Physicians once had to rely on indirect information to diagnose certain illnesses. They could monitor patients’ heartbeats, check their blood pressure, and listen to their breathing, but short of exploratory surgery, they had to base their diagnoses strictly on observation and experience. X-ray technology changed much of that, according to Andrew Mays, M.D., a glaucoma specialist in the UAB Department of Ophthalmology. “Doctors could poke, prod, and palpate their patients, but that only gave a general idea of the state of a person’s internal systems,” he says. “Then X-rays came along and allowed us to actually see what was going on inside the body. It would be hard to overstate the importance of that discovery.”

In the same way that the cathode-ray tube changed the practice of medicine, new imaging devices are helping ophthalmologists detect glaucoma in its first stages. These breakthroughs are allowing clinicians to administer early treatments and are making it possible for researchers to learn more about the pathologic changes associated with glaucoma.

**Early Warning**
The key to halting glaucoma’s progression lies in early detection, says Mays. “At the turn of the century, people who were diagnosed with glaucoma went blind nearly 100 percent of the time,” he says. “Today, well more than half of glaucoma patients maintain good vision after it’s been diagnosed.”

While part of the reason for this improvement has to do with the host of treatments that are currently available—drainage tubes to relieve the pressure created by glaucoma, for instance, and neuroprotective agents, usually in the form of eye drops, that lessen damage to nerve endings—early diagnosis plays an equally important role. “The earlier we can detect glaucoma in the disease process, the sooner we can begin addressing it with the different therapies we now have on hand,” says Mays.
While most ophthalmologists still rely on “tried-and-true” diagnostic methods such as visual field tests, such methods are highly variable and relatively subjective, according to Christopher Girkin, M.D. “The results of such tests are fairly insensitive, and often the damage to the optic nerve is quite advanced by the time a patient reports a problem,” he says. “That’s why it’s so important to have a reproducible, objective means of gathering images of the eye’s interior.”

Girkin is director of the Optic Nerve and Retinal Imaging Center at UAB, where he has assembled the most sensitive, state-of-the-art ophthalmic imaging equipment currently available. “We are using a simultaneous stereophoto camera, an optical coherence tomographer, or OCT, and the Heidelberg retinal topographer,” he says. “I believe this last instrument will prove to be the most useful in terms of providing the detailed, anatomic images that we’re looking for.”

**Intricate Images**
According to Girkin, these instruments provide very different types of images. The simultaneous stereophoto camera provides three-dimensional prints of the optic disk. These images are far superior to other, more conventional forms of photography. The OCT, on the other hand, can be used to create “cross-sections” of the retina, says Girkin.

“Being able to look at the inner layer of the retina, at the nerve fiber layer, is particularly useful since that’s where glaucoma first makes its presence known,” he says. “The OCT can also be used in evaluation of retinal disorders such as macular holes and traction of the macula.”

The Heidelberg retinal topographer creates images *on cover* similar to those produced by a CT scan. “It takes serial ‘slices’ through the optic nerve and makes a topographic map, which allows us to observe the structural changes in the optic disk. These changes generally precede the visual-field loss that is associated with glaucoma.”

While these instruments form the centerpiece of the center’s capabilities, Girkin also utilizes a multifocal electroretinogram (ERG) to obtain information. As opposed to the standard ERG, which provides data concerning electrical activity across the entire retina, this multifocal unit allows ophthalmologists to pinpoint activity in a very specific area. “While you get a more ‘global’ image of the retina from the standard ERG, the multifocal device allows us to extrapolate little components of the visual field,” says Girkin, who is also director of the department’s Glaucoma Service. “It provides much more precise data, which is very useful.”

Together, this arsenal of equipment—all of which is networked and connected to a powerful computer—allows Girkin to gather information for immediate diagnosis of glaucoma and also to retain data for long-term observation and comparison. “It allows us to take a picture of the retina at a very precise point in time, store it, and then compare it to another image of the same patient taken a little farther down the road,” he says. “That’s crucial when you want to make sure you’ve halted the disease’s progress.”

**Singular Study**
In addition to early diagnosis and patient tracking, the equipment is allowing Girkin to create a database that is the first of its kind. In collabora-
AS YOU MAY HAVE ALREADY NOTICED, with this issue of Vision, we have increased its size from eight to 12 pages. Two factors have led to this change: growth and activity within the UAB Department of Ophthalmology, and the desire to present some of our featured articles in greater depth.

