Vanderbilt Vision

FOCUS: Teaching Excellence

Residency Training Program • Ft. Campbell Collaboration • Emphasis Program • RESEARCH: Creating Vision Scientists • PROFILES: Chief Residents Past & Present • Volunteer Clinical Practitioners
Dear Friends,

Of the three areas comprising the mission for the academic medical center – clinical care, research, and teaching – the most indispensable is teaching. In reality, the university was established for the purpose of education. Yet, as academic centers put increasing pressure on faculty to support their department with clinical revenue and research grants, time for teaching and mentoring is under constant threat.

In contrast to other universities, the Vanderbilt School of Medicine has maintained its emphasis on education. This is reflected in the fact that Vanderbilt annually ranks first in the country in medical students' satisfaction with their educational experience. Thus, prioritizing training programs at the Vanderbilt Eye Institute comes naturally.

In this issue, you will read about the wide range of educational opportunities that we offer, including those for medical students, graduate students, residents, postdoctoral research fellows, and postdoctoral clinical fellows. We are proud that Vanderbilt's unique Emphasis Program for medical students is directed by my predecessor as Chair, Dr. Denis O'Day. Dr. O'Day was integral to the program's development and design, and received the School of Medicine Award for Excellence in Teaching last year for Innovation in Educational Programming That Has Proven to Be Effective.

Dr. Laura Wayman joined our faculty in 2005 as our first full-time Residency Program Director. She has crafted a curriculum for teaching cataract surgery, which integrates one-on-one teaching in a surgical wet lab, with step-wise transfer of various stages of the surgical procedure to the operating room. We are fortunate to have a marvelous cadre of community physicians, many who trained at Vanderbilt, who generously volunteer their time to instruct residents – both in the outpatient clinics and in the operating room. In addition, we have recently established an outstanding collaboration with the eye surgeons at Fort Campbell, 30 miles north of Nashville, whereby our residents get extensive experience with refractive surgery.

The Eye Institute also boasts great opportunities for the development of vision scientists. In our research laboratories, there are undergraduates, graduate students, medical students, postdoctoral fellows, residents, and visiting scientists working under the mentorship of our research faculty. Not only are they learning state-of-the-art laboratory techniques, they also are actively conducting experiments as part of world class vision research studies.

Education is alive at well at the Vanderbilt Eye Institute! I hope you enjoy this issue of Vanderbilt Vision.

Sincerely yours,

Paul Sternberg, Jr., M.D.
G. W. Hale Professor and Chair
Vanderbilt Eye Institute
EDITOR'S NOTES

Vanderbilt Vision is a publication of Vanderbilt Eye Institute, a department of Vanderbilt University Medical Center. Vanderbilt Vision provides ophthalmologists with information on current research and state-of-the-art clinical applications.

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Vanderbilt University Medical Center is a comprehensive research center committed to excellence in patient care and physician education.

Vanderbilt Vision is written for physicians and friends of the VEI and does not provide a complete overview of the topics covered. It should not replace the independent judgment of a physician about the appropriateness or risk of a procedure for a given patient.

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Vanderbilt University Medical Center

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Josh Hu, M.D., third year resident in the wet lab with Laura Wayman, M.D., Director of Resident Training. Cover image: Anne Rayner and Getty Images

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When Laura Wayman was recruited to the Vanderbilt Eye Institute in 2005, its residency program needed “re-energizing.” Paul Sternberg, new himself as VEI’s chair, realized it would take a special person to help him make Vanderbilt one of the most sought-after ophthalmology training facilities in the country.

“We were fortunate that Laura heard about the opportunity,” said Dr. Sternberg. “She was having great success in private practice, but missed the educational environment of an academic medical center that she experienced during her outstanding training at Mayo Clinic. She had a deeply rooted desire to teach ophthalmology and this made her really stand out from other applicants.”

“My decision to leave a busy surgical practice in Florida and join the faculty at Vanderbilt Eye Institute was based on the opportunity to teach one of the things I love most – ophthalmology,” said Dr. Wayman. “In addition, Vanderbilt offered a chairman committed to education, faculty support in all areas of ophthalmology, a good reputation, and exposure to a diverse patient population.”

