VANDERBILT EYE INSTITUTE
FACILITIES UPDATE

The Eyes Have It at VEI Optical

It’s been a year since the Vanderbilt Eye Institute moved to its new location, and nobody’s happier than Marcell Troupe, manager of the VEI optical shop. The Vanderbilt Optical Center now occupies a prime location in the midst of Vanderbilt Medical Center and is a destination for employees, students and area residents. In the new location, the Center has seen a 40% increase in business.

One of the Center’s specialties is pediatric contact lens fitting and children’s products, including protective eyewear for sports. Optometrists Brad Kehler, Lori Ann Kehler and Jeff Sonsino also fit special lenses for ocular disease and other conditions and prosthetic lenses for traumatic injury or congenital abnormalities.

Marcell Troupe: “It’s great to be affiliated with the VEI specialists. We’ve got a beautiful, state-of-the-art store we can all be proud of. And we carry designer as well as traditional lines in frames, so we are able to offer a variety to our clients.”

FOCUS: New Thinking in Vision Care
Partnering in Surgery • Determining the Best Treatments
The Next Stage in Quantum Dot Imaging • Translational Research • PROFILE: Brian Carlson
NEWS: Sam and Darthea Coleman Chair in Ophthalmology
Dear Friends,

It's hard to believe that we already have been in our new clinical facility and vision research laboratories for over a year! In April, 2008, we celebrated the opening of the new Vanderbilt Eye Institute with a fantastic scientific symposium and a spectacular black tie gala.

Our enlarged footprint has allowed continued unprecedented growth. Our physicians should see over 80,000 patient visits and perform over 5000 surgeries this year, up from 35,000 visits and 2250 surgeries in 2003. We have grown from our singular presence on campus to 9 locations throughout Tennessee and Kentucky. Our faculty has increased from 15 to 40 over the same time period. As well, we have seen a tripling in our extramural research funding and in the number of applications to our residency program.

To compliment the challenges of a larger enterprise, the faculty and staff created a strategic plan for the next five years: Eye on the Future. This document outlines 6 strategic initiatives: 1) to optimize the patient experience by improving access while ensuring efficient encounters in a warm and inviting environment; 2) to provide quality care by consistently and progressively improving our clinical efficiency and monitoring quality measures; 3) to grow and sustain our services to the community we serve; 4) through training and education, to continually push ourselves and trainees to learn not only clinical care but also how to communicate and interact with the patient and each other; 5) to conduct research that will be innovative and focused on practical exploration that can be translated to the care of our patients; and 6) to promote a culture and environment that will have the Vanderbilt Eye Institute become the employer of choice.

In closing, there are several accomplishments that are worthy of highlighting. Annual staff turnover is considered a meaningful marker of the health of the workplace: we have reduced our turnover rate from over 20% to under 10%. This is marvelous tribute to VEI physicians and managers. Secondly, Dr. John Penn was recently named Assistant Dean for Faculty Development in the School of Medicine, following a rigorous search. Dr. Penn will remain Vice Chairman and maintain his successful research lab, but will cede his role as Director of Research, which he has held for over a decade, to Dr. David Calkins. David is a Ph.D. neuroscientist who joined the VEI faculty in 2004; he is an internationally recognized researcher in the field of neuroprotection and glaucoma. We are thrilled for John, and view this as a complement to both Dr. Penn and the Department. Finally, Dr. Sean Donahue, Chief of the Division of Pediatric Ophthalmology, was named the inaugural holder of the Sam and Darthea Coleman Chair in Ophthalmology. We are thrilled that Sean’s successful academic career can be recognized in such a meaningful manner.

Sincerely yours,

Paul Sternberg, Jr., M.D.
G. W. Hale Professor and Chair
Vanderbilt Eye Institute
Partnering in Surgery Results in Innovative Techniques

A.J. Parks being prepped for surgery at Vanderbilt.

“Instead of each doctor performing the individual surgery, we’re able to do it all in one setting.”

– Jeffrey Kammer, M.D.