Both of these factors came into play with our cover story, dealing with the new Optic Nerve and Retinal Imaging Center. Through funding from the UAB Health Services Foundation and the Alabama Eye Institute, among others, the department now possesses the most up-to-date equipment available to study—in vivo—the structure of the retina and optic disk.

Within these pages you will read about two of the department’s major contributors in the field of retinal disease. Christine Curcio, Ph.D., has developed an international reputation in the field of macular degeneration research, and Robert Morris, M.D., who continues to “push the envelope” in terms of surgical treatments for macular disorders. His novel approaches have gained both national and international recognition, and his recent election to the presidency of the International Society of Ocular Trauma further acknowledges his pioneering work in this field.

The UAB Department of Ophthalmology’s Annual Clinical and Research Symposium, held in May of 2000 at the Callahan Eye Foundation Hospital, was a tremendous success. We are hard at work planning next year’s meeting, to be held in May 2001. Stay tuned for further details!

This fall, two new members have joined our faculty. Russell Read, M.D., who attended the School of Medicine at UAB, completed an ophthalmology residency at the University of Washington and two fellowships—ophthalmic pathology and uveitis/ocular immunology—at the Doheny Eye Institute at the University of Southern California’s School of Medicine. Kay Scilley, Ph.D., completed her doctoral studies in developmental psychology at UAB. She was recently awarded a two-year grant from the Retirement Research Foundation to evaluate the effectiveness of treatments designed to improve vision in nursing-home residents. Drs. Read and Scilley will add greatly, in terms of scope and depth of expertise, to the talent already existing within the department.

Finally, I look forward to seeing many of you at the upcoming American Academy of Ophthalmology meeting in Dallas. Our alumni reception will be held on Tuesday, October 24, from 6 to 8 p.m. at the Le Meridien Hotel. Please come by for a visit. I hope to speak with each of you to enlist your support as we continue—together—to build the UAB Department of Ophthalmology.

Lanning B. Kline, M.D.
Chair, UAB Ophthalmology
The Benefits of Strabismus Surgery

STEPHEN KRAFT, M.D., is an associate professor of ophthalmology at the University of Toronto and is also on staff at the Hospital for Sick Children. During a recent Grand Rounds presentation for the UAB Department of Ophthalmology held at the Children’s Hospital, Kraft discussed outcome criteria in strabismus surgery. The presentation was based on an article published in the Canadian Journal of Ophthalmology.

In assessing the necessity for certain surgical procedures, it is important to periodically review the benefits of these techniques. For that reason, Stephen Kraft, M.D., has carefully observed—and documented—the positive outcomes of strabismus surgery. “In my article, I wanted to present practical criteria concerning strabismus surgery that can be of use to ophthalmologists,” he says. “This evidence should dispel the common misconception that correcting long-standing strabismus is a ‘cosmetic’ procedure.”

Objective criteria for success in strabismus surgery include the monocular and binocular visual acuity, the angle of alignment, the quality of motor acuity, the sensory fusion results, the extent of the field of binocular single vision (BSV), and the reduction or elimination of any compensatory head posture.

It is important that the surgeon consider all surgical approaches before proceeding, Kraft advises, since more than one plan for eye muscle surgery could successfully align the eyes in primary position. The ophthalmologist should examine the potential effects of these alternatives on other positions of gaze, including the reading position, and select the option that will result in the most useful outcome for the patient.

In the case of children, Kraft says there is no disputing the fact that correcting childhood onset strabismus leads to several positive results. “There is the obvious cosmetic improvement, which enhances the child’s self-image,” he says. “Equally important are the functional benefits, which

Current Issues in Ophthalmology

The Dynamics of Photodynamic Therapy

IN THE WAR AGAINST age-related macular degeneration, UAB is on the front lines. And when at war, ammunition matters. That’s why the new photodynamic—or “light activated”—drug treatment, Visudyne, is so important, according to John Mason, M.D.

“We were recently involved in clinical trials for this new drug, and the outcome painted a pretty positive picture,” he says. “We were able to stabilize vision in 67 percent of the test cases and to actually improve vision in 16 percent of our patients.”

Photodynamic therapy (PDT) is a means of treating tissue that has been damaged as a result of age-related macular degeneration, or ARMD, and halting the progression of the disease without damaging the surrounding tissue, according to Mason. “This allows us to address a highly specific area without causing peripheral damage,” he says.

Visudyne—a PDT developed by CIBA Vision, the eye-care unit of Novartis AG, and QLT, Inc.—is a treatment that targets choroidal neovascularization, the vascular disorder responsible for the damage associated with ARMD. The manner in which this is achieved is fascinating, says Mason.