Once at Vanderbilt, Dr. Wayman began by formalizing the education committee, which includes the Chief Resident, Prat Itharat (see page 9) and faculty representing pediatric ophthalmology, retinal and vitreous diseases and comprehensive ophthalmology. The committee meets once a month.

In the last two years the VEI education committee has redesigned the curriculum, incorporating the core competencies established by the Accreditation Council for Graduate Medical Education (ACGME).

In addition to clinical education, residents participate in formal weekday lectures. These follow the Basic and Clinical Science Series as closely as possible to reinforce the information published by the American Academy of Ophthalmology. A monthly academic seminar series brings in experts from both ophthalmologic research and clinical practice to speak on current issues and topics.
Five times a year, a one-hour ethics seminar is moderated by Dr. Larry Churchill, Ann Geddes Stahlman Professor of Ethics at Vanderbilt Medical Center. Residents submit cases in which they felt there may have been ethical issues. The residents, Dr. Wayman, and Dr. Churchill address these issues in a roundtable discussion. Dr. Churchill also points the group to pertinent resources on the topic in the literature.

On the surgical side, Dr. Wayman has updated the microsurgical skills lab. In their first year, residents spend a 10-week rotation in the “wet” lab, learning step by step the skills to perform cataract surgery. The residents have hands-on experience with cataract surgery before they ever leave the classroom. In addition, they take the specific skill they’ve learned each week into surgery, performing that one step on an actual patient. This training method is unique to the Vanderbilt Eye Institute.

The residency program includes a requirement for active participation in research during the second and third years. This program is administered with the guidance of the resident research committee, chaired by David Calkins, Ph.D. (see article, page 6).

Vanderbilt serves a patient population of approximately 4.5 million people from a variety of socio-economic backgrounds – at the Vanderbilt Medical Center, at the adjacent Veterans Administration Medical Center and at Nashville General Hospital at Meharry.

During the three-year residency, approximately nine months are spent at the VA Medical Center. The VA is equipped to allow residents to perform comprehensive ophthalmology procedures as well as subspecialty procedures.

For clinical experience in pediatric ophthalmology, the Tennessee Lions Eye Center at Vanderbilt Children’s Hospital has six fully equipped examining rooms and is staffed by full-time faculty and residents.

Despite the rigors of her position, Dr. Wayman still loves to teach. “When I see the excitement on residents’ faces when they perform the first step in cataract surgery – that’s what is most exciting for me!”

Collaboration Reaps Big Pay-Off

Vanderbilt Eye Institute residents get lots of practice in refractive surgery. In collaboration with Blanchfield Army Community Hospital, fourth-year residents spend part of a 10-week rotation at the Ft. Campbell, Kentucky, Warfighter Refractive Eye Surgery Center. This arrangement allows them to perform upwards of 25 bilateral cases as the primary surgeon.

Residents become familiar with and perform preoperative evaluations for refractive surgery in order to determine a patient’s candidacy and/or risk factors for surgery. They observe, then perform (as primary surgeon) corneal laser refractive surgery. And finally, they provide postoperative care for corneal laser refractive surgery patients. When the resident completes the rotation, he or she receives on-site certification in refractive surgery.

Currently, the residents are spending two days a week at Ft. Campbell on an every-other-week basis throughout the 10-week cycle. One day is spent in the OR, while the other day is spent performing preoperative and postoperative evaluations.

Adam Buchanan, M.D., Chief, Ophthalmology at the Warfighter Refractive Eye Surgery Center: “My partner, Dr. Sanford and I have an interest in education and we’re glad to be able to provide this opportunity for the Vanderbilt residents that they wouldn’t get with paying or private patients.”
When Dr. Denis O’Day left his post as Chair of the Department of Ophthalmology and Visual Sciences in 2002, he knew he wanted to stay involved with physician education. Little did he know that he would be part of developing what has become a unique experience that distinguishes Vanderbilt from other medical schools.