Instead of each doctor performing the individual surgery, we’re able to do it all in one setting.

Jeffrey Kammer, M.D., Franco Recchia, M.D. and Uyen Tran, M.D. at VEI. (photo by Anne Rayner)
Presenting glaucoma is variable,” explains Dr. Agarwal. “The more severe the malformation, the more likely it is that intraocular pressure will increase because the fluid cannot drain properly from the eye. In children younger than three, when the pressure goes up the eye gets bigger and the cornea can get cloudy. This combination surgery will relieve the pressure.”

During A.J.’s procedure, Dr. Joos prepares the eye for both procedures and attaches the shunt plate tucked underneath the eye muscles outside of the eye. Dr. Agarwal performs the vitrectomy to reduce the amount of fluid produced by the ciliary body, essentially “turning down the faucet.” Then Dr. Joos places the shunt tube in its best location and closes the incision. A.J. has plenty of room in the front of his eye for the tube.

Dr. Joos explains, “I’ll check A.J.’s pressure tomorrow, and if it’s soft, he will start taking healing medications, but he won’t resume all of his glaucoma medications. I’ll see him the day after surgery, about four days later, in a week, then every couple of weeks for two months to adjust the medicines. Dr. Agarwal can evaluate him as needed on the same clinic days so it is convenient to coordinate his care.”

“Because children both heal well and scar well,” explains Dr. Joos, “they may require glaucoma medications in addition to the shunt, or a laser surgery to reduce the production of fluid or, in rare cases, a second glaucoma shunt.”

The two doctors have developed a miniature endoscope-assisted method to perform the surgery in patients with conditions such as corneal edema or opacities that compromise the surgical view to remove the vitreous gel. Many patients are familiar with an endoscope from abdominal surgery, where procedures like an appendectomy can be performed through a small incision, using the endoscope as an illuminated telescope. A modified endoscope is used in the eye, allowing the surgeon to visualize areas of the eye inaccessible with conventional techniques. The endoscope enables Dr. Agarwal to see that the vitreous is completely removed without resorting to an intraoperative keratoprosthesis and corneal graft. This greatly shortens the operative time for patients who don’t otherwise need a corneal transplant.

At ARVO in May, VEI resident Ryan Tarantola will present the outcomes of the team’s efforts. Tarantola has studied a group of 23 patients with whom the technique was utilized. Over the long term, the endoscope-assisted vitrectomy and shunt procedure has resulted in a significant reduction in intraocular pressure and the number of glaucoma medications required by patients after surgery.

Dr. Joos: “The combined glaucoma shunt and vitrectomy procedure is a wonderful sight-saving treatment, but we are continuously looking for ways to control the pressure better and reduce the number of procedures!”

Drs. Kammer and Recchia have also evolved their technique along the way. The two doctors have recently pioneered a combination vitrectomy and posterior tube shunt surgery using a 25-gauge instrument. The technique will be presented for the first time at ARVO by David Reichstein, co-author and also a VEI resident.

“25-gauge instrumentation has been one of the most significant developments in eye surgery,” explains Dr. Recchia. “The smaller incisions are less invasive. There is less trauma, less damage to intraocular tissues and a shorter healing time. This is especially attractive in an eye with glaucoma, which is more brittle and more susceptible to these issues. The tube actually fits nicely through these smaller incisions, so it seemed like a natural adaptation of the technology.”

“One of the advantages we find in working together is that we have slightly different perspectives. Thus, critical thinking leads to new questions and hopefully, new discoveries.”

– Franco Recchia, M.D.
Brian Carlson is preparing for the next evolution in his health care management career: teaching. Carlson, Department Administrator for Vanderbilt Eye Institute, has developed a four-part lecture series to introduce VEI residents to health care concepts that fall beyond their clinical training.

The project began when Laura Wayman, M.D., head of VEI specialties, and was the hub of outpatient specialists in the mostly rural area. Brian saw it as an opportunity to learn about specialties other than ophth. In just three years, he became CEO of the group, and received a “40 Under 40” award presented to the top 40 leaders in Western New York under the age of 40.