“Cells that are undergoing rapid proliferation, such as those found in neovascularization, require a greater number of lipoproteins than normal cells do,” he explains. “So what we do is administer an intravenous drug that is attracted to lipoprotein activity, and then ‘activate’ the drug with a laser.”

The drug, also known as verteporfin, is dormant, or “caged,” until it is activated by the cold laser—a “non-thermal” beam carefully tuned for this specific type of therapy. Once the drug is activated, it destroys the abnormal cells: “It actually causes them to die, which puts an end to the neovascular process,” says Mason.

UAB’s involvement in the clinical trial began in October 1999 and ran through February of this year. Thirty patients who were already being treated by Mason and his colleagues were recruited for the study. Similar trials were being conducted simultaneously at other clinics around the country. Visudyne therapy has since been approved for use in the United States by the Food and Drug Administration. It has also been cleared for use in Canada and Sweden, according to Mason.

“Photodynamic therapy is also used in cancer treatment,” he notes. “In ophthalmology, its only application at this point is treatment of macular degeneration. Still, it represents an exciting new approach to halting this disease in its tracks.”
include optimizing visual acuity, regaining sensory fusion and stereopsis, and maximizing field of binocular vision.” In adults, acquired strabismus often leads to disabling symptoms such as asthenopia, diplopia, and compensatory head postures. Surgery done within a few months of onset in such cases has a high chance of success in terms of restoring binocular vision in primary position, creating a useful expanse of the field of BSV, and eliminating any abnormal posture, according to Kraft.

Kraft also says that quantitative assessments show that realigning the eyes can lead to improved psychosocial functioning, having a positive effect on self-image and the avoidance of depression and anxiety. “It is also important to define the terms cosmetic and reconstructive,” he says. “Surgery that is cosmetic modifies a structure in the body that is already normal and changes its appearance. Reconstructive surgery restores an abnormal structure to one that is as normal as possible. It is therefore only proper to consider strabismus surgery reconstructive therapy.”

TO PROVIDE our readers a glimpse into projects and personalities in the department, we will profile a member of the research and clinical faculty in each issue of Vision (below, in bold).

**Academic Faculty**

Michael Callahan, M.D. Professor
Martin Cogen, M.D. Assistant Professor
Jeffrey Crain, M.D. Assistant Professor
Frederick Elsas, M.D. Associate Professor
Richard Feist, M.D. Assistant Professor
Donald Fletcher, M.D. Associate Professor
Christopher Girkin, M.D. Assistant Professor
Wade Joiner, M.D. Assistant Professor
Arthur Kelly, M.D. Assistant Professor
James Kimber, M.D. Associate Professor
Lanning Klune, 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

**Robert Morris, M.D. (pg. 8)** Associate Professor
John Parker, M.D. Assistant Professor
Robert Phillips, M.D. Associate Professor
James Powell, M.D. Associate Professor
John Mason, M.D. Assistant Professor
Andrew Mays, M.D. Assistant Professor

**Research Faculty**

Christine Carcio, Ph.D. (pg. 7) Associate Professor
Ramon Dacheux, Ph.D. Professor
Clyde Guidry, Ph.D. Assistant Professor
Greg Jackson, Ph.D. Assistant Professor
Cynthia Owsley, Ph.D. Professor
Kay Scilley, Ph.D. Assistant Professor
Shu-Zhen Wang, Ph.D. Assistant Professor

**Clinical Faculty**

James Byrne, M.D. Clinical Instructor
Alston Callahan, M.D. Clinical Professor
Britton Carter, M.D. Clinical Instructor
William Cox Clinical Instructor
David Davidson, M.D. Adjunct Assistant Clinical Professor
Scott Dorin, M.D. Associate Clinical Professor
Sasun Eiland, M.D. Assistant Clinical Professor
Greer Geiger, M.D. Assistant Clinical Professor
Joel Herring, M.D. Instructor/Fellow
Christopher Kelly, M.D. Clinical Instructor
James Kelly, M.D. Clinical Instructor
Price Kloess, M.D. Assistant Clinical Professor
Ferenc Kubin, M.D. Clinical Professor
Elmar Lauraczczek, M.D. Assistant Clinical Professor
Ralph Levene, M.D. Clinical Professor
Angela Lewis, M.D. Assistant Clinical Professor
Michael Masse, M.D. Assistant Clinical Professor
Nancy Medeiros, M.D. Assistant Clinical Professor
Thomas H. Metz, M.D. Assistant Clinical Professor
Marc Michelon, M.D. Assistant Clinical Professor
John Morgan, M.D. Assistant Clinical Professor
John Owen, M.D. Clinical Instructor
Ralph Pfluest, M.D. Clinical Professor
Elise Cox Pratt Clinical Instructor
Donald Stephens, M.D. Instructor/Fellow
Thomas Tann, M.D. Instructor/Fellow
Wayne Taylor, M.D. Clinical Instructor
Donald Turnbull, M.D. Associate Clinical Professor
Yujen Wang, M.D. Instructor/Fellow
Darrell Wolfe, M.D. Associate Clinical Professor

The dark area near the center of this image is the ruptured blood vessel resulting from wet-form macular degeneration.