Dr. O’Day was invited to serve as head of a committee designing an innovative research program for medical students. While most medical schools encourage student research in one way or another, none of the models were considered satisfactory. Clearly medical students needed greater exposure to research, but where...and how?

At the time, the only place in the curriculum was an introductory course on biomedical research. Five years later, the program Dr. O’Day and the committee created is a unique, holistic experience that reflects the broad range of opportunities for medical research.

The Emphasis Program affords first- and second-year students the opportunity to pursue a project of their own choosing. Students select from one of nine focus areas: Biomedical Informatics, Education, Law and Policy, Patient-Oriented Research, International Health, Medical Humanities, Community Health Initiatives and Health Outreach, Laboratory-Based Biomedical Research, and Public Health Research and Management. The eighteen-month project can be in any discipline so long as it applies to improving medical care.

The Emphasis Program teaches the attributes of scholarship and leadership in the context of a project done in collaboration with a faculty mentor. “First-year medical students come to Vanderbilt Medical School with many diverse skills and passions,” says Dr. O’Day. “We like to provide a menu that’s as wide as possible to let them explore these interests.”

Medical students are exposed to each Emphasis area during the first semester. They acquire an understanding of the field’s unique characteristics by learning how scholars in this field identify and investigate important questions.

Students select a mentor for their project in the area they have chosen. The mentor/student relationship is vital: special care is taken to find the right match. After a “courtship” process, both parties have to sign a formal agreement outlining what each agrees to bring to the project. This system appears to be working – many students continue to collaborate with their chosen mentors throughout their entire medical school experience.

Once students have selected their projects and mentors, they spend the following spring investigating, planning and initiating their projects. They pursue the projects full-time for an eight-week period in the summer and during the following year. Projects are presented at the annual Emphasis Forum in April complete with formal posters and abstracts published in a journal.

Almost two hundred students are

"The Emphasis Program helps doctors-to-be address the current & future challenges in the field of medicine." – Denis O’Day, M.D.
The Vanderbilt Emphasis Program is a unique mode of self-directed study which takes place during the first two years of medical school. This program aims to harness the student’s skills, talents, and passions by allowing them to pursue a project of their choosing.

Three Vanderbilt medical students have chosen basic research in ophthalmology as their emphasis. Working in John Penn’s lab, these students are pursuing various areas of interest and opening their eyes to a possible career in ophthalmology.

Harvard graduate Matt Rioth is investigating the response of endothelial cells in a hyperglycemic environment. He is a second year medical student from Colorado Springs, CO.

Anjali Shah, from Owensboro, KY, received her undergraduate degree at Vanderbilt. She is working with fellow second year medical student, Kunal Sharma. They are concentrating on trying to identify anti-angiogenic proteins in the vitreous of rats following penetrating ocular injury. Kunal is a graduate of Emory and grew up in Augusta, GA.

All three students spent much of the summer in the lab. With fall classes well underway, they still find time for their important lab work.
In John Penn’s lab, the pace is fast and furious. Graduate students Monika Clark, Susan Yanni and Josh Barnett work alongside him on various research projects, flanked by three undergraduate students, three medical students, a visiting professor or two and three research assistants. “The students bring vitality and excitement to the work,” Penn, director of research at the Vanderbilt Eye Institute, says, “and often, fresh insights. Interacting with them is one of my favorite parts of my job.”

Like most medical schools, Vanderbilt offers two discrete post-graduate tracks: M.D. and Ph.D. What distinguishes the Vanderbilt Eye Institute is that it has stringent research requirements not only for students pursuing basic research training, but for medical students (see Emphasis Program, page 4) and residents as well.

The Vanderbilt University School of Medicine currently ranks 12th among medical schools that receive funding from the National Institutes of Health. Vanderbilt Eye Institute faculty members pursue a variety of research interests across the major ophthalmology subspecialties, ocular diseases and basic visual processes. This breadth of interests provides for a wide array of projects for both doctoral candidates and residents.

At the VEI, cutting-edge vision research is directly related to patient care. Basic researchers — seeking a better fundamental understanding of the eye in health and disease — and clinician scientists work together with a rare synergy on research projects that translate to new treatments. The large patient population provides an extensive database for both retrospective and prospective clinical studies.

