the UAB Department of Ophthalmology. We are most grateful to benefactors such as Loris and David Rich for helping us meet that commitment.



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



from the department chair

An Update on the Low Vision Center

Battling Vision Loss on Many Fronts



The Low Vision Center assists patients for whom life has literally become a blur due to vision loss.

WHEN YOU'RE LIVING with impaired vision, the simplest tasks can become difficult—even navigating a familiar room can cause you to stumble. But the UAB Center for Low Vision Rehabilitation hasn't missed a single step since it was established two years ago, taking a multidisciplinary approach to helping patients make the most of their remaining vision.

"The last patient I saw was number 1,421, so we're seeing more than 700 patients per year," says Donald Fletcher, M.D., an associate professor in the UAB Department of Ophthalmology and co-director of the center. "One of the real strengths of our program is its comprehensive nature: not just giving somebody a magnifier, patting them on the back, and sending them on their way."

Marsha Swanson, O.D., an assistant professor in the UAB School of Optometry

and codirector of the clinic, agrees. "We've had a low-vision clinic since the School of Optometry was founded, so we've been a primary-care provider for quite a few years now. But now we're able to refer patients to this comprehensive low-vision clinic for in-depth, ongoing care to help patients come to grips with their vision loss and teach them how to deal with it effectively."

Options for treatment, Swanson says, are "patient-specific"—an individual with 20/50 vision who simply needs to conduct everyday activities such as shop-

ping or paying bills might not need as much assistance as someone whose job requires close inspection of blueprints or legal documents. "It's the more complicated cases that we refer to the Low Vision Clinic," she says.

That's where occupational therapist (OT) Beth Barstow, OTR/L, comes in. Along with colleagues Jennifer Bell and Mary Warren, also OTs holding the same degree, she conducts initial patient evaluations, discussing the visual deficits the patient is experiencing and determining the best approach for that particular individual.

"With someone who has macular degeneration, for example, we'll help them use what we call 'eccentric viewing,' or learning to see around their blind spot," Barstow says. "But with glaucoma, it's just the opposite—they need to ambulate in their environment despite the loss of their peripheral field.

This rehabilitative component is something that really makes us unique."

Another unique aspect of the center is its relationship with the UAB Department of Occupational Therapy. "Ours is the first OT curriculum in the country to develop a graduate program in low-vision rehabilitation," says Barstow. "So the students in that program are over here observing our work, and when they graduate, they're able to either provide those services themselves or refer their patients to the right person."

The Low Vision Center recently brought in Timothy Elliott, Ph.D., from the UAB Department of Psychology to begin laying the groundwork for both individual and group-therapy programs for the center's patients. "We also hope to get more involved in research," says Fletcher. Pointing to a recent seminar hosted by the department to help pursue National Eye Institute funding, he adds, "because very little research has been done to determine the best rehabilitative treatments to achieve optimal outcomes."

In addition to all that's been accomplished so far—including the establishment of a satellite clinic in Montgomery—Fletcher says there have been other high points as well. "We were instrumental in getting Medicare to recognize visual impairment as a diagnosis that merits rehabilitation, so that has helped with clinical reimbursement—along with a tremendous amount of support from the EyeSight Foundation of Alabama.

"But from a personal standpoint, it's wonderful to see what the concepts that I've long dreamed about implementing can actually do for our patients," he says. "So that's been very gratifying, you bet!"

Grand Rounds

Basic Ethical Tenets for Ophthalmologists

CHARLES M. ZACKS, M.D., who is vice chair of the Ethics Committee for the American Academy of Ophthalmology and practices at the Maine Eye Center in Portland, recently made a presentation during Grand Rounds at the UAB Department of Ophthalmology. The following is a synopsis of his comments.

Competence: *Ophthalmologists should not perform procedures beyond their specific training and experience.*

Competence is not static, but must be maintained by remaining up-to-date in the field and learning new skills.

Practicing ophthalmologists must minimize risk to patients as they learn new skills. The topic of the "learning curve" is addressed in Academy Advisory Opinions and other sources.

