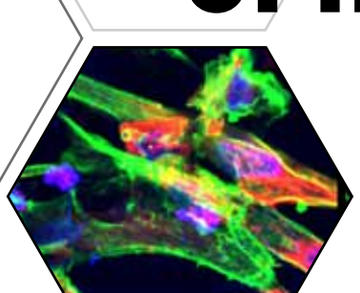
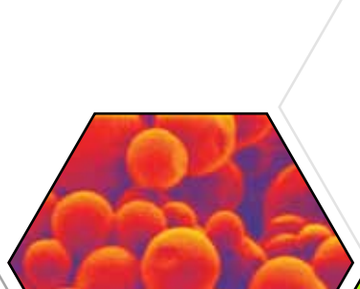
OHIO STATE

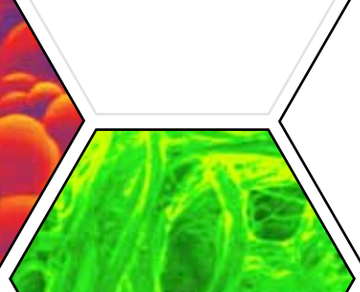
BUCKEYE OPHTHALMOLOGY



NANOTECHNOLOGY

tiny particles that may save your sight





MEET THE ROBINSONS
DR GEE IS A BIG HIT
NEW EYE STUDIES

FALL2010

www.eye.osu.edu

OHIO STATE
BUCKEYE
OPHTHALMOLOGY

Volume 5 Issue 2
Fall 2010

Thomas Mauger, MD
Department Chairman

CONTENTS

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PROGRAM COORDINATOR - CHRISTINA STETSON, BA
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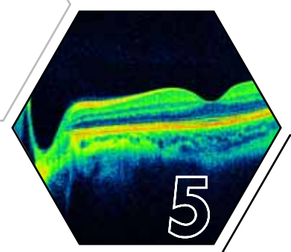


MEET THE ROBINSONS

Ohio Couple Commit $1 Million

Meet Thom and Pat Robinson. They are an extraordinary couple from Troy, Ohio that work tirelessly to better their community and the future of Ohio. Evidence of their volunteering and philanthropic efforts can be seen all over The Ohio State University—in the newly renovated main library, the new Veterinary Medicine academic building, the many generous athletic scholarships, and recently planned gift to The OSU Havener Eye Institute.

Pat is president of the board of trustees for the Paul G. Duke Foundation, which was established by and named for her father, founder of the lawn services company ChemLawn. Thom served two tours of duty in the United States Marine Corps and served as an area sales manager for Dinner Bell Foods, Inc. until he retired in 1978. Both serve on numerous volunteer boards and committees, and are enthusiastic advocates of OSU.

"It all started with a football ticket," said Pat. "Then more you are here, the more involved you get, the more questions that you ask, the more people that you meet. The next think you know, you're thinking 'Gee, this is a wonderful place. What can we do to help?'"

Thom and Pat understand the value of medicine and the importance of sight. They have seen dramatic changes in ophthalmology in their lifetime, and know that even more amazing discoveries are just around the bend. Their commitment to that brighter future was what led them to make the one million dollar planned gift to ophthalmology.

"We liked it here [at OSU]," said Thom. "We liked [OSU Ophthalmology alumnus] Dr. Kapatansky and he got us involved. We like to make gifts that make a big impact and affect a lot of people. That's our goal."

As outstanding volunteer leaders, members of boards and committees, extraordinary donors, and enthusiastic Buckeye fans, the Robinsons form a great partnership that has served Ohio State with distinction in many capacities.

"I think that we learned a lot from my dad," said Pat. "He was just a good person and taught us how to be generous. I always feel that you should give back to your community. There is no reason not to; it all comes back. You do get that reward back for helping others. I only wish that I could live to 200, so I could give more."

GEE IS A BIG HIT!

OSU Resident and Long Drive Champion, Landon Colling

OSU President Raises $41,000 for Education

OSU President E. Gordon Gee stepped from his vehicle onto the beautifully manicured OSU Scarlet Golf Course lawn and was eagerly met by over 100 charity participants at the Fifth Annual BuckEYE Golf Classic. The charity outing, held this past June, had a lot to live up to as the previous events had been hosted by some amazing, first-class special guests including Archie Griffin, Thad Matta, Jim Tressel, and Clark Kellogg. The bar was set high, but thankfully Gee is no stranger to the limelight.

As president of the second largest university in the country with an annual budget greater than the state of Rhode Island, Gee is at home with national attention, but maintains his hometown charm. His candor and friendliness are well-known, but you are still not quite prepared for the genuine level of interest that he has for people. It is no wonder that he was recently named *TIME* magazine's No# 1 College President in the country.