Graduate students excel after leaving the VEI. Penn’s last two graduate students are in fellowships at the Mayo Clinic and at Harvard. “Training in fundamental aspects of eye disease is an important part of our responsibility to our students, but it’s not all we do. We also prepare them to make a successful transition to independence — to write solid grants and papers, to manage lab personnel and other necessary resources. In short, we prepare them to compete,” he said.

“Basic research and clinical research are strongly integrated at Vanderbilt,”
says David Calkins, chairman of the VEI’s resident research committee. “It affords us a natural opportunity to collaborate.”

The resident research committee includes both clinical and research faculty, and residency program director Laura Wayman. The committee guides residents in the administration, design, execution and presentation of their research projects.

Residents usually work on separate projects in their second and third years. Calkins, Wayman and other committee members work together to discuss resident needs, ensuring that they find projects that engage them. The experience includes not only the hands-on undertaking of a research project, but faculty mentorship and training in the discipline of science.

Calkins explains: “Residents leave the Vanderbilt Eye Institute having been exposed to serious academic research. After going through our program, they have an excellent understanding of how research contributes to the progression of clinical practice.”

Brian Armstrong, Resident

Not only is Brian Armstrong, M.D., a Vanderbilt Eye Institute resident, he received his medical degree from Vanderbilt as well. For the first two years of his training, he worked on a biomedical informatics grant to archive Vanderbilt’s medical curriculum. In his third year of medical school, he began working in David Calkins’ laboratory.

“Dr. Calkins is one of the reasons I stayed at Vanderbilt for my residency,” he said. “He’s been a good mentor. I really didn’t have much interest in bench research…”

“My ideal is to be a part of discovering new knowledge - whether it’s through bench or clinical science.” - Brian Armstrong

he’s taught me what research can be.” Dr. Armstrong is currently working with Dr. Calkins on a project whose broad topic is neuroprotection and optic nerve damage (see Vanderbilt Vision, Fall 2006).

“Having these two well-respected bench scientists (David Calkins and John Penn) on the faculty is great exposure for residents,” says Brian. “I now know that I want to be a clinician-scientist.”

“Incorporating more basic research endeavors into the residency is key,” he said. “My ideal is to be a part of discovering new knowledge – whether it’s through bench or clinical science.”
Rebecca Sappington, Research Fellow

Rebecca Sappington, Ph.D., Vanderbilt Eye Institute Fellow, has shared VEI’s multidisciplinary approach from early on. She began her basic research as an undergraduate, studying biology and psychology with an emphasis on behavioral neuroscience. Working in a psychiatric hospital, Rebecca noticed the same patients returning again and again.

“I decided that I wanted to work in a field where I could effect some real change,” she said of her Ph.D. in neuroscience. “The visual neurodegenerative diseases have a lot to teach us. The eye’s accessibility makes it easy to see the impact of treatment, offering hope for research breakthroughs in degenerative conditions like Alzheimer’s and Parkinson’s.”

Dr. Sappington points out that interaction between researchers and clinicians is a strength of clinical departments with research programs like Vanderbilt’s. In basic science departments, interaction between clinicians who treat patients with the disease and researchers studying the disease is more difficult to promote.

As a research fellow, Rebecca helps instruct residents, which informs her own training. She finds that medical students often pose questions that basic scientists don’t ask. “I get just as much from them as they do from me,” she says.

Josh Barnett, Doctoral Candidate

Although Josh Barnett is just beginning his Ph.D. program, he's been a presence in John Penn’s lab through several years of undergraduate and graduate coursework. “I was exposed to the discovery process,” he recalls, “and learned that I really wanted to be a researcher. The faculty members at the Vanderbilt Eye Institute respect graduate students and want to make it the best possible experience.”

Josh is part of Vanderbilt’s Interdisciplinary Graduate Program (IGP). A pharmacology major, his lab research has included ophthalmology, immunology and microbiology, neuroscience and biological engineering. Under Dr. Penn, he is studying pharmacological interventions in vascular diseases of the retina.