Carlson plans to introduce more about health care finance that is directly related to the day-to-day management of a practice: coding, charge capture, referrals and prior authorizations. As residents begin to look for their first jobs, what they should look for in contracts, restrictive covenants, buy-ins to practices – all the scenarios they may be faced with.

Carlson believes, Carlson, is the time when you start to form habits. He wants residents to be conscious of how their interactions with patients affect outcomes. And how their interactions with staff affect outcomes. The importance of interacting as a team – listening to and trusting the people who work for them. How to treat them with respect, understanding and compassion. How to know when to listen, when to talk, and when to draw the line.

Carlson: “A doctor only has so much face-to-face time with the patient. How do you have enough time to diagnose, figure out a treatment plan, and then answer the questions the patient may have all in the allotted appointment time? We’ll discuss simple things like sitting down, making eye contact – non-verbal cues.”

These issues comprise the psychological aspects of practicing medicine, and Carlson comes by his interest in them naturally – he was a psych major in college. Growing up in Erie, PA, he attended Wittenberg University, and then Xavier University in Cincinnati, where he received an MBA and Masters in Health Services Administration (MHSAs).

He did a fellowship at the University of Illinois in Chicago and then was hired into his first real job at Northwestern University, where he was the practice manager for women’s health. “I learned more about women’s health issues than I ever wanted to know!”

“The department had 80+ employees and 95% were women. Most were former labor and delivery nurses who were twice my age. When I walked in the first day, they looked at me and said ‘Who in the heck is this kid?”

“What I learned most in that job is that it’s essential to understand what other people in the practice do. I’m only as effective in my job as they are in their jobs. If I just sit in my office with 20% of the information, I’m not helping them….we’re going nowhere. That job taught me to learn what other people do…attempt to walk in their shoes.”

Brian and his wife, Michelle, had their first two children in Chicago [they now have four]. But they were far from home and grandparents, so when a job in the Northeast came calling, Brian answered.

He was recruited to Olean, NY, as COO of private multi-specialty group. The practice included 38 providers in 18 specialties, and was the hub of outpatient specialists in the mostly rural area. Brian saw it as an opportunity to learn about specialties other than ophth. In just three years, he became CEO of the group, and received a “40 Under 40” award presented to the top 40 leaders in Western New York under the age of 40.

But he and Michelle missed the intellectual stimulation of Chicago and the academic environment of a teaching hospital. They realized they didn’t want to live in a small town. And they didn’t care for the winters. When the VEI opportunity presented itself, they took it seriously.

“What sold me on Vanderbilt was the opportunity to work with Dr. Sternberg,” says Carlson. “The VEI was already doing great things, and he had bigger plans for the future. I came here two years ago in May, and we’ve accomplished so much since then.”

“This has been a team process. Paul and I have established a great working relationship. We don’t have to look over each other’s shoulder, and that’s what makes us hum.”

One of the things Carlson did when he first came to the VEI was spend time with each of the faculty members. He saw it as an opportunity to pick up on the nuances in the practice of ophthalmology and now, as problems occur, he’s able to say, “I noticed this. Have you thought about this? Have you tried that? I’m not helping you with your clinical plan, I’m telling you that there are other ways you could approach it.”

This philosophy has informed his approach to the lecture series. “Residents are so entrenched in learning the clinical skills and care plans, this other stuff gets lost. But you pick up what you observe – it’s the environment you’re raised in. All I can offer is to be open and pay attention.”
Off-label drug use occurs when a drug is “prescribed in a way or for a condition not covered by the original FDA approval”. The practice of off-label drug use in ophthalmology is neither uncommon nor new. Antibiotics have been used off-label to prevent bacterial endophthalmitis after cataract surgery since 1956. In glaucoma care, topical corticosteroids were applied postoperatively to minimize scarring at the surgery site well before a clinical trial first demonstrated their efficacy in 1985.