Despite this high title, he was completely comfortable with talking and posing for photos with as many participants as he could. To community sponsors and area ophthalmologists, Gee extended more than just a smile and firm handshake, but a deep appreciation for their support of education and research at the OSU Havener Eye Institute.

After meeting Gee, the charity participants were treated to a Drive Clinic led by world Long-Drive champion and OSU Ophthalmology resident Dr. Landon Colling. He showed them proper swing technique, how to maximize your efforts, and concluded with tips on health and fitness. (*For a video of Dr. Colling's clinic, visit www.eye.osu.edu/events*).

Ophthalmology Donor Tina Skestos with her foursome

The participants were grateful for the tips, as they were definitely needed for the challenging course ahead. OSU Scarlet Golf Course is one of the top collegiate courses in America and was recently redesigned by former Buckeye and golf legend, Jack Nicklaus. As difficult as the course was, everyone agreed that it was a perfect day with sunny skies and well-matched foursomes.

The BuckEYE Classic trophy was awarded to Drs. Doug Baker, Jack Dingle, and Tom Dingle for scoring way under par, but the real winners were the OSU Ophthalmology resident physicians. The $41,000 raised will go to support their education and better the lives of central Ohioans.

"It was a success, but we could not have done it without the help of our sponsors, especially Fifth Third Bank," said Dr. Alan Letson, Residency Program Director. "They are companies that are so invested in their communities that they step up to make a difference by educating tomorrow's eye physicians. Their foresight will help us to save sight in ways we can only imagine now."

Opposite Page:
Top Inset Photo: Dr. Alan Letson, President Gee, and Dr. Paul Weber ***Bottom Inset Photo:*** Dr. Irene Tung, Dr. Rick Whitehead, President Gee, Dr. Cate Olson, and Dr. Lena Chheda

OSU President Dr. E. Gordon Gee

HAVENER EYE INSTITUTE PHYSICIANS

CORNEA


Thomas Mauger, MD


Andrew Hendershot, MD


Rebecca Kuennen, MD


Richard Lembach, MD

COMPREHENSIVE


David Castellano, MD


Julie Meier, MD


Amit Tandon, MD

GLAUCOMA


Paul Weber, MD


Gloria Fleming, MD


Andrea Sawchyn, MD


Annette Terebuh, MD

NEURO-OPHTHALMOLOGY


Steven Katz, MD


David Hirsh, MD

RETINA


Alan Letson, MD


Colleen Cebulla, MD, PhD


Susie Chang, MD

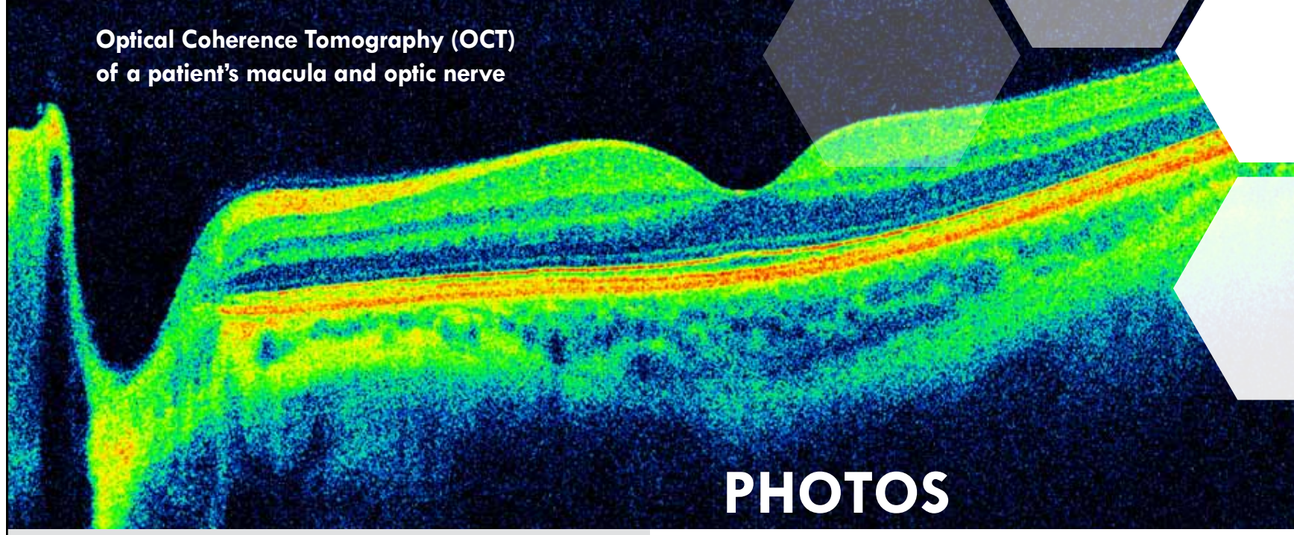

John Christoforidis, MD


Frederick Davidorf, MD


Paul Kurz, MD


L. Carol Laxson, MD, PhD


Michael Wells, MD



Your Thoughts on Our New Docs...