The same area shows a great deal of improvement after treatment with photodynamic therapy using verteporfin.
SINCE EXCIMER LASER TECHNOLOGY was first developed, more than 1.5-million people have undergone laser refractive surgery. One of the more popular techniques is laser in-situ keratomileusis, or LASIK surgery. As techniques and the technology have evolved, however, one thing has remained the same, according to Virginia Lolley, M.D. “Patient-surgeon contact is key,” she says. “That’s something we emphasize at UAB.”

As director of Laser Vision Correction in the Department of Ophthalmology, Lolley makes a point of meeting with each patient personally. “I handle the preoperative evaluations and postoperative care myself. I think there is a definite advantage when the surgeon handles these key components.”

Lolley explains that many clinics offering LASIK surgery contract with optometrists to provide preliminary and follow-up treatment. While that may work in some cases, she sees many advantages to increased patient-surgeon interaction: “I spend about an hour with each of my patients preoperatively, and you can really learn a lot about how they will manage in surgery during that time,” she says. “The kinds of things that help the surgeon decide whether or not patients are really good candidates for LASIK.”

Lolley began developing her technique during three “mini-fellowships” in 1999. While attending certification training offered by VISX (the manufacturer of the laser system UAB uses), Lolley approached the course instructor, Mark Odrich, M.D., about spending additional time observing him in practice at the Edward S. Harkness Eye Institute at Columbia University.

“Dr. Odrich is one of the people who developed the VISX laser system, so I thought he would be an excellent person to learn from,” says Lolley.

Odrich agreed to her request, suggesting that she also approach two other leaders in the LASIK field: James Salz, M.D., at Cedars Sinai Hospital in Los Angeles, and Colman Kraff, M.D., of Northwestern Memorial Hospital in Chicago. “I was able to observe three premier surgeons in the field,” she says. “It was a tremendous opportunity and has helped us establish our program here at UAB.”

Apart from the hands-on approach she takes, Lolley says there are many reasons patients should choose UAB. “When you’re going to have laser surgery, you need to come to a reputable institution. People see UAB as a center of excellence, and they’re right.”

Lolley also points out that the LASIK procedure has become the “industry standard” in terms of proven laser surgery techniques. “Even Tiger Woods has undergone LASIK surgery,” she says, “and you would have to admit that his game has only improved.”
Christine Curcio, Ph.D.

Research Faculty Profile

MOST CHILDREN who are interested in astronomy spend their evenings gazing at the sky, memorizing constellations and tracing falling stars with their fingertips. Christine Curcio spent hers scribbling furiously on a notepad. “I was the kid working out the equations so that I could understand the astronomy books,” she says with a laugh.

Years later, having drifted in her interests, she found herself studying art history at Brown University. “I was taking a required life-science course, and my interest was instantly rekindled,” she says. “I thought, ‘What do you know, I’m still interested in science!’”

When Curcio graduated from Brown in 1972 with a bachelor’s degree in biology, she intended to enter graduate school at some point, but she decided to take a break from academia and work for a while. She landed a job in the psychology department at Princeton University, assisting a professor who was conducting research on the higher-order visual functions of the brain. This turned out to be one of the most meaningful periods in Curcio’s life.

“When I look back on the four years I spent there, I realize that what I got out of it was a persisting interest in neuroscience,” she says. “I became interested in the visual system, which is where I’ve spent a good deal of my professional life.

“And although we couldn’t have known it at the time, I was interacting with people who were destined for greatness. The professor I worked for, as well as many of his students, went on to become members of the National Academy of Sciences. So that was a really important experience for me—just to have the opportunity to be exposed to people who possessed that level of ambition and ability.”

Inspired by the experience, Curcio went on to earn her master’s and Ph.D. degrees in anatomy from the University of Rochester. She then conducted postdoctoral studies at Boston University before joining the faculty of the University of Washington, where her husband—a professor of computer science at MIT—had relocated. As a member of the research faculty, Curcio assisted Anita E. Hendrikson, Ph.D., in her laboratory.