Informed consent: *It is a physician's responsibility to provide sufficient information. This should include the rationale, risks, benefits, alternatives, and potential complications of a proposed treatment. Although legal standards may differ, the ethical standard is for the physician to ensure that the patient understands these aspects of the proposed treatment. If the patient is not competent to sign, surrogates legally may be designated to do so.*

Clinical trials and investigative procedures: *Clinical research involves a special case for informed consent. First, the research protocols should be approved by the appropriate review mechanism, such as institutional review boards. Second, the enrolled patients should understand clearly that they are participating in research, and specifically consent to being included in a research protocol. Use of patient data in a prospective clinical research project without the patient's knowledge or consent is unethical.*

Other opinions: *Patients' requests for other opinions should be respected.*

Neglecting to obtain consultations as appropriate can be a source of trouble, usually through failure to recognize the limits of one's own competence, or disinclination to have others see evidence of complications.

Pretreatment assessment:

Documentation should reflect patients' unprompted reports of problems and not be influenced by incentives to find indications for treatment. Skewing surgical or other treatment indications for secondary motives such as increasing one's training or practice experience, increased remuneration, or completion of research, is unethical.

Delegation of services: *In both academic and practice settings, the ophthalmologist is under ethical obligation not to delegate aspects of care to auxiliaries unless they are adequately trained and supervised to perform the delegated function. In the academic setting, the attending physicians are under obligation to adequately mentor and supervise residents and fellows, and conversely, the trainees must not undertake actions beyond their competence unless mentors are able to guide them appropriately.*

Postoperative care: *In general, surgeons are responsible for postoperative care, and should provide aspects of care within their unique competence. If care is to be transferred, consent should be obtained before surgery from both the patient and the receiving practitioner.*

Misrepresentation of procedures/materials: *Services the ophthalmologist provides must be described truthfully, and misrepresentation of services or their cost is unethical. This can occur through significant omissions or distortions, or by using or avoiding specific language. Examples might include exaggerating the danger of some conditions or charging for more extensive surgery than was performed.*

Under/overtreatment: *Doctors should recommend tests or procedures in the best interest of the patient. Overprovision of services, presumably for financial gain, but also for other motives—including wider surgical experience or for undisclosed clinical research—is unethical.*

Commercial concerns/conflicts of interest: *Commercial conflicts of interest should not alter one's clinical judgment. This might include ownership of surgery facilities, an optical shop, significant stock ownership, or a consulting relationship with a pharmaceutical or equipment manufacturer. Inappropriately large fees for referring surgical patients to others may also raise concerns.*

Doctor-to-doctor communication: *Communication between ophthalmologists should be accurate and truthful, and negative interrelations between physicians must not be allowed to adversely affect patient care. For example, it is unethical for physicians to express their differences or animosity by withholding or slowing exchange of patient information.*

UAB Department of Ophthalmology

TO PROVIDE our readers a glimpse into projects and personalities in the department, we profile selected faculty members in each issue of *Vision*. The names of faculty profiled in this issue appear in bold below.

Academic Faculty

Michael Callahan, M.D.	Professor
Martin Cogen, M.D.	Associate Professor
Jeffrey Crain, M.D.	Assistant Professor
Christine Curcio, Ph.D.	Professor
Ramon Dacheux, Ph.D.	Professor
Frederick Elsas, M.D.	Associate Professor
Richard Feist, M.D.	Assistant Professor
Donald Fletcher, M.D.	Associate Professor
Christopher Girkin, M.D.	Associate Professor
Clyde Guidry, Ph.D.	Associate Professor
Greg Jackson, Ph.D.	Assistant Professor
Wade Joiner, M.D.	Assistant Professor
James Kimble, M.D.	Associate Professor
Lanning Kline, M.D.	Professor and Chair
Virginia Lolley, M.D.	Assistant Professor
John Long, M.D.	Assistant Professor
John Mason, M.D.	Assistant Professor
Andrew Mays, M.D.	Assistant Professor
Gerald McGwin Jr., Ph.D.	Associate Professor
Robert Morris, M.D.	Associate Professor
Cynthia Owsley, Ph.D.	Professor
John Parker, M.D.	Assistant Professor
Robert Phillips, M.D.	Associate Professor
James Powell, M.D.	Associate Professor
Russell Read, M.D.	Assistant Professor
Carol Rosenstiel, O.D.	Associate Professor
Kay Scilley, Ph.D.	Assistant Professor
Harold Skalka, M.D.	Professor
Jason Swanner, M.D.	Assistant Professor
Michael S. Vaphiades, D.O.	Associate Professor
Andrew Velazquez, M.D.	Assistant Professor
Shu-Zhen Wang, Ph.D.	Associate Professor
Milton White, M.D.	Assistant Professor
Douglas Witherspoon, M.D.	Associate Professor
Jeff Yee, M.D.	Instructor