“John’s lab is translational,” Josh explains. “The projects we’re working on are immediately applicable to patients. I like the VEI’s emphasis on clinically relevant research. It allows us to address whether something will work with patients. That’s a rare opportunity for a graduate student.”

Josh acknowledges that the program is a lot of work. “You really have to love it. But we do have fun, too!”
“How did a Northeast guy like me get to the South?” asked Matt Vicinanzo, M.D. (Vanderbilt, 2005). “Denis O’Day’s excellent sales pitch! And his reputation didn’t hurt, either. He and Donald Gass were such prominent players in the ophthalmology field.”

Dr. Vicinanzo had attended Harvard for his undergraduate degree and Syracuse for medical school and was considering northeastern schools for his residency. But once he came to Vanderbilt he didn’t look back. A wife, four children, and an oculoplastics position now have him planted firmly in Birmingham. He gets to teach the UAB ophthalmology residents, operate, and raise a family. Life couldn’t be better.

Vicinanzo was Chief Resident during his tenure at Vanderbilt, and is highly appreciative of the input he was allowed to have in the Vanderbilt Eye Institute’s residency program.

“When Paul Sternberg came in he had a vision; he wanted to take things to the next level. He let me develop the Chief Resident position and participate on the education committee.”

“The hands-on education was great. I was able to perform over 170 cataract surgeries during my residency. More importantly, thanks to the Vanderbilt Eye Institute and Dr. Sternberg, I was able to secure one of only twelve ASOPRS oculoplastics fellowships in the country that year,” said Vicinanzo.

Prat Itharat, M.D., the VEI’s current Chief Resident, also came to Nashville from the Northeast. In fact, he attended the same school as Vicinanzo - SUNY Upstate (Syracuse). “Dr. Vicinanzo interviewed me for medical school and for residency. Talk about a small world!” he said. Vanderbilt was ranked high on his list because of the camaraderie among residents. “And there was a good balance in the program between pathology and surgery,” he said.

As Chief Resident, Dr. Itharat wasn’t quite ready for how busy he would be. Because Vanderbilt Medical Center is a Level I trauma center serving a 200-300 mile radius, residents get called in for emergencies more frequently than in community hospital based programs. “A lot of people think ophthalmology is one of the easier sub-specialties from a call perspective,” said Prat. “A typical night of call might include seeing patients with facial trauma, facial burns, corneal ulcers, iritis, retinal detachments, ruptured globes and so forth. In an academic setting, we get to see it all!”

Dr. Itharat thinks his toughest job is serving as liaison between the faculty and residents. Not only does he manage the logistics of the residency group – calls, lectures, meetings, etc. – he also sits in on the monthly faculty meetings and brings any issues to the fore that the residents may be having.

“Our class is a little more aggressive than others,” he said. “We expect to maximize our experience. It is very difficult to balance conflicting needs and concerns.”

He has high regard for the changes that have been made to the ophthalmology residency program since he’s been at Vanderbilt. “Usually you don’t do cataract surgery until the 2nd or 3rd year. Because we are trained in the first year and learn the surgery piece by piece, I think we are more skilled (and confident) when we go into the operating room.”
S
ince the beginning of its residency program, the Vanderbilt Eye Institute has maintained a vigorous relationship with the Middle Tennessee ophthalmology community. One good example is a program whereby ophthalmologists practicing in the Nashville area – looking for a way to give back and to stay in touch with the academic community – can volunteer their time to supervise training at Vanderbilt and the VA Medical Center.

One of these visiting ophthalmologists has been coming to Vanderbilt for over 36 years. John Downing, M.D., received his ophthalmology training at the Naval Hospital in Philadelphia during the Vietnam War. After serving his time in the Navy, he returned to his home state of Kentucky, and started a private practice in Bowling Green. Dr. Downing enjoyed private practice, but missed the interaction that occurs in a teaching hospital. He began volunteering his time to work with the Vanderbilt residents, and has been coming to Vanderbilt every month or two since 1971.