Andrew Hendershot, MD - Cornea

"I'd send anyone I know to him. I have been coming to the Department of Ophthalmology since the 60s; I am one of those real problem patients. Dr. Hendershot has worked with me for a year and I'm sure that he has gotten a lot of good training just from me. I like him a lot and I HIGHLY recommend him."
Peggy Roberts - Xenia, Ohio

Michael Wells, MD - Retina

Dr. Wells is an excellent doctor; very smart, very good bedside manners. He puts patients at ease. I went through a heck of a deal with him. I lost my right eye to a piece of metal. When my left eye started going blind too, he caught it fast. He saved my eyesight in my left eye. If he hadn't caught it, I would be permanently blind. Whenever I had trouble, Dr. Wells would call me back. I'm talking about 9, 10, 11 o'clock at night; if I left a message, I would get a call back from him. If he had to slide me in to see him, he'd make room. I think that he is a fantastic human being. He has a great personality and I think that he is an excellent doctor.
Michael Martin - Leesburg, Ohio

Andrea Sawchyn, MD - Glaucoma

"While she was a resident, Dr. Sawchyn was well respected and loved by her patients. During that time, she received the Robin D. Howson Housestaff Humanism Award for routinely exhibiting attributes of ethics and integrity, caring and compassion for patients and patients' family members. She was an outstanding clinician and we are thrilled to welcome her back. She will be a tremendous addition to the Glaucoma service and to our faculty."
Alan Letson, MD - Residency Program Director

PHOTOS ON DEMAND

Patient Care Faster & More Accurate with New Photo Management Program

Say what you will about viruses and traffic jams, but technology has given us the opportunity to go far beyond our physical limitations. From cars that can take us hundreds of miles in a single day, to computers that increase productivity to the nth degree, technology is always expanding our horizons. It also is making for easier and more reliable patient care. With the dawn of electronic medical records (EMR), we have seen a level of consistency that was impossible with paper charting. Topcon© Medical System's EyeRoute® program is another example of increased productivity and efficiency that EMR has to offer.

EyeRoute® is an ophthalmic image management program that integrates images and reports from all types of ophthalmic instruments into a single, secure digital environment. The easy-to-use, point-and-click system captures information from most ophthalmic instruments. This data is then accessible from any computer through the web-based interface or on a compatible handheld device. Images may be viewed, panned, zoomed, enhanced, and annotated with both text and audio dictation.

Not only is it a leap forward in reliable patient care, it's safe too. EyeRoute® is HIPAA compliant and includes encryption, the latest firewall protection, and usage tracking. That means that your medical information gets to the people who can help you faster than ever, and no one else. You can get your results sooner and get started on the road to recovery. Now that's what I call progress.