Clinical Faculty

Wade Brock, M.D.	Instructor/Fellow
James Byrne, M.D.	Clinical Instructor
Alston Callahan, M.D.	Clinical Professor
Britton Carter, M.D.	Clinical Instructor
William Cox	Adjunct Assistant Clinical Professor
Susan Eiland, M.D.	Assistant Clinical Professor
Andy Everett, M.D.	Clinical Instructor
Greer Geiger, M.D.	Assistant Clinical Professor
Christopher Kelly, M.D.	Clinical Instructor
James Kelly, M.D.	Clinical Instructor
Price Kloess, M.D.	Assistant Clinical Professor
Ferenc Kuhn, M.D.	Associate Clinical Professor
Tirso Mark Lara, M.D.	Instructor/Fellow
Elmar Lawaczek, M.D.	Clinical Professor
Ralph Levene, M.D.	Clinical Professor
Michael Massey, M.D.	Assistant Clinical Professor
Nancy Medeiros, M.D.	Assistant Clinical Professor
Thomas H. Metz, M.D.	Assistant Clinical Professor
Marc Michelson, M.D.	Assistant Clinical Professor
John Morgan, M.D.	Assistant Clinical Professor
John Owen, M.D.	Clinical Instructor
Scott Parma, M.D.	Instructor/Fellow
Roswell Pfister, M.D.	Clinical Professor
Elise Cox Pratt	Adjunct Instructor
Benjamin W. Roberts, M.D.	Instructor/Fellow
Philip H. Scharper Jr., M.D.	Instructor/Fellow
Wayne Taylor, M.D.	Clinical Instructor
Warren A. Thompson, M.D.	Instructor/Fellow
Len Tucker, M.D.	Instructor/Fellow
Donald Turnbull, M.D.	Associate Clinical Professor

Cynthia Owsley, Ph.D.

BARTIMAEUS WAS A BIBLICAL CHARACTER whose eyesight was restored through faith. Cynthia Owsley, Ph.D., hasn't quite accomplished any miracles of that scale, but the insights gained from her vision research have helped make driving safer for thousands of older motorists—and the substantial benefits from that research earned her the Bartimaeus Award from the Detroit Institute of Ophthalmology last year.

Owsley, who has been with the Department of Ophthalmology since 1982, received the award at the 2003 World Congress on the Eye and the Auto, an automobile-industry-sponsored conference on the role of vision in safe driving. "It's a scientific program where we talk about a variety of topics—how vehicles can be made safer from a visual standpoint, how highways can be made safer," she says, "but two of the specific topics we address is how vision impairments and problems impact safe driving, and what we can do to enhance driver safety from a vision standpoint."

Owsley has dealt with these issues for nearly 15 years, and she was thrilled to have her work recognized. "The award is beautiful," she says. "Obviously, I was deeply honored."

One of the most important discoveries made by Owsley's research group concerns medical interventions to reduce acci-

Sheffield H. Young

SHEFFIELD YOUNG'S 14-YEAR CAREER in health-care management has taken him all across the Southeast—"from Mississippi to the Carolinas"—and exposed him to a wide variety of specialties ranging from family practice to obstetrics and gynecology. However, managing the clinical practices of the Ophthalmology Services Foundation (OSF) might rank as the most satisfying work he's ever done.

"I think the rewards of treating vision problems are very different from treating problems in urology or an OB/GYN problem," he says. "With pediatric ophthalmology, for instance, I've talked to parents who say Dr. Martin Cogen has saved their children's sight, and that's amazing."

OSF might also feature one of the most diverse patient bases Young has ever worked with. "We do see patients from birth to late in life, I guess," he says with a smile. "We see infants in the hospital within weeks or even days of being born, but on the other hand, a large segment of our practice is the Medicare population. And that's also something that is different from urology and OB/GYN."

"We have a large African-American population, many of whom have glaucoma," he adds. "And we also perform a lot of

dent risks among older drivers. “We found that cataract surgery reduces older adults’ crash risk by 50 percent,” she says. “That’s important to society, because no one has ever really identified a way to lower crash risk in older drivers.

“I wouldn’t say that the findings promote cataract surgery, but it does emphasize that when you are examining a patient who has cataracts, you need to have a discussion about driving,” she continues. “The patients have to make the decision as to whether they have the surgery or not, but it should be a part of the discussion, especially if the patient has a lifestyle that depends strongly on driving—it should be one of the issues to consider.”