“I enjoy working with residents,” he said. “Coming to Vanderbilt and interacting with the residents helps me stay in touch and keep current with the latest knowledge.” In addition to surgery supervision, he gives a lecture on each visit, mostly on cataract techniques, but also in practice management.

For almost twenty years, Dr. Downing has also been volunteering with ORBIS, a nonprofit humanitarian organization dedicated to blindness prevention and treatment in developing countries, where 90 percent of the blind reside. The ORBIS Flying Eye Hospital is literally a hospital with wings that brings together dedicated eye care professionals and aviators to give the gift of sight to developing countries around the world. Orbis works with local doctors in each country to teach them to use newer techniques, and with building infrastructure, such as starting eye banks. John’s role is teaching doctors the latest practices in the management of cataracts, the most common problem worldwide causing treatable blindness.
“I love to travel, so I get to combine my desire to help others with my desire to see new places,” he said. “It’s rewarding to see the improvements that have been made each time we return to the same countries.”

One of the Vanderbilt residents supervised over the years by Dr. Downing is Meredith Ezell – a Nashvillian with a successful ophthalmology practice in Hermitage, Tennessee. Dr. Ezell has herself been volunteering at the VA for over 21 years. “I really learned a lot from the volunteer doctors who supervised me,” she said. “You watch the faculty and you know their tricks. But working with someone from outside can really make an impression. When I finished my residency, I thought, I’d like to do that if they’ll let me!”

For the first couple of years she wondered, “Gee, do I really know more than they do?” But as she got more experience in her own practice, her confidence grew and she was able to bring more to the residents. “And I pick up tips from them,” she said.

In the time she’s been volunteering at Vanderbilt, Dr. Ezell has seen many technological changes. “A procedure that used to take over an hour now can be done in thirty minutes,” she said. “The tools have really evolved. Even the residents make it look easy.”

Like Dr. Downing, Dr. Ezell also volunteers internationally with Health Talents International, a non-profit medical evangelism organization that hosts several trips annually to Guatemala and Nicaragua. She was instrumental in establishing Clinica Ezell in Montellano, Guatemala, which serves as the point of operation for all of HTI surgical teams serving coastal Guatemala. The facility consists of three surgical suites, a 50-bed ward, clinic exam rooms, pharmacy, lab, and X-ray room. Adjacent to the surgical center is a dormitory that houses 44 visiting team members, a large commercial kitchen and dining area. The surgical teams teach local doctors as well as treat patients.

Dr. Ezell: “As physicians, the most important thing we can do to give back is to teach others what we’ve learned.”

Meredith Ezell at the VA Medical Center in Nashville. Photo: Anne Rayner
The Vanderbilt Eye Institute is pleased to announce the following grants or awards for laboratory research:

**Paul Sternberg, Jr., M.D.**
2007 Sommer Prize for Macular Degeneration Research from the EyeCare Foundation for exploring the relationship between variations in the genetics of mitochondria and the function of retinal pigment epithelial cells.

**David G. Morrison, M.D.**
International Retinal Research Foundation grant for the project titled “Insulin-like Growth Factor and IGF Binding Protein: Influence on Hypoxia-Induced Retinal Neovascularization.”

**Min S. Chang, M.D.**
Research to Prevent Blindness, Inc. Robert E. McCormick Special Scholars Award to support studies of molecular regulation of epithelial junctional complex formation on corneal wound healing.

**Josh Barnett,** graduate student in Dr. Penn’s lab: Ruth L. Kirschstein National Research Service Award from the National Institute on Aging. The award will cover Josh’s graduate tuition and stipend for up to five years. The title of the application was “Quantum Dot-Based Profile Imaging of Endothelial Progenitor Cell Subpopulations & Effect on Retinal Neovascularization.”