In the U.S., physicians are free to use any marketed product as they deem appropriate for a given patient, but pharmaceutical companies are not allowed to promote off-label use. Treatment with any drug or therapy is based on a consensus between a well-informed patient and physician. The more scientifically sound the information supporting its use, the more confidently can the physician and patient assess the possible value of the proposed unapproved treatment.

This is no different in the case of off-label ophthalmic medications. More often than not, however, pharmaceutical companies do not elect to conduct further clinical trials and petition the FDA to support expanded use unless the treatment will benefit large numbers of patients. The expense and time required are perceived as just too prohibitive.

So what do physicians do, when the academic literature and key opinion leaders are reporting promise of an “off-label” treatment? In the last several years, retinal specialists have faced this issue head-on with the discoveries of Avastin® (bevacizumab) and Lucentis® (ranibizumab). Both drugs appear to have a comparable effect in treating age-related macular degeneration. Which drug to use has been a controversial topic since Lucentis was first introduced in 2006.

Avastin, developed by Genentech for cancer therapy, was the first of these drugs to receive FDA approval. In cancerous colon tumors, Avastin administered intravenously was proven to block vascular endothelial growth factor, or VEGF, a factor that stimulates abnormal blood vessel growth and leakage. Avastin was found to inhibit blood vessel growth, and without a blood supply, the tumor starves and dies. Macular degeneration, diabetic retinopathy and retinopathy of prematurity — the leading causes of blindness in specific populations — all involve such vessel changes.

Once Avastin was approved for treatment of colon cancer, Genentech began testing the drug for use in neovascularization of the eye. The initial study showed tremendous benefit, though it was suggested that Avastin was not optimally formulated to penetrate the retina and arrive at the precise site of new blood vessel growth.

“Our dilemma,” explains Paul Sternberg, Chair of the Vanderbilt Eye Institute and a retinal specialist, “is that you’ve got doctors who know they’ve got this great drug out there, Lucentis, and you’ve got patients who are just waiting for FDA approval to get the drug. Between the time you complete the study and get FDA approval, they may go blind.”

Retinal specialists began administering Avastin intravenously, but it posed complications with elderly patients. An ophthalmologist at the University of Miami began studies injecting Avastin directly into the eye at a significantly lower dose. While injecting into the eye was not new — Macugen had been administered this way for several years — injecting Avastin for macular degeneration constituted an off-label usage.

Meanwhile, Genentech had begun testing a new compound that was a fragment of an antibody against VEGF, which became Lucentis. Lucentis was ultimately approved by the FDA for treatment of macular degeneration.

Sternberg: “While Lucentis has gone through safety and efficacy studies, you have this other drug, Avastin, which is very similar from a mechanism standpoint, but has not had the clinical trials for the eye. Avastin seems to be as effective as Lucentis...but Avastin costs $70/dose as opposed to $2,000 for Lucentis. You now have this dilemma as a practitioner...quite honestly, retinal specialists around the country are very divided.”

Most macular degeneration patients receive their health insurance through Medicare, so even with coverage the co-pay cost for Lucentis is around $400 per month without secondary insurance. Now there’s an NIH study to compare the two drugs — (CATT) Comparison of AMD Treatments Trial — but it took a long time to find funding due to the cost of Lucentis.

What makes the story even more interesting is that neovascularization also occurs in ocular histoplasmosis and degenerative myopia, and there’s leakage in diabetes (diabetic macular edema) that may benefit from anti-VEGF drugs. Select cases of retinopathy of prematurity, where it is difficult to see into the eye because of leaking or blood vessel engorgement, may also benefit.

“There’s a high likelihood that Avastin or Lucentis might help these conditions,” says Sternberg. “In these cases, both drugs are off-label, so we always give patients the ‘I don’t know’ $50 drug.”