“Anita is a premier vision researcher who has done seminal work in understanding the visual cortex and the development of the eye,” says Curcio. “One day she pointed to a shelf of human eyes she’d obtained from the Eye Bank and said, ‘Christine, nobody has looked at the photoreceptors in the human retina in any detail for more than 50 years.’ Since I saw myself as a good detail person and a relentless quantifier, I thought I’d give it a shot.”

According to Curcio, the classic study of the retina referred to at that time involved only one eye, yet it had stood unchallenged since its publication in 1935. She decided to replicate the study, which resulted in the paper “Human Photoreceptor Topography,” published in 1990. “That’s really where I made my first mark,” she says.

Since that time, Curcio’s reputation has grown to the point that she is recognized worldwide as an authority on age-related macular degeneration. But the road leading to her current understanding of the disease has been filled with surprises.

“In order to study this disease, I had to take an intellectual and personal journey,” she says. “It’s not really clear what chapter in the pathology book macular degeneration belongs in. Is it primary neural degeneration, in the manner of Alzheimer’s or retinitis pigmentosa, or is it a connective tissue disorder? These are the kinds of things I’ve had to figure out for myself, and it’s taken me pretty far outside my more-familiar world of neuroscience.”

Since Curcio’s overall hypothesis is that macular degeneration may be similar to atherosclerosis, she is currently involved in research involving cholesterol deposition in Bruch’s membrane. She has shared her findings during presentations made at Research to Prevent Blindness, Inc., in Washington, D.C., and at the Schepens Eye Research Institute at Harvard University. It has recently been accepted for publication by the journal Investigative Ophthalmology and Visual Science.

Curcio also created the Alabama Age-Related Macular Degeneration (ALARMD) grading system.

“While I’ve made a transition that only involves a few hundred microns in the back of the eye, from the retina to Bruch’s membrane, it has required me to change my research tools, my perspective, everything,” she says. “But I finally feel as if I’ve arrived at the place where I’m supposed to be.”

Christine Curcio has developed new ways of photographing the retina and has also created the ALARMD grading system.
WHEN HIS FATHER was recruited by Wernher von Braun to help create the Marshall Space Flight Center in Huntsville, Alabama, Bob Morris naturally began entertaining dreams of becoming an astronaut. Influenced by this “personal window into the space program,” he set a course toward becoming a science astronaut, enrolling at Purdue University and obtaining a bachelor’s degree in physics. He then earned his medical degree from UAB before entering the United States Air Force pilot training program, graduating as a reconnaissance pilot in the F4 Phantom.

On reviewing his options at this point, Morris found his career path blocked by NASA funding reductions after the 1969 moon landing, and so he decided to proceed with “Plan B.” “My medical training led me to realize that, even though rocket scientists had finally succeeded in putting a man on the moon, eye surgeons still had not reached the back of the human eye,” he says of the revelation that led him to his residency in the UAB Department of Ophthalmology. “That didn’t happen until 1971, and I’m pleased to have seen the earliest stages of both developments.”

On completing his residency, Morris decided to gain additional experience by traveling to Cologne, Germany, to study at what was then considered to be the world’s leading eye trauma center. “I knew Dr. von Braun and other German scientists from having lived in Huntsville, and I had a lot of admiration for their science and medicine,” he says. “As it happened, my Guard unit was scheduled for two weeks’ active duty overseas at that time, so I was able to fly over for my interview. Thirty-six F4s took off from Birmingham at midnight and flew across the ‘big pond’ for the first time in the unit’s history.”

At the completion of his fellowship in Germany—where he “received six year’s worth of training in six months”—Morris returned to the United States, where he studied with Robert Machemer, M.D., the inventor of vitreous surgery, at the Bascom Palmer Eye Institute in Miami. He returned to Alabama in 1979 as the first fellowship-trained vitreous surgeon in the state.

In the 21 years since Morris joined UAB, he has been an active contributor to the developing field of vitreoretinal surgery. He has been published in prestigious journals such as Investigative Ophthalmology & Visual Science and the American Journal of Ophthalmology. He has received honors including the Migel Medal, the highest bestowed by the American Foundation for the Blind, and The Vitreous Society Honor Award for 1999. He is also staff physician for a number of sports organizations, including the National Football League’s European division.

Morris holds a number of patents, the most recent awarded in April of 1999. Along with his colleague C. Douglas Witherspoon, M.D., an associate professor of ophthalmology at UAB, he invented the preferred method of infusing fluid into the eye during vitreous surgery. More recently they invented a revolutionary technique to remove scar tissue from the macula.