CARING

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CARING SUPPORT STAFF

1 Commitment:
Personalized Patient Care

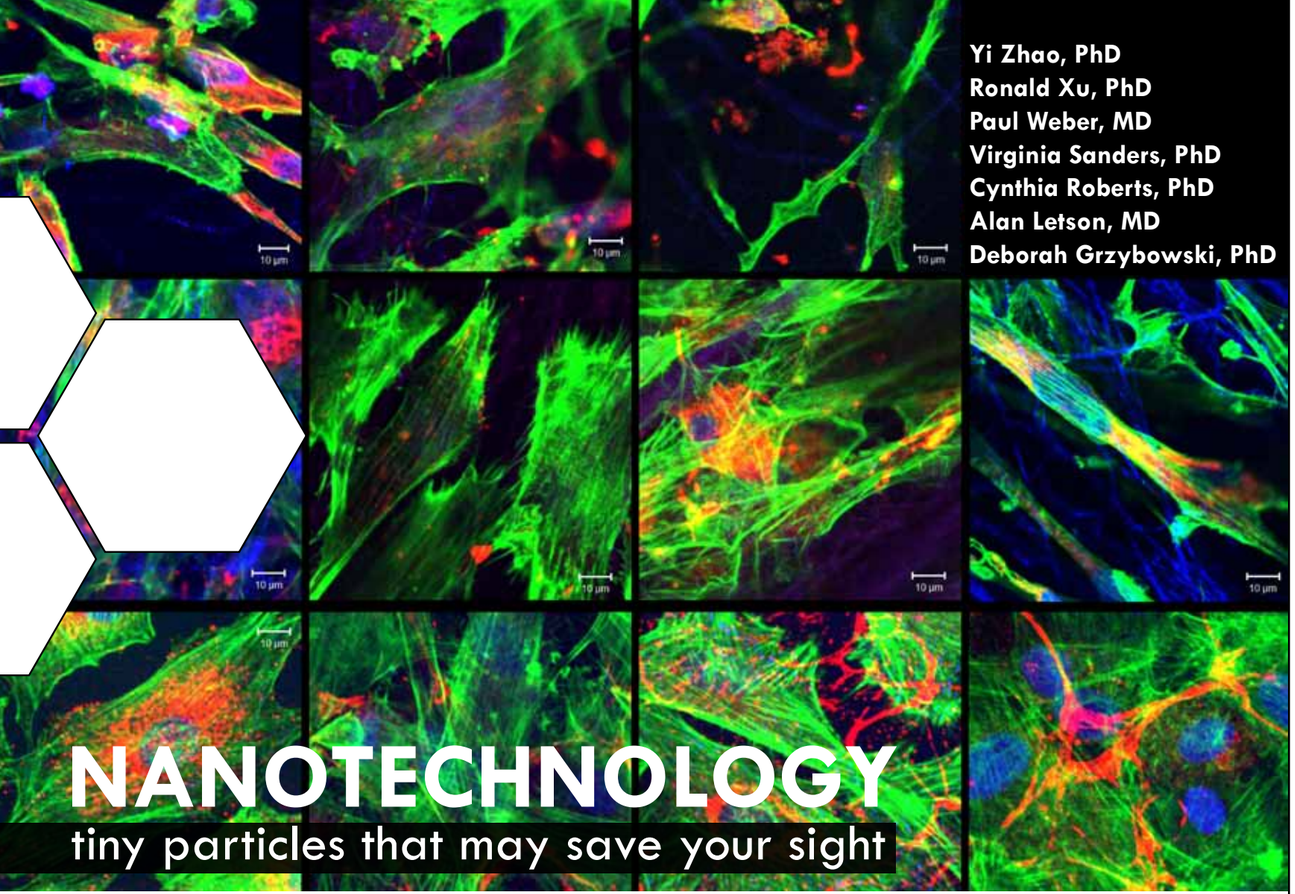
COMMITMENT

HAVENER EYE INSTITUTE

dedication

21

DEDICATED PHYSICIANS



Yi Zhao, PhD
Ronald Xu, PhD
Paul Weber, MD
Virginia Sanders, PhD
Cynthia Roberts, PhD
Alan Letson, MD
Deborah Grzybowski, PhD

NANOTECHNOLOGY

tiny particles that may save your sight

The 1966 Oscar award-winning film Fantastic Voyage took us on a microscopic journey through the bloodstream. In the film, physicians and scientists were miniaturized to save a patient's life. Setting aside science-fiction (and shrinking people), scientists and physicians have always been fascinated with the idea of utilizing atomic and sub-atomic particles for healthcare and technology. Now, they are using nanotechnology to do just that.

Nanotechnology, the study of controlling extremely small matter, deals with structures sized between 1 and 1000 nanometers (one billionth of a meter). By comparison, a nanometer is to a meter what a marble is to the earth. At The OSU Havener Eye Institute, we are using some of the world's smallest particles to deliver much-needed medication to patients with AMD and to discover the mechanisms behind glaucoma, one of the world's most common blinding diseases.

NANOFIBERS COMBAT GLAUCOMA

In a David and Goliath tale, the nanoparticle is poised to take on a disease that the National Eye Institute calls the second leading cause of blindness in the world. Using tiny nanofibers, OSU researchers Drs. Gryzbowski, Weber, Roberts, and Zhao, the Principal Investigator (PI), are creating artificial tissue that will be used to study glaucoma.

The eye, unlike most of the body, relies on fluid rather than bone to help maintain its shape. Much like a water balloon, it requires the correct amount of fluid to function properly. Because the eye is constantly producing fluid, it needs to drain fluid to maintain the right amount of intraocular pressure, or pressure within the eye. Glaucoma, which affects 65 million people worldwide, is generally associated with high intraocular pressure (IOP). The trabecular meshwork is located in between the cornea (clear surface of the eye) and the iris (the colored portion of the eye). It is responsible for draining the intraocular fluid and maintaining proper IOP.

There are many theories about why high IOP can lead to glaucoma, but testing these theories can be difficult, as very few trabecular meshwork tissue samples are donated for research. Artificial tissue had to be created for enough to be available for study. trabecular meshwork tissue is very complex, and past methods of construction were limited to less realistic two-dimensional models. This complicates the data analysis and interpretation. Clearly, a model that can more closely resemble natural trabecular meshwork tissues was imperative.

"Nanotechnology gives us a new perspective for research. As we shrink things down, we can see many rules that are different from the larger scale world. It's like opening the door to a new frontier in medicine." **Yi Zhao, PhD**

By weaving tiny fibers that had been nanoengineered, the trabecular meshwork complex natural shape can now be replicated, making closer study possible. The end of this terrible disease could be just around the corner.