If Lucentis is proved to be effective for these other conditions, which will ophthalmologists use? The story’s not over...there will certainly be expanded indications for Lucentis use. And which drug does the VEI use? For macular degeneration, Dr. Sternberg uses Lucentis and Dr. Stephen Kim, a new faculty member, uses Avastin. (Full disclosure: Dr. Sternberg is a paid consultant to Genentech with fees paid to Vanderbilt.)

“I want my doctors to decide what’s best for their patients,” says Sternberg. “We train our residents — through journal clubs — to be critical readers. When they’re making decisions, they’re then able to critically evaluate drugs and surgeries.”

Sternberg wants to expand the resident journal club to include discussions of clinical and economic indicators. He believes medicine is at a point where decision-making by physicians (continued page 10).
benefit of the patient irrespective of the economics? Should the surgeon recommend an operation be part of the risk and "O ur medical students need to know expensive operation when vision will be limited? Should the cost of the retina is still detached, with a small chance of reattaching the retina, had two retinal procedures and the questions are being asked," be clearly based on clinical grounds. In fact, doctors have been making these kinds of decisions regarding surgery for some time. If a patient has had two retinal procedures and the retina is still detached, with a small chance of reattaching the retina, should the surgeon recommend an expensive operation when vision will be limited? Should the cost of the operation be part of the risk and benefit of the patient irrespective of the economist? “Our medical students need to know that the questions are being asked," says Sternberg, “the world is changing, and it is naive for us to think that economic considerations will not be part of a physician’s decision-making process.” “Is it our job to worry about the cost of health care or is it our job to provide the best care for our patients… how do you balance those? At the Vanderbilt Eye Institute, we’ll keep asking the questions.”

(Taking Quantum Dot Imaging to the Next Level)

Josh Barnett practically glows as he explains the two grants he has recently received to investigate the efficacy of endothelial progenitor cells (EPCs) as a drug delivery system for diabetic retinopathy. The grants – from the National Institute of Aging and the OneSight Foundation – are an outgrowth of the Vanderbilt Eye Institute’s research expertise in the causes of, and development of treatments for, retinal diseases, as well as more recent efforts in novel imaging techniques and new investigations into the biology of circulating endothelial progenitor cells (EPCs). Barnett is a graduate student in John Penn’s lab.

As profiled in the Spring 2007 issue of the Vision, Dr. Penn has worked with Rick Haselton in Biomedical Engineering to develop a multispectral, real-time imaging tool using quantum dots for the study of multiple cellular and biomolecular mediators of inflammation in a rat model of diabetes. This work is now being extended to other applications.

Diabetic retinopathy is a devastating eye condition that can irreversibly blind a person overnight. It is now considered the leading cause of blindness in working-age Americans. People with diabetic retinopathy often have abnormal blood vessel growth in their retina, which can cause blood to leak into the eye and cause severe vision loss.

Treating the condition is complicated, because it’s difficult to get drugs to the location of the new blood vessels. After learning of endothelial progenitor cells that home to sites of this type of blood vessel growth, Barnett and Penn set out to study the effectiveness of these cells as drug delivery vessels. EPCs are highly significant participants in the neovascular component of a host of diseases, such as atherosclerosis and cancer. Current research on EPCs has identified several different proteins that are expressed on the cells’ surface. It is unclear which of these proteins is involved in the homing function, and this is one of the questions in which Barnett and Penn are interested.

Using the knowledge that there are endothelial cells that travel through the circulatory system and home to sites of new blood vessel growth associated with diabetic retinopathy, Josh and other researchers in the Penn lab are isolating these cells and tracking their behavior in the retina with the multispectral quantum dot nanocrystal-based imaging system which enables a continuous, non-invasive view of the cells circulating in the retina.

A greater understanding of the mechanism(s) by which EPC home to sites of blood vessel growth may facilitate the development of new methods to deliver customized, high-efficacy drugs to these sites. These drugs will be aimed at the inhibition of new blood vessel growth in order to halt the progression of diabetic retinopathy.