Morris was recently named president of the International Society of Ocular Trauma—the organization of eye injury surgeons that moved its headquarters to Birmingham from Israel this past summer. He also serves on the board of the Alabama Eye Institute and is president of the Helen Keller Foundation for Research and Education.

“I like to think of the Helen Keller Foundation as a spinoff of UAB’s outreach activities, because it never would have been formed without the university’s presence here,” he says of the organization he founded along with UAB scientist Magnus Höök, Ph.D., and with the blessings of the Keller family. “The name of Alabama’s most famous citizen transcends state and national borders, in terms of recognition and support. We hope to become a funding partner to UAB’s programs in sight, speech, and hearing research.”

As for his career path so far, Morris says he is pleased to have chosen the practice of ophthalmology. “It’s turned out even better than I expected,” he says.

“Although I envy my friend Larry DeLucas for his flight aboard the space shuttle, I’ve been able to travel into the eye—an equally elegant inner space.”
IN THE LAST 20 YEARS, much progress has been made in the area of communications technology—and this is especially true in the lecture hall. According to Lanning Kline, M.D., chair of the UAB Department of Ophthalmology, renovations in the Smith Education Center—found in the Callahan Eye Foundation Hospital—reflect these improvements.

“With all of the important information being presented during Grand Rounds by our residents, faculty, and guest speakers,” he says, “we thought it was time to upgrade our facility.”

The upgrades include a state-of-the-art audiovisual system, featuring stereo sound and two 36-inch monitors, and ports that allow laptops to feed Internet images and PowerPoint presentations onto the screens.

“We’ve also connected the education center electronically to the operating rooms for real-time viewing of special surgical demonstrations,” says Kline.

The room’s main function is for Grand Rounds, which is held the second Friday of each month. While case presentations are made by residents, the faculty is responsible for much of the discussion. In addition, guest lecturers are featured about three to four times per year. The next scheduled lecturer is Denis O’Day, M.D., chair of the Department of Ophthalmology and Visual Sciences at Vanderbilt University and also president of the American Board of Ophthalmology. O’Day will visit on October 13, 2000, to address reaccreditation requirements that have recently been put in place for practicing ophthalmologists. On November 10, 2000, Diane Swift, who is president of Research to Prevent Blindness, Inc., will visit.

“The renovations were funded jointly by the department and the hospital to promote both education and research,” says Kline. “We feel this investment will help to raise the educational profile of both the department and the university.”

Callahan Eye Foundation Hospital

Quality Quarters

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Alabama Eye Institute

Organizational Outreach

THE BOARD OF DIRECTORS of the Alabama Eye Institute (AEI) was recently presented with the results of a special needs assessment survey for the state of Alabama. Almost a year in development, the report was prepared by Janet Bronstein, Ph.D., and Michael Morrisey, Ph.D.—both faculty in the UAB School of Public Health’s Department of Health Care Organization and Policy. The findings will help the AEI direct its support of research, education, and indigent eye care.

“We’re pleased to have reached this stage in the growth of our organization,” says Torrey Smitherman, executive director of the AEI. “The results of this survey will help us chart a productive course toward achieving our goals.”

According to the report, data from the National Eye Institute and the American Federation for the Blind reveal that in Alabama there are approximately 24,000 legally blind individuals, with an additional 120,000 having permanent serious vision impairment. Because rates for these disabilities are much higher for elderly individuals, the numbers are rising with the aging of the population. Other findings include that the most common treatable eye problems are potentially treatable or controllable if diagnosed early.

Even though services are available, access can be a problem for those living in rural areas. Treatment—both ophthalmic and optometric—is centered in cities, particularly in Birmingham, where there is a high degree of ophthalmic subspecialization.

State ophthalmologists, optometrists, and other eye-health professionals were surveyed to find out what areas they felt most need to be addressed. Many respondents perceive a need for low vision services including visual rehabilitation training. They also see a need for more public education to increase awareness of the benefits of preventive care and to connect individuals needing care with service providers.

“This needs assessment survey was a major undertaking, but one that we feel will ultimately benefit the entire state,” says Smitherman.
Anthony Catanzaro, M.D.

MOST PEOPLE ARE LUCKY to identify a single profession that they find fulfilling during their lifetime. Tony Catanzaro is now on his second career, and says he believes he’ll stick with it.