Owsley’s career in ophthalmology began with research into people at the opposite end of their life span—“I was very interested in visual development in infants,” she recalls. “But following that, I did a postdoctoral fellowship at Northwestern University, and I became very interested in aging and the effects it has on vision. . . . Because so few people were studying it at the time, I thought this would be a unique opportunity to work in an area where there was a great need.”

Owsley’s interest in public health convinced her to return to graduate school in 1990 and pursue a master’s degree from the UAB School of Public Health. “It was challenging because I was a full professor and I hadn’t been a student for a long time,” she recalls with a laugh.



Cynthia Owsley’s latest research focuses on reducing accident risks for older drivers who are more vulnerable to vision loss.

It did give her experience that she and husband Michael Sloane, Ph.D., a professor in the Department of Psychology who was recently named director of UAB’s Honors Program, could impart to their two children. Their daughter Maeve is finishing up her college search as a senior at Mountain Brook High School, while son Peter attends the University of Chicago.

“Over the summer, he worked in the trauma center with Dr. Loring Rue here at UAB, and he enjoyed that a great deal,” Owsley says. “I think he’s still toying with the idea of going to medical school.”



Sheffield Young says managing the OSF clinic might be the most satisfying work he’s done in his 14-year career.

University of Alabama in 1990, he managed practices in Tuscaloosa, Nashville, and even as far away as Mississippi

routine eye care, seeing patients who are coming in for their regular eye exams. So we really do have a broad base of patients.”

Young first got exposure to the health-care field working as an orderly in a hospital in his hometown of Shreveport, Louisiana, at age 16. After receiving his degree in health-care management from the

and North Carolina before joining the UAB Department of Ophthalmology in December 1999.

The job originally appealed to him because “it was an opportunity to manage a growing practice”—an appeal that Young says is also the job’s biggest challenge. “I think the most exciting aspect of my job in the last four and a half years has just been keeping up with the ‘growing pains’ of the department,” he says, adding that the clinic is still actively recruiting doctors to handle ophthalmology’s many subspecialties.

But Young says he appreciates the way everyone in the department is given the chance to contribute to the recruiting and hiring process. “I would say the chairman takes the lead role, but the full-time faculty and myself all take an active role in recruiting,” he says. “We all have input—I think Dr. Kline’s given everyone on the faculty opportunities to meet and give feedback on different candidates.”

In the end, the most challenging part of his job has also been one of the most rewarding: getting to watch the department grow, and seeing his work pay tangible benefits.

“When I started here, we had five physicians who were seeing patients—today we’ve got twice that many. The space has probably doubled, too, in the four years that I’ve been here,” Young says. “Overall, it’s been near-constant growth. And we’re still out there recruiting!”

A Chance at Sight

From a Terrible Ordeal Comes Optimism

THE SEASIDE OF HAIFA, ISRAEL, can be beautiful in early October.

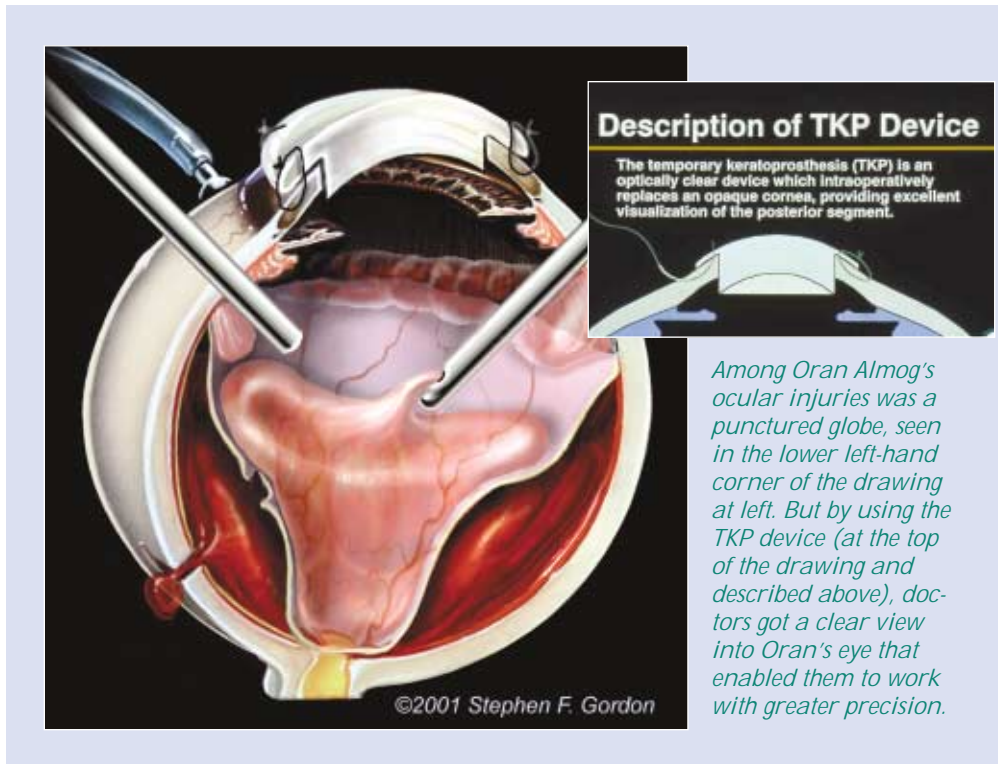
Ten-year-old Oran Almog was having lunch with his family and grandparents at Maxim, a popular beachfront restaurant jointly owned by Arabs and Jews, when a young woman wired with explosives walked into the crowded dining room. In a thundering flash, Oran's world went dark. His father, brother, cousin, and grandparents were among the 21 killed, and he, his mother, and sister were three of the more than 55 wounded.