To date, the delivery of drugs to the retina has proven extremely difficult. Currently, various stages of diabetic retinopathy are treated with a laser that cauterizes the newly grown abnormal blood vessels. Investigation into alternative, less-invasive treatment options will positively impact the quality of life for patients receiving care.

The Vanderbilt Eye Institute is dedicated to conducting research that will further the understanding and potential treatment options for people living with diabetes and its complications.
Did you always want to be a doctor? I got a lot of encouragement, but I struggled to choose between doctor or scientist. It wasn’t until I was far down the road in my education that I realized that you can do both. In those days it wasn’t obvious that there was a career as a physician scientist. It was at Tulane as an engineering student that I encountered mentors that said, “You know, there’s this thing called and M.D./Ph.D. program.” Once I realized that was possible, I knew what I wanted to do.

If you had to choose between patient care or research, which would you choose? That’s like asking me to choose my favorite child! I don’t think I could choose, because for me the choice was both. I couldn’t split them apart and don’t want one to be excluded. Now that I’m in an administrative role, I’m shepherding the two so that the whole is greater than the sum of the parts.

What do you love about research? Two things: the challenge of the unsolvable puzzle and the explosive impact that a single “aha!” can lead to. There are few things in life where unlocking an answer can have such dramatic impact. Most of what you do in life is one foot in front of the other, but with research there’s non-linear impact from even a single discovery. You can do something that has tremendous impact on society... no matter who you are or what you’re doing.

How do you see the role of research for VUMC? There’s been movement back and forth between basic discovery or clinical/translation research. I see that as an artificial argument, because a health research enterprise has both. Doing one to the exclusion of the other would be like a company investing all its assets in the long term with no short-term investments.

Basic science is our long-term investment strategy. Clinical/translational research is the short-term yield. I hate to reduce it to an economic argument, but a healthy organization invests in both. That’s what we’re doing. I want to see Vanderbilt do things that everybody around the globe knows about. We’ve risen to the level where we can accomplish that.

How did Vanderbilt get to this place? Ten years ago, Vanderbilt had a stated goal to greatly expand the amount of translational research. Subsequently, the number of faculty who are clinician researchers has increased exponentially. Many of the senior management at VUMC are practicing researchers, which creates an atmosphere in which we are constantly finding new ways to approach problems.
Sam Coleman was the classic image of the self-made man. After his family’s wholesale grocery business failed during the Depression, he started one of the first real estate development firms in Middle Tennessee and northern Alabama. Coleman developed many key residential areas, including Brentwood, TN, in the 1970s.

Both Ann and Bob Coleman are Vanderbilt alumni – Bob, 1951, and Ann, 1953. After college and marriage, Bob, an engineer and an only child, went to work with his father, and continues the work of the family firm today. Ann began her life-long commitment to volunteer work.

The Coleman’s have two daughters: Dee Coleman Boswell, who lives in Houston with her husband, Jeff, and three daughters, and Nancy Coleman Deaton, who lives in Nashville with her husband, Mark, and three children. In addition to the Ophthalmology chair, the elder Coleman’s endowment includes funds for pediatrics programs. “I was the one who got my father-in-law interested in the pediatric side,” laughs Ann. “For years he heard me talk at the dinner table about the work I was doing. The Children’s Hospital was founded in 1972, and I was honored to serve on the first board of Friends of Children’s Hospital. In fact, I continued my involvement for many years. It was a wonderful surprise to me that Sam wanted to include them in the endowment.”

“Dr. Donahue took us on a tour of the pediatric section of the new Vanderbilt Eye Institute facility and we were really impressed,” says Mr. Coleman. He mused: “My mother would be so pleased to see this bright new building. She always complained that the Ophthalmology office was the darkest place on campus...and it was for people with eye problems!”

Over the last several months, the Coleman’s have enjoyed getting to know Sean Donahue, M.D., Ph.D., the appointee to the Coleman chair. “Dr. Donahue is just so touched by all of this…it’s so important to him,” says Ann. “I knew a chair was a big deal, but I didn’t realize until we talked to Sean how much it means to a physician. We’re so honored that he is the recipient of this chair.”