“I find the practice of ophthalmology to be appealing on a number of levels,” says Catanzaro, who earned a bachelor’s degree in chemical engineering from Auburn University. “Not only am I able to make my own way—to fail or succeed based on my own effort and ability—but I can also make a difference in the quality of people’s lives. It’s tremendously satisfying to be able to give that kind of gift.”

Straight out of college, Catanzaro accepted a position with the Savannah River Plant—a nuclear power facility then operated by E.I. duPont. Although he enjoyed the work and felt that he had a bright future with the company, he couldn’t shake the suspicion that he wasn’t making the most of his potential.

“My parents are both from Europe,” he says. “My father is from Italy and my mother immigrated from Holland. Since neither of them had a formal education, it was their top priority that I get a college education. ‘We don’t care what you study,’ they’d say, ‘we just want you to get an education.’ They encouraged me to make something of myself, and their support was very important to me.”

Also important was the example Catanzaro’s father set for him. “He was a jeweler, a true craftsman, and he worked very hard for the success he enjoyed,” he says. “I remember watching him repair watches—not quartz watches, but the ones with spring movement—and thinking that it was beautiful and fascinating all at the same time. I was really attracted to the thought of working on something so delicate and intricate, and I think that attraction played a big role in my decision to go into ophthalmology.”

No longer able to put off the inevitable, Catanzaro enrolled in the Medical College of Georgia in Augusta. After earning his medical degree, he followed his intuition once again by applying to only the ophthalmology programs he truly wanted to enter. “I told my wife that if I didn’t get a bite, we’d have to make other plans,” he says. “You can imagine my relief when I was accepted into UAB’s program.”

Alumni Spotlight

Catanzaro completed his residency in 1994 and immediately signed on as an associate with Bryan Grissett, M.D., another UAB alum who had established Gadsden Eye Associates. “I worked as Bryan’s associate for two years before buying into the practice as a partner,” he says. “We share the same professional philosophy, so it’s been a great relationship right from the start.”

The core of that philosophy involves volunteerism, says Catanzaro. “Bryan and I both work with The Eye Clinic, which is a free clinic operated by the local Lion’s Club,” he says. “We see anywhere from 15 to 20 patients they refer to us each month, and if they don’t have a sponsor such as the Veteran’s Administration, we provide our services free of charge.”

Catanzaro recalls one patient who could no longer work because of severe cataracts. “He was a house painter, and he couldn’t even see to climb the ladder any more,” he says. “But we were able to provide the surgery he needed to regain functional vision, and I’m glad to say that he’s back painting and earning a living again.”

Grissett and Catanzaro aren’t the only ones providing these services in Gadsden, however. They are joined by Michael McEwen, M.D., Michael McIntyre, M.D., and Barry Dabbs, M.D., who are also graduates of the UAB Department of Ophthalmology’s residency program.

“My time at UAB was just a wonderful experience, and one that I hope my own children may someday decide to share,” says Catanzaro, referring to his daughter and three sons. “Although it would be hard to top the advancements that have been made in the field over the last 20 years, I think we’re headed toward even bigger things in the very near future. I wouldn’t mind my children being part of that.”

“I’d like to pass along to them the message that they can make a difference if only they apply themselves,” he says. “That’s the message my parents passed along to me.”
WITH NEARLY 100 ophthalmologists attending the recent Clinical and Research Symposium held by the UAB Department of Ophthalmology, it could be said that the event was a resounding success—especially considering that there are only approximately 200 ophthalmologists practicing in the entire state. “The attendance was great,” says Department Chair Lanning Kline, M.D. “It was not only an opportunity for us to reconnect with our alumni, but also a great way to form new relationships. That’s why we decided to open the event to everyone, not just faculty and graduates of the department.”

This year’s symposium featured three guest lecturers recognized as leaders in their areas of expertise. J. Donald Gass, M.D., of the Vanderbilt Eye Center, is an international expert on the macula and delivered the inaugural Helen Keller Lecture. M. Bruce Shields, M.D., is chair of the Department of Ophthalmology at the Yale University School of Medicine and an authority on glaucoma. Richard L. Anderson, M.D., president of Oculoplastics Surgery, Inc., is a leader in the field of oculoplastic surgery.

“Dr. Gass is a world-renowned expert in his field,” says Kline. “His three-volume textbook is the authoritative work on the macula.”

Gass’s lectures covered the ways patients with macular disorders can present, how they can be managed, and also how the ophthalmologist can be fooled into making the wrong diagnosis. He also discussed a case he encountered while on the faculty at the Bascom Palmer Eye Institute, involving a nematode that can cause great damage in the retinal space. “Dr. Gass showed how a laser can be used to eliminate this intruder with minimal scarring,” says Kline.