Oran's numerous injuries included one eye that was completely destroyed, and the other was so badly damaged that his doctors felt the only choice was to remove it. But his mother pleaded with them to find a way to save the eye. The search for other options led Israeli doctors to the UAB eye trauma team that had performed surgery on victims of the U.S. Embassy attack in Kenya and the Birmingham clinic bombing.

In performing more than 200 surgeries, Robert Morris, M.D., Doug Witherspoon, M.D., and Robert Phillips, M.D., have found that a temporary keratoprosthesis (TKP) and close teamwork between subspecialties can be the keys to saving vision in eyes that might otherwise have to be removed.

"When the cornea is cloudy, we can't visualize the back of the eye to determine whether there is a possibility of restoring useful vision, or see to make repairs," says Morris, who serves as president of the International Society of Ocular Trauma and the Helen Keller Foundation. "If we wait to see if the cornea will clear, we may be too late to repair the retina."

That's where the TKP can make the difference, according to cornea specialist Phillips. "When I replace a dam-



aged cornea with a TKP, I can give Dr. Morris and Dr. Witherspoon a window to work," he says.

The three doctors have been cooperating on ocular traumas since Phillips described an early version of the Landers-Fouls TKP he saw in development during a fellowship at Duke University in 1981. The technology has continued to improve, and today the team uses the latest version, the Landers Wide Field TKP (WTKP).

For nine hours, the doctors worked in sequence to save Oran's sight. After Phillips placed the TKP, the retina team went to work, with Morris as lead surgeon and Witherspoon consulting. "When you have a complex case like this, it's good to have as much experience in the room as possible, especially when you're making difficult decisions on how to proceed," Morris says.

"As in many bombing cases, the injuries were bilateral, which made the

stakes even higher," Witherspoon recalls. "The retina was twisted, which presented a challenge. However, we were able to straighten and reattach it."

Phillips then replaced the TKP with a cornea transplant. "Before the surgery, Oran was worried about what color his eye would be," Phillips remembers. "I told him he could have a contact lens in any color he wanted, and then he smiled."

Oran still has surgery for other injuries and a year or two of recovery ahead back home in Israel. He also has experienced some setbacks in his visual rehabilitation that may require another visit to Birmingham to assess his chances for useful, long-term sight. Still, after his surgery was completed, Oran could see well enough to kick a soccer ball down the hall of Children's Hospital.

International Perspective

Exploring New Vistas in Glaucoma Research

IN THE LUSH, green mountains of Guatemala, there are ruins of ancient cities where the Mayan civilization reached its zenith. Long before the coming of Columbus, those who lived there achieved remarkable advances in mathematics, astronomy, and medicine.

Today, modern medicine sets the standard of care in Guatemala City, a cosmopolitan environment in a nation full of contrasts. Julio E. DeLeon-Ortega, M.D., grew up in a family of physicians in Guatemala; when he chose to follow the examples of his pediatrician father and neurologist uncle by studying medicine, he became interested in exploring the latest medical advances in other parts of the world.