NANOBUBBLE DELIVERING DRUG

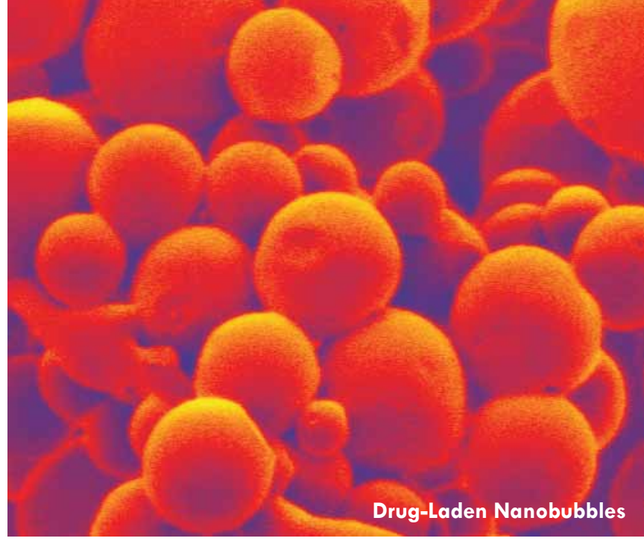
From potions to pills to injections, the medical community has always tried to find better and faster ways of getting medication to where it will do the most good. In 2010, Genentech, the world's leading biotech company, granted OSU researchers $80,000 worth of Lucentis®. Lucentis® is an anti-VEGF medication that slows the growth of abnormal blood vessels in the back of the eye (retina) for patients with age-related macular degeneration (AMD). Drs. Roberts, Sanders, Letson, and Xu (PI) are now developing a more efficient drug delivery method for anti-VEGF medication using microscopic particles known as nanobubbles.

Intraocular injections of anti-VEGF medication have been used to combat AMD for many years, but despite their success, still have many problems. The anti-VEGF medication quickly leaves the eye after injection, and since a high concentration is needed for proper treatment, more injections are necessary. Each additional injection multiplies the risks of local and systemic adverse reactions.

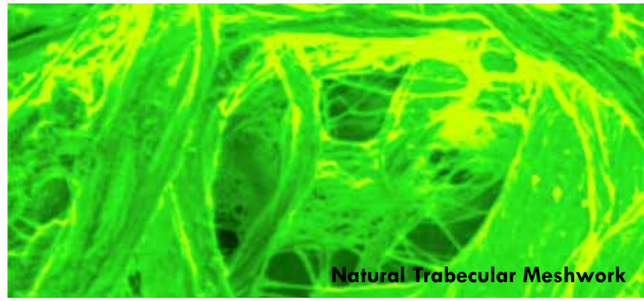
The new, drug-loaded nanobubbles will allow medication to accumulate in the retina for a longer period of time, until activated selectively using ultrasound. The nanobubbles are dyed a fluorescent yellow, which makes them visible to imaging and to be guided and released when they are in place. The biodegradable nanobubbles keep the medication from disbursing before reaching the target area, reducing the number of injections needed.

In short, nanotechnology allows for more research, more answers, fewer injections, fewer adverse reactions, and better care for our patients—and that is no small thing.

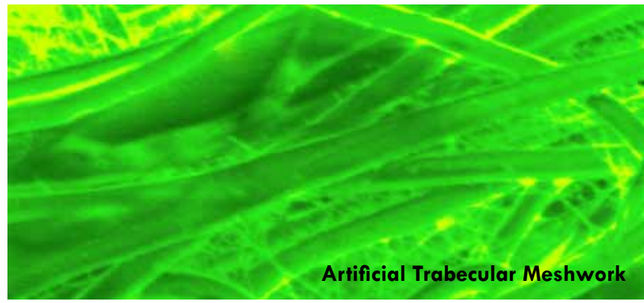
"What we are creating is a clinical platform, right now we are using it for AMD, but really it could be used for delivering medication for all ophthalmic diseases. We are very excited by the possibilities." **Ronald Xu, PhD**



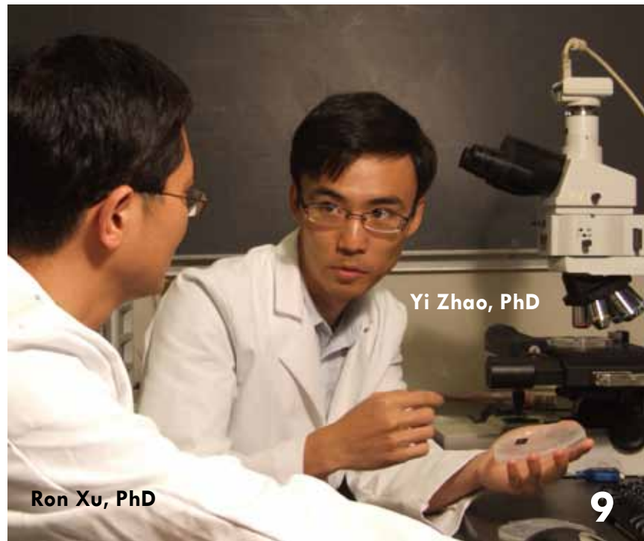
Drug-Laden Nanobubbles



Natural Trabecular Meshwork



Artificial Trabecular Meshwork



RESIDENT & FELLOW RESEARCH RECOGNIZED IN 2010

Research is a big part of the training program at the Havener Eye Institute, so when our residents are able to present their work at major research conferences and are given top honors, we want to share the good news.