A top glaucoma specialist, Shields discussed two of the newest treatment approaches currently in use: neuroprotective agents, eye drops that limit the damage glaucoma causes to the optic nerve, and mitomycin, a cancer drug that can also be used to keep surgical filtration sites functional by limiting scar tissue formation.

“There is a whole new generation of neuroprotective agents in the pipeline that should really prove helpful in battling this disease,” says Kline. “And mitomycin, which is used in conjunction with glaucoma surgery, is an interesting approach, although somewhat controversial. It’s a ‘double-edged sword,’ as Dr. Shields put it.”

In addition to ptosis, orbital tumors, and methods for treating thyroid eye disease, Anderson also discussed blepharospasm. “Dr. Anderson has had a huge impact on our understanding and treatment of this condition,” says Kline. “In fact, he stayed after the symposium to address nearly 100 members of the state support groups of the Benign Essential Blepharospasm Society.”

A ceremony was also held honoring Alston Callahan, M.D., hospital founder and first chair of the department. “Although the university has expressed its appreciation to Dr. Callahan by renaming the Eye Foundation Hospital in his honor, this allowed the faculty and graduates to thank him personally,” says Kline. William Deal, M.D., dean of the University of Alabama School of Medicine, spoke during the event, as did John Parker, M.D., president of the hospital’s medical staff, and Hartwell Davis, chairman of the board of the Alabama Eye Institute. Residents also made presentations, discussing research projects undertaken over the past year. Those judged best won awards named in honor of Lynn B. McMahan, M.D. (see box listing winners above).

Kline says next year’s event is already being planned. “I invite people to contact me with suggestions for speakers,” he says. “We see the symposium as an annual opportunity not only to learn, but also to stay informed of the growth and development of the UAB Department of Ophthalmology.”
• BO ACKERMAN, M.D. (1991-’94), is currently in private practice with fellow UAB ophthalmology graduate Steve Wisehart, M.D., in Gainesville, Georgia. Ackerman and his wife, Renae, have three children: Kate, who is five; Hannah, three; and Paige, who is one year old. The partners will soon expand to a new office providing LASIK, cataract, and oculoplastic surgery.

• C. BARRY DABBS, M.D., FACS (1993-’96), lives and practices in Alabama at Gadsden Eye Associates. He is currently president-elect of the Alabama Academy of Ophthalmology, sits on the board of trustees of the Alabama Eye Bank, and is on the board of directors for the Alabama Eye Injury Registry. Dabbs is also on the medical advisory board for the Alabama Department of Public Safety.

• THOMAS B. FRIMAN, M.D. (1984-’87), practices in Fairhope, Alabama, where he is past-chair of the Department of Surgery at South Baldwin Regional Medical Center and president-elect of the medical staff at Thomas Hospital. He is on the board of directors of the Alabama Academy of Ophthalmology, was certified by the Alabama Board of Ophthalmology in 1988, and also by the American College of Eye Surgeons in 1993.

• JOSEPH F. GRAVLEE, JR., M.D. (1982-’85), currently lives and works in Fairhope, Alabama. His practice, Bay Eyes, also has locations in Gulf Shores, Foley, and Daphne. He is designer of the Gravlee Safety Bevel™ Phacoemulsification Probe—a device used in cataract surgery—and operates the bed and breakfast, Away at the Bay, with his wife, Glenda.

• ERNST NICOLITZ, M.D. (1974-’77), has practiced in Florida for the past 20 years. He is certified by the American Board of Ophthalmology and Otolaryngology and received additional training in oculoplastic surgery at Will’s Eye Hospital in Philadelphia. Nicolitz has published articles on orbital tumors and lid and cosmetic surgery. He has also received the Ophthalmology Academy’s Honor Award.

• GATES J. WAYBURN, JR., M.D. (1973-’76), currently practices in Nashville, Tennessee. He is partners in Guardian Eye Associates with Walter Frey, M.D., and James Conrad, M.D.

• PERRY YOUNGER, M.D. (1995-’98), practices with his partner, Alexander Chang, M.D., in Mt. Lebanon, Pennsylvania. Their practice has four offices with one part-time and two full-time physicians on hand. Younger recently published an article in the February 2000 issue of the journal, Ophthalmology.

• JOSEPH ZARZAUR, M.D. (1972-’75), is on the staff of St. Vincent’s Hospital in Birmingham, Alabama, from which he recently earned a 25-year service award, and president of Eye Medical Center. He also has recently established a retail optical boutique in Mountain Brook’s English Village.

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