"When I was completing my residency in Mexico City, I was looking for an opportunity to combine my interest in ophthalmology with surgery and research," DeLeon-Ortega says. "My uncle attended a neurology seminar at UAB, and he was very impressed with the facility and instructors. I was also impressed when I learned more about the school and Dr. Chris Girkin's work with glaucoma patients, including surgery and very advanced imaging devices. I interviewed with Dr. Girkin and applied for a fellowship."

DeLeon-Ortega noted that eye care in Birmingham and Guatemala City has many similarities, as well as a few differences. "The care in both cities is generally good, though some equipment is less available," he explains. "Glaucoma is one of the major threats to vision when it isn't detected in time, and unlike Alabama, ophthalmologists in Guatemala see many cases of advanced cataracts. Patients from rural areas often don't seek care until they have lost much of their vision."

The differences are perhaps greatest in terms of the lifestyles of the two cities. Though it may be difficult to imagine from the perspective of anyone who spends much time in Birmingham traffic, DeLeon-Ortega says he finds life here simpler and more peaceful. "It's so calm here—driving is so much easier," he says.

Birmingham may well seem peaceful compared to Guatemala, where the social infrastructure is still recovering after decades of guerrilla warfare that ended in 1996. Crime and violence are not uncommon, he says, making caution a necessary part of everyday life.

"It's wonderful being able to walk freely on the streets and do things without worrying," he says. "My wife loves shopping, and the barbecued ribs are wonderful. They don't have barbecue like that at home. We enjoy living in Birmingham and we love our work."

DeLeon-Ortega's wife is also a physician—he met Dr. Patricia Alvarez during his residency in Mexico City, where she graduated in pediatric ophthalmology. She has completed another year of study at UAB and is now involved in research.

Julio himself is interested in imaging and electrophysiology, and those interests are continuing to grow now that he is involved in research to develop better ways to diagnose glaucoma and optic nerve diseases.

"We are combining the knowledge gained from imaging instruments with what the patient can do in functional tests, and that combination has great potential," he says. "The correlation between these two sources

of diagnostic information is one of the most exciting topics in the field. We work with multifocal electroretinograms and other sophisticated imaging to look at the relationship between structure and function; the advanced imaging helps us better localize the source of problems. We can compare what we're seeing with what patients can tell us through traditional diagnostic techniques like visual field tests."

DeLeon-Ortega is making progress on his dissertation in electrophysiology. When he finishes his fellowship in a year or so, his dream is to be a clinician-scientist.

"I look forward to learning more about imaging, and I want to continue working in research to better understand the physiology of glaucoma," he says.



Julio DeLeon-Ortega has experience with glaucoma, having seen many advanced cases in his home country of Guatemala.

Alumni Spotlight

Stephen M. Hamilton, M.D.

STEPHEN M. HAMILTON, M.D., has made a living on the cutting edge of ophthalmology. In the mid-1990s, he was one of the first doctors to practice LASIK eye surgery; now he's one of the first doctors in the country to use the AlphaCor™ artificial cornea.

Hamilton says that as of February 2004, only 150 AlphaCor surgeries had been performed worldwide, most of them in Australia. But Hamilton already has performed six surgeries at Eye Consultants of Atlanta, Inc. "It's still a very new procedure in the country, and it's exciting to be one of the first doctors to perform it," he says. "I'm teaching a course at the ASCRS [American Society of Cataract and Refractive Surgery] meeting this May with the doctors who developed the procedure."

Hamilton's interest in technology and advanced procedures stems from the engineering degree he earned at Auburn University, just before starting medical school at UAB in 1985. He says he "vividly" remembers the day he became interested in ophthalmology. "While I was a medical student, I went over to the ophthalmology clinic to get a free eye exam from a resident, Dr. Jim Byrne, who's now a retinal specialist in Huntsville," Hamilton says. "While he examined me, he told me all about the field, and got me really excited about it, and I became interested in doing some retinal research. I think ophthalmology just appealed to my engineering side."

Hamilton moved to Atlanta in 1993 to do a fellowship in corneal and external disease, and has been there ever since. "That fellowship grew into a surgery practice," he says, and he now specializes in corneal transplants, as well as LASIK and refractive surgery.

"I started doing LASIK in 1996 or '97, and within a few years it had become a pretty well publicized procedure—probably by the end of '99," he says. "That's when a lot of ophthalmologists started having their own LASIK done. When you're recommending it to a patient, it certainly supports your recommendation when you say you've had it done yourself."