American Association for Pediatric Ophthalmology and Strabismus 2010 Annual Meeting - Orlando, FL

Two of our residents, Dr. Lena Chheda and Dr. Cate Olson, recently presented at the American Association for Pediatric Ophthalmology and Strabismus. Dr. Chheda presented her poster entitled "The Effect of Surgical Preparation Technique on Bacterial Load of Surgical Needles and Suture Material Used During Strabismus Surgery" (David L. Rogers, MD; Mario Marcon, PhD; Don L. Bremer, MD; Gary L. Rogers, MD; Richard P. Golden, MD).

Dr. Olson was recognized as "Best in Show" for her poster "Changes in Optic Nerve Sheath Diameter After Lumbar Puncture in Children" (David L. Rogers, MD; Rae R. Fellows, MEd; Emily de los Reyes, MD).

Dr. Chheda (left) and Dr. Olson (right)

We also want to recognize all of the residents and fellows that presented at the ARVO Meeting, including Drs. Andrew Hendershot, Vishal Verma, and Rick Whitehead.

Association for Research in Vision and Ophthalmology 2010 Annual Meeting - Ft. Lauderdale, FL

"Metastasis in Small Uveal Melanomas" **V Verma**, MH Abdel-Rahman, CM Cebulla, FH Davidorf.

"Utility of the Convergence Insufficiency Symptom Survey in a Tertiary Care Center" **G Whitehead**, DL Rogers, M McGregor, A Serna.

"Cataract Surgery Simulators in the Training of Ophthalmology Residents" **AJ Hendershot**, AM Mahmoud, TF Mauger.

"The Effect of Intravitreal Pegaptanib, Bevacizumab and Ranibizumab on Blood Vessel Formation During Cutaneous Wound Healing in a Rabbit Model" JB Christofo-ridis, R Ricketts, S Bean, **C Pratt**, J Pierce, **MB Wells**, K La Perle.

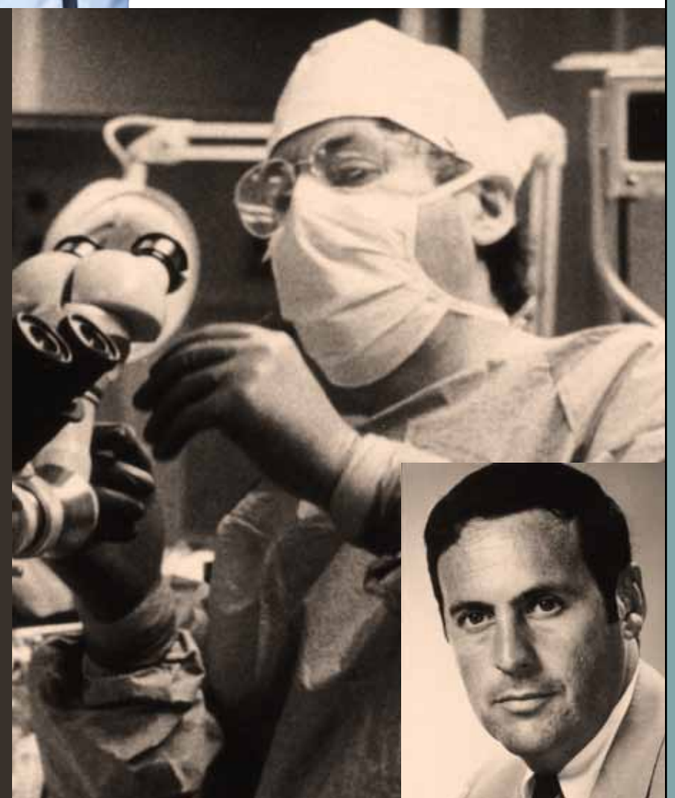
RICHARD H. KEATES, MD

(1932–2010)

Dr. Keates passed away on January 26th after amazing 46-year career which began The Ohio State University Medical Center in 1964. He was one of the early pioneers of intraocular microsurgery and the development of the YAG laser for treatment of secondary cataracts. He developed the first eye bank in Central Ohio and was the Central Ohio Eye Bank Surgeon Director for 16 years.