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**Pearls XI: April 4-5, 2008**

**Vanderbilt Eye Institute - Nashville**

*A review of current issues for the comprehensive ophthalmologist*

**Guest Speakers:**

- Thomas Aaberg, Sr., M.D.
- Gary Abrams, M.D.
- Mark Blumenkranz, M.D.
- Susan Bressler, M.D.
- Neil Bressler, M.D.
- Robert Daroff, M.D.
- Eugene de Juan, Jr., M.D.
- David Epstein, M.D.
- Stuart Fine, M.D.
- Robert Goldberg, M.D.
- Dale Heuer, M.D.
- John Clarkson, M.D.
- Dan Jones, M.D.
- Anselm Kampik, M.D.
- Lanning Kline, M.D.
- Hilel Lewis, M.D.
- Robert Machemer, M.D.
- Daniel Martin, M.D.
- William Mieler, M.D.
- David Parke, II, M.D.
- Mark Petrash, Ph.D.
- Stephen Ryan, M.D.
- Andrew Schachat, M.D.
- Jerry Shields, M.D.
- Fumio Shiraga, M.D.
- Ron Smith, M.D.
- Yasuo Tano, M.D.
- Jim Tsai, M.D.
- George Waring, III, M.D., FACS
- C.P. Wilkinson, M.D.
- Karla Zadnik, O.D.
- Emory University Eye Center
- Kresge Eye Institute
- Stanford University Medical Center
- Johns Hopkins Hospital
- University of California, San Francisco
- Duke University Eye Center
- Scheie Eye Institute
- Jules Stein Eye Institute
- Medical College of Wisconsin Eye Institute
- Miller School of Medicine, Univ. of Miami
- Cullen Eye Institute
- Ludwig-Maximilians University
- UAB, Department of Ophthalmology
- Cole Eye Institute/The Cleveland Clinic
- Duke University Eye Center
- Emory University Eye Center
- Univ. of Chicago, Dept. of Ophth.
- Dean A. McGee Eye Institute
- Washington Univ. School of Medicine
- Doheny Eye Institute
- Cole Eye Institute/The Cleveland Clinic
- Wills Eye Hospital
- Kagawa Medical Center
- Doheny Eye Institute
- Osaka University Medical School
- Yale Eye Center
- Emory University Eye Center
- Johns Hopkins Hospital
- Ohio State Univ., College of Optometry

For more information on this event contact Tammy Tankersley at 615-936-0044 or tammy.tankersley@vanderbilteyeinstitute.com
Paul Sternberg, Jr., M.D.  
Chair, Vanderbilt Eye Institute  
RETINA/VITREOUS  
Special interests: age-related macular degeneration and complex retinal detachments.

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

Jiyang 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-OPHTHALMOLOGY/PEDIATRIC OPHTHALMOLOGY  
Special interests: amblyopia, surgical management of complicated strabismus, pediatric neuro-opthalmology, and visual field testing.

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

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 glaucomas.

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

Brad Kehler, O.D.  
OPTOMETRY  
Special interests: low vision rehabilitation, specialty optics, contact lenses.

Lori Ann F. Kehler, O.D.  
OPTOMETRY  
Special interests: specialty contact lens fitting, both for adults and for children.

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/OCULOPLASTICS  
Special interests: ophthalmic plastic surgery with a particular interest in orbital disease.

Lawrence M. Merin, RBP, FIMI  
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.

Franco Recchia, M.D.  
RETINA/VITREOUS  
Special interests: pediatric retinal disorders and retinal vascular disorders.

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

Jeffrey Sonsino, 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.
Vanderbilt Eye Institute is expanding its laboratory space to complement its strategic research plan. Jiyang Cai, Min Chang, David Calkins, Jin-Hui Shen and John Kuchtay will relocate to a 7,500 square foot space above Langford Auditorium in the new Phase II section of MRB IV.

The new unit's floor plan is similar to MRB IV's Phase I facilities in Light Hall, which currently houses Vanderbilt Eye Institute researchers. The 11th floor unit offers a conference room, library, and areas geared toward specialized use such as cell culture, microscopy and isotope work.

Some space will be furnished, but uninhabited, for recruitment of additional scientists, chosen to complement the VEI's research strategic plan. Vice Chairman and Snyder Professor John S. Penn, along with clinicians Karen Joos, David Morrison and Franco Recchia, will remain in the current VEI facility at Medical Center East.