Hamilton lives in the Buckhead area of Atlanta with his wife, Beth, and two daughters, 8-year-old Rachel and 5-year-old Natalie. Among the interests he's carried over from his days in medical school is playing the drums, which he does at Peachtree United Methodist Church, where his family attends weekly, and at the Cathedral of Christ the King just down Peachtree Road. "I played the drums back in med school and during my residency," he recalls. "Now we have a rock band I play in weekly at church."

He also joins his colleagues in making regular mission trips to Honduras, providing surgery and eye care for the underprivileged people of that nation.

Between his surgical practice, family, hobbies, and mission trips, Hamilton has plenty to keep him busy, and the Birmingham native says he's developed a productive niche for himself in Atlanta—"I'll probably stay here until I retire," he says with a laugh. "Still, I miss Birmingham. I like it a lot—it's a great town."



In this sequence, Stephen Hamilton (top) takes the tiny AlphaCor artificial cornea (second from top) and implants it in the patient's eye (third from top) in his Atlanta clinic (bottom). Hamilton was featured on an Atlanta TV news program as one of only a handful of doctors in the country performing this cutting-edge procedure.

Development Update:

Charitable Gifts Give A Competitive Edge

In today's high-tech world, a significant part of a medical institution's appeal to outstanding faculty and residents is the ability to keep up with technology. Our ability to provide technological enhancements directly correlates with our success in recruiting and retaining the best and brightest faculty and students. In our region, we compete heavily with prestigious private institutions that have sizeable charitable endowments. State and federal dollars are becoming more scarce, and are almost always restricted. Charitable giving, then, is the only venue we have to bring in needed funds for special program enhancements. Donors to the UAB Department of Ophthalmology are important to the sustained growth and optimal positioning of vision science in the state of Alabama—last year, \$1,780,000 was received in charitable gifts to support education and research within the Department of Ophthalmology.



*Jeannie Edwards Horton,
director of development*

2003 Funding Sources for the UAB Department of Ophthalmology

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David G. Birch, Ph.D.
Paul Witkovsky, Ph.D.
Steven K. Fisher, Ph.D.

1994-1995

Matthew M. LaVail, Ph.D.
P. Michael Iuvone, Ph.D.
Samuel Jacobson, M.D., Ph.D.
Robert S. Molday, Ph.D.
Pamela A. Raymond, Ph.D.
Peter A. Campochiaro, M.D.
Johanna M. Seddon, M.D.

1995-1996

Cheryl M. Craft, Ph.D.
Janice M. Burke, Ph.D.
Meredith L. Applebury, Ph.D.
Tom Reh, Ph.D.
Carol M. Mangione, M.D.
Ann H. Milam, Ph.D.

1996-1997

King-Wai Yau, Ph.D.
Donald G. Puro, M.D., Ph.D.
Paul A. Sieving, M.D., Ph.D.
Edwin M. Stone, M.D., Ph.D.
David S. Papermaster, M.D.
Gary S. Rubin, Ph.D.

1997-1998

Sally A. Moody, Ph.D.
Gerard A. Lutty, Ph.D.
Vijay P. Sarthy, Ph.D.
Edward N. Pugh Jr., Ph.D.
Peter Sterling, Ph.D.
Markus Meister, Ph.D.

1998-1999

Joe C. Besharse, Ph.D.
Daniel T. Organisciak, Ph.D.
Gerald B. Grunwald, Ph.D.
Howard S. Kruth, M.D.
Sheila K. West, Ph.D.
Nicolas G. Bazan, M.D., Ph.D.

1999-2000

Caroline C.W. Klaver, M.D.
Fulton Wong, Ph.D.
Steven J. Fliesler, Ph.D.
Nicholas C. Brecha, Ph.D.
Diane L. Hatchell, Ph.D.

2000-2001

Peter Racz, M.D., Ph.D.
Malcolm M. Slaughter, Ph.D.
John S. Werner, Ph.D.
Hans Grossniklaus, M.D.
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William W. Hauswirth, Ph.D.
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2001-2002

Dianna A. Johnson, Ph.D.
Deborah Stenkamp, Ph.D.
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Russell Van Gelder, M.D., Ph.D.
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2002-2003

Enrique J. Rodriguez-Boulan, M.D.
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Claude Burgoyne, M.D.
Henry J. Kaplan, M.D.
Harry A. Quigley, M.D.
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