In 1990, Dr. Keates became Professor and Chairman of the Department of Ophthalmology at the University of California–Irvine. He returned to The Ohio State University in 2007 and began a collagen corneal cross-linking clinical trial. Due to his innovative research, he was an invited lecturer all over the world and published numerous influential peer review articles including several medical text books and chapters.

Dr. Keates was an innovator of technology who will long be remembered by colleagues, students, staff, and patients for his influential teachings and his boundless energy.



MAKE A DIFFERENCE

JOIN A RESEARCH STUDY

SOME STUDIES OFFER:

- Free Medication
- Free Office Visits
- Free Dietary Counseling
- Time Compensation

WET AMD PATIENTS

Are you receiving monthly injections for wet AMD? You could help discover a way to fewer injections by using alternative eye drops.

CATARACT PATIENTS

Are you concerned about post-surgical inflammation? Help us evaluate a new eye drop that may reduce ocular swelling after cataract surgery.

CORNEAL KERATOCONUS PATIENTS

Do you have keratoconus or corneal thinning after laser vision correction surgery? Vitamin B2 eye drops and exposure to UV light may strengthen the front surface of the eye (cornea) and improve visual acuity.

DIABETIC RETINOPATHY PATIENTS

Do you have a vitreous hemorrhage? The new chapter of a seven-year study is looking at an injection that may clear the blood from inside the eye.

NEW WET AMD PATIENTS

Have you been recently diagnosed with age-related macular degeneration (AMD)? Help us compare medication doses for patients with AMD.

SEVERE HEADACHE PATIENTS

Do you often have severe headaches accompanied with vision changes, double vision, or a "whooshing" sound? These may be signs of idiopathic intracranial hypertension (or pseudotumor cerebri). Help us evaluate the current treatment for newly diagnosed patients with this condition.

FOR MORE INFORMATION CALL (614) 293-9161 OR (614) 652-2620

2010 HAVENER ALUMNI

(*Pictured left to right*)

Wendy Smith, MD matched with the National Eye Institute in Bethesda, MD to complete a uveitis fellowship.

Katie Baston, MD is headed to the Lone Star State to join a comprehensive ophthalmology private practice in El Paso, TX.

Rick Whitehead, MD plans to continue his training at Indiana University with a pediatric ophthalmology fellowship.

Cedric Pratt, DO will be staying on at The OSU Havener Eye Institute to complete a two-year vitreoretinal fellowship.

Landon Colling, MD will be joining a comprehensive ophthalmology private practice in Lynchburg, VA.

WELCOME NEW RESIDENTS

Honey Herce, MD
University of Texas
College of Medicine at Houston

Billy Terrell, MD
Marshall University
School of Medicine

Rachel Reem, MD
University of Illinois
College of Medicine at Rockford

Jen Jaworski, MD
University of Cincinnati
College of Medicine

Kristen Burwick, MD
The Ohio State University
College of Medicine

Sireesha Clark, MD
The Ohio State University
College of Medicine

CHICAGO

Pierre Gourmet

Join us at the Pierre Gourmet on the 1st floor of The Peninsula, RSVP to eye@osumc.edu or (614) 293-8760.

MAN ON A MISSION

OSU Alum John Pajka, MD

For many, a vacation is time to relax and recuperate from work. So when someone uses their well-earned time off to share their talents with underserved populations, you know that they must have a real passion for what they do. John Pajka, MD (*top right photo*), is a Havener Eye Institute alum and an extremely busy ophthalmologist from Lima, Ohio, who spends his vacation time bringing eye care to under-privileged countries.

"People ask me why I do this mission thing so much," said Pajka "and I frequently find myself quoting Dr. Havener, 'Find a job you love and you don't have to work anymore.' Ever since my residency at OSU, my wife Linda and I wanted to do some sort of mission work."

Dr. Pajka and his wife have been all over the world, from Africa to South America, bringing ophthalmic care to thousands of impoverished people. He is tireless in his dedication to restoring sight.

On a recent trip, Dr. Pajka visited the remote region of Bushenyi, Uganda (*lower right photo*) located in equatorial Africa. The Bushenyi people have virtually no access to cataract surgery of any kind. Like many countries in the developing world, they lack the resources and infrastructure to provide, in some cases, even the most basic health care, let alone eye care.

"Most of the people we operate on have been blind from cataracts for years," said Pajka, "not seeing loved ones, not able to see to feed themselves, let alone to work. They have become totally dependent on family or neighbors for everything. A simple cataract operation doesn't just restore their sight, it changes and restores their lives, and gives hope where often there was none."

For decades, Uganda's economy has suffered from devastating economic policies and instability, leaving Uganda as one of the world's poorest countries. While as many as 420,000 people in Uganda are blind, the country has only 39 ophthalmologists, mostly in urban areas. With such a desperate need, doctors like John Pajka are making a difference, not only in individual lives, but in the entire community.