Sean Donahue is chief of Ophthalmology at the Monroe Carell Jr. Children’s Hospital at Vanderbilt, and is a Professor of Ophthalmology and Visual Sciences, Pediatrics and Neurology at VUMC. When he came to Vanderbilt in 1995, he was instrumental in the creation of the Tennessee Lions Eye Center, which opened in October of 1997. Donahue has helped grow the Pediatric Ophthalmology service from about 1,000 to 10,000 patients a year since 1995.

Paul Sternberg, VEI Chair, in announcing the endowment, had this to say: “Great universities are defined by their ability to attract the people who want to make a difference. We are fortunate to have philanthropists like the Coleman family, who help us protect things that are of value and importance – our children and our sight.”

“Being named to an endowed chair is the highest honor a faculty member can achieve,” Sternberg continued. “It lets them perform that ‘crazy... (continued on page 16)
The Vanderbilt Eye Institute announces:

Rachel Wang Kuchtey, M.D., Ph.D., assistant professor of Ophthalmology at the Vanderbilt Eye Institute, has received a Career Development Award from Research to Prevent Blindness. The $200,000 award, granted for a four-year period, will support Kuchtey’s glaucoma research.

“We are hoping to come up with early diagnostic testing and develop therapeutic agents to treat glaucoma in the early stages,” Kuchtey said. Research to Prevent Blindness is the world’s leading voluntary organization supporting eye research.

(Coleman profile continued)

idea’ experiment that may lead to a scientific breakthrough. Or for that gifted educator, who may block out precious time helping a student prepare to present a paper for the first time at a national meeting, like Sean has done.”

Dr. Jeffrey Balser, the newly designated Vice Chancellor of VUMC, put it this way: “Endowing a chair is a really timeless way to honor Sam and Darthea, who had a personal connection with eye disease and wanted to support us in Ophthalmology. The chair also honors their daughter-in-law, Ann Coleman, who’s worked with us as a key volunteer at Children’s Hospital.”

“Endowed chairs are the lifeblood of any educational organization, and they are particularly important in today’s economic environment. Endowed chairs last essentially forever, around for thousands of years in spite of all the things that happen. This endowed chair will be here when the world is something we can’t recognize.”

“We are pleased that Dr. Donahue is activating the Coleman chair,” says Bob Coleman. “Ann and I are really impressed with his work. I’m sure that he and the Eye Institute have a bright future.”

Dr. Donahue: “There are four milestones in the life of an academic physician...being offered that first job, being awarded tenure, achieving the rank of full Professor, and, finally, receiving an Endowed Chair. I am so thankful to the Colemans for their generosity, and also to this fine institution, where, for me, all four of those milestones have happened.”

Paul Sternberg, Jr., M.D.
Chair, Vanderbilt Eye Institute
RETINA/MAVERICK
Special interests: age-related macular degeneration and complex retinal detachments.

Anita Agarwal, M.D.
RETINA/MAVERICK
Special interests: inflammatory diseases of the retina and diabetic retinopathy.

Jiang Cai, M.D., Ph.D.
VISION RESEARCH
Special interests: mitochondrial oxidative damage and protection in aging and age-related degenerative diseases.

David J. Calkins, Ph.D.
VISION RESEARCH
Special interests: degenerative disorders of the visual system and the genetic mechanisms of retinal disease.

Min S. Chang, M.D.
VISION RESEARCH
Special interests: growth and maintenance of corneal epithelial cells.

Amy S. Chomsky, M.D.
COMPREHENSIVE OPHTHALMOLOGY
Special interests: Veterans Administration Hospital Chief Attending.

Sean P. Donahue, M.D. Ph.D.
NEURO-OPTHALMOLOGY/PEDIATRIC OPHTHALMOLOGY
Special interests: amblyopia, surgical management of complicated strabismus, pediatric neuro-ophthalmology, and visual field testing.