"There are few procedures in medicine where we can make such a profound impact on so many people's lives in so short a time," said Pajka "I feel very fortunate to be able to do this, giving back, paying forward. I have a great job and missions like this help remind me why I went into medicine, to help people. There is nothing like it!"

Dr. Pajka at Bushenyi Eye Clinic in Uganda.

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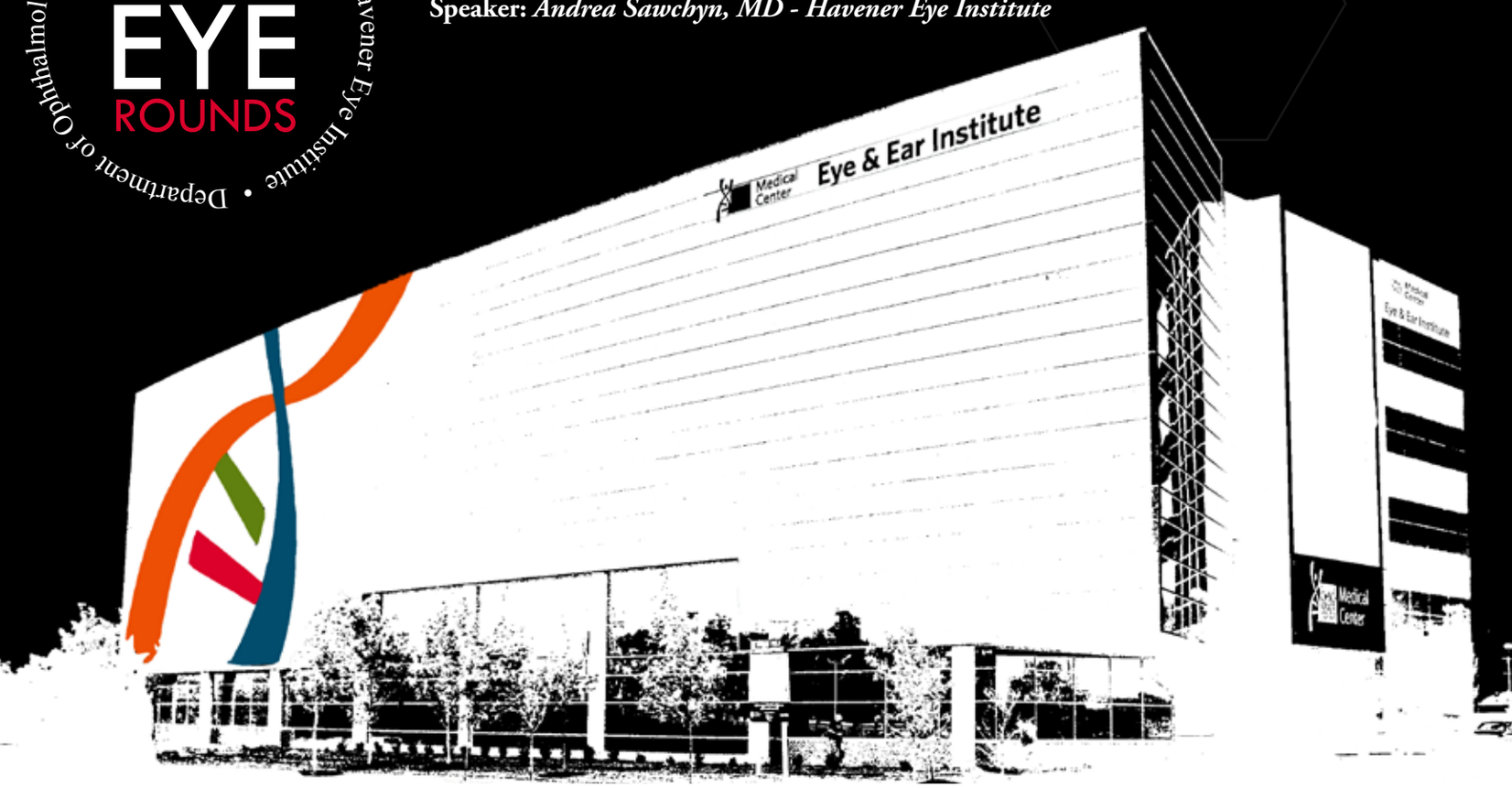
OSU EYE ROUNDS

"THE GLAUCOMA UPDATE" *Davidorf Lectureship Event*

Guest Speaker: ***Lou Cantor, MD - Indiana University, Chair***
Moderator: ***Paul Weber, MD - Havener Eye Institute***
Speaker: ***Andrea Sawchyn, MD - Havener Eye Institute***



Join us Wednesday, November 3, 2010 for a complimentary CME & dinner event at the OSU Eye & Ear Institute located at 915 Olentangy River Road in the 3rd floor conference room. RSVP to (614) 293-8760 or Barbara.Landolfi@osumc.edu.