Robert Estes, M.D.
PEDIATRIC OPHTHALMOLOGY/ADULT STRABISMUS
Special interests: Childhood and adult strabismus, ophthalmic genetics.

James W. Felch, M.D., Ph.D., F.A.C.S.
COMPREHENSIVE OPHTHALMOLOGY
Special interests: Cataract surgery.

Jin Hui-Shen, Ph.D.
VISION RESEARCH
Special interests: laser surgery and the invention of surgical devices.

Karen M. Joos, M.D., Ph.D.
GLAUCOMA
Special interests: low-pressure glaucoma and pediatric glaucoma.

Jeffrey A. Kamner, M.D.
GLAUCOMA
Special interests: neovascular glaucoma and complicated glaucoma cases.

Brad Kohler, O.D., F.A.A.O.
OPTOMETRY
Special interests: low vision rehabilitation, specialty contact lenses.

Lori Ann F. Kohler, O.D., F.A.A.O.
OPTOMETRY
Special interests: amblyopia, pediatric eye care.

Stephen J. Kim, M.D.
RETINA/MAVERICK
Special interests: uveitis.

Mark A. Knoll, M.D., J.D.
COMPREHENSIVE OPHTHALMOLOGY
Special interests: Cataracts, refractive surgery, secondary IOL implantation, corneal transplantation.

John Kuchtey, Ph.D.
VISION RESEARCH
Special interests: immunological aspects of anterior chamber pathology in glaucoma.

Rachel W. Kuchtey, M.D., Ph.D.
GLAUCOMA
Special interests: cellular and molecular mechanisms of aqueous outflow in glaucoma.

Patrick Lavin, M.D.
NEURO-OPHTHALMOLOGY
Special interests: eye movement disorders, nystagmus, neuro-otology, headache and metabolic disorders affecting the visual system.

Jennifer Lindsey, M.D.
COMPREHENSIVE OPHTHALMOLOGY
Special interests: Cataracts, eyelid disorders, ocular trauma, diabetic eye disease, and glaucoma.

Louise A. Mawn, M.D.
NEURO-OPHTHALMOLOGY/OPTICPLASTICS
Special interests: ophthalmic plastic surgery with a particular interest in orbital disease.

Mark R. Melson, M.D.
OPTICPLASTICS
Special interests: ophthalmic plastic surgery.

Lawrence M. Merin, RBP, FHM
OPHTHALMIC IMAGING CENTER
Special interests: retinal imaging, epidemiology and diabetic eye disease.

David Morrison, M.D.
PEDIATRIC OPHTHALMOLOGY
Special interests: strabismus, pediatric cataracts, and retinopathy of prematurity.

Denis, M. O’Day, M.D., F.A.C.S.
CORNEA AND EXTERNAL DISEASE
Special interests: ocular fungal infections.

John S. Penn, Ph.D.
VISION RESEARCH
Special interests: molecular basis of ocular angiogenesis.

Francis Rechelka, M.D.
RETINA/MAVERICK
Special interests: pediatric retinal disorders and retinal vascular disorders.

Chadly D. Singleton, M.D.
COMPREHENSIVE OPHTHALMOLOGY
Special interests: refractive errors, cornea disorders, cataracts, glaucoma, diabetic eye disease, ocular trauma, and strabismus.

Jeffrey Sensimo, O.D., F.A.A.O.
OPTOMETRY
Special interests: complicated and difficult-to-fit contact lenses, and low vision rehabilitation of adults and children.

Uyen L. Tran, M.D.
CORNEA AND EXTERNAL DISEASE/ LASER SIGHT
Special interests: corneal transplantation, cataract surgery, and refractive surgery.

Laura L. Wayman, M.D.
COMPREHENSIVE OPHTHALMOLOGY
Special interests: Director of Resident Training and cataracts.

Daniel W. Weikers, M.D.
COMPREHENSIVE OPHTHALMOLOGY
Special interests: Cataracts, refractive surgery, secondary IOL implantation, sports ophthalmology - team physician for Tennessee Titans and Nashville Predators.