

## Pursuing passions: Portraits of care

The Eye Clinic at University of Iowa Hospitals and Clinics treats thousands of patients throughout the year. Individuals come from across Iowa and beyond, and range in age from infants to centenarians. We appreciate being able to provide exceptional and compassionate eye care to so many people. All the while, we are reminded that each patient is an individual who has passions and dreams of their own.

### SWEET MUSIC

Cataract surgery is a regular occurrence at UI Hospitals and Clinics, with nearly 1,500 surgeries performed by doctors here in the past year. While it is considered a common surgery, often there are patients with complicated cases that go beyond the routine.

David Naughton, 69, from Nevada, Iowa, was one of those exceptions. Naughton's vision problems date back several decades. Various health conditions and two strokes have complicated his vision over the years. Referred to UI Hospitals and Clinics, he has been treated by several Eye Clinic specialists in the Vascular, Retina and Glaucoma services since the 1980s. The continuity of care has allowed doctors to carefully monitor his condition.

Naughton has a condition known as nanophthalmos, in which one eye developed smaller than normal. The condition contributed to a variety of complicating factors in his vision. In his adult life, he was forced to give up driving. Blurry vision and constant eye strain forced him to cut back on other things he enjoyed, too, including reading sheet music when playing his trumpet. An avid player since before his days in the UI Marching Band, Naughton had to shelve his instrument due to the pressure in his eyes.

His situation took a dramatic turn for the better after he received cataract surgery in his right eye in spring 2016. Naughton underwent a difficult surgery performed by **Wallace L.M.**



Eye Clinic patient David Naughton received good news that was music to his ears during his post-operative appointment with Dr. Tim Johnson.

**Alward, MD, and Tim Johnson, MD, PhD** during which the two worked together to relieve the fluid built up in the eye and insert a higher-power lens than normal.

During the postoperative visit the next morning, doctors took the patch off Naughton's eye. He blinked and exclaimed, "Oh my God, everything is crystal clear!" A follow-up appointment revealed that his vision is now 20/20 in his right eye. He is able to see at night, and the improved vision has meant he no longer needs a contact lens in his left eye.

Since the surgery, Naughton's life has changed considerably. It is the first time he's been able to go without eyeglasses since the first grade. He is experiencing things he hasn't in years, like the great view of the stars that living in rural Iowa

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## Eye Clinic adds ocularist

In certain cases of traumatic eye injury, eye cancer, or other congenital conditions of the eye, it may be impossible to save the eye, and the eye must be surgically removed. In these instances, a custom-made prosthetic eye may be used to provide a person with a more natural appearance. Artificial eyes are matched in size and color to the remaining natural eye in such detail that it's often difficult for others to notice that a person is "wearing" an artificial eye.



University of Iowa Hospitals and Clinics now offers an Ocular Prosthetics Service for patients facing these circumstances. **Lindsay Wagner Pronk, BCO, BADO**, joins the Eye Clinic and consults with patients at the main hospital location. Skilled in fabricating and painting artificial eyes, Pronk also shows patients how to handle and care for artificial eyes, and she provides long-term care through periodic examinations.

### CLINICAL RESEARCH AT UI

**The University of Iowa is an active participant in clinical research with potential impact to patients in our Eye Clinic and beyond. A sampling of clinical research and studies includes:**

**PeriOcular and INTravitreal corticosteroids for uveitis macular edema (POINT Trial)**

A Phase 4 randomized study to evaluate the efficacy of three commonly used corticosteroid injections (periocular triamcinolone acetonide, intravitreal triamcinolone acetonide, and intravitreal dexamethasone implant) in adults 18 years and older with uveitis and macular edema diseases in at least one eye. Visit [clinicaltrials.gov](http://clinicaltrials.gov) and search "NCT02374060".

Principal Investigator: James Folk, MD  
Hawk IRB # 201509733  
**Study Contact: Maria Davis at 319-359-3775 or [maria-davis@uiowa.edu](mailto:maria-davis@uiowa.edu)**

**New Non-invasive Modalities for Assessing Retinal Structure and Function**

A new technology has recently been developed to assess the structure and function inside the eye. This technology is now available in a non-invasive retinal imaging device that images the movement of blood through blood vessels in the eye. The purpose of this study is to determine whether this device is able to accurately measure functional and structural damage in the eye. Recruiting adults ages 18 to 99.

Principal Investigator: Randy Kardon, MD, PhD  
Hawk IRB # 201307773  
**Study Contacts: Jan Full at 319-356-8299 or [jan-full@uiowa.edu](mailto:jan-full@uiowa.edu)**

**Carotenoids in Age-Related Eye Disease Study 2 (CAREDS - Diet and Vision)**

Multicenter, prospective, cohort follow-up study to evaluate macular pigment levels as a modifiable risk marker for age-related macular degeneration and other age-related vision changes. Women who participated in Women's Health Initiative for the ancillary CAREDS baseline studies will be invited to return for follow up.

Principal Investigator: Karen Gehrs, MD  
Wisconsin-Madison IRB of Record #201507847  
**Study Contact: Jean Walshire at 319-467-5183 or [jean-walshire@uiowa.edu](mailto:jean-walshire@uiowa.edu)**

**Testing of the Peripheral Visual Field - Obtaining the Full View**

The purpose of this study is to evaluate and validate larger perimetric stimuli with full peripheral visual fields by comparing the current standard automated perimetry methodology with new full visual fields techniques in patients with healthy eyes, glaucoma, glaucoma suspect, idiopathic intraocular hypertension (IIH), and other optic neuropathy conditions. Recruiting adults ages 18 to 90 years.

Principal Investigator: Michael Wall, MD  
Hawk IRB # 201507753  
**Study Contact: Trina Eden at 319-356-1611 or [trina-eden@uiowa.edu](mailto:trina-eden@uiowa.edu)**

*Research studies are designed to answer important questions about eye disease. Some studies research investigational medications or devices by testing their safety and effectiveness in patients. Before new medicines or devices can be approved for public use, they are all tested in these types of clinical trials.*



David Naughton has resumed one of his favorite pastimes – playing the trumpet – thanks to the eye surgery he received at UI Hospitals and Clinics. Image courtesy of Trinity Barker, *Nevada Journal*.

allows. “I could see the stars. And there weren’t two moons,” Naughton says. “It’s been amazing for me! I could see color and detail!”

“I am thrilled things have gone so well,” Johnson says. “His case was certainly challenging, and it is gratifying when the result is successful.”

Naughton has returned to yardwork and other interests and has begun performing music with orchestral groups in public again. “Every day is full of new experiences! I started playing the trumpet again and can see the notes clearly,” he says.

## SEEING THE FINISH LINE

Competing in triathlons is no easy task. There are countless miles of training runs and bike rides, as well as laps to swim. Mental strength, resilience, and proper nutrition certainly play a role in being able to compete in endurance events. For Eye Clinic patient Bridget Stengel, good vision sure helps, too.

Recently retired, Stengel, 57, spends much of her time training and competing in triathlons. While at a race in Milwaukee, she noticed a blind spot in her right eye. Upon returning home to Moline, Ill., she consulted with her local doctor, who suggested she seek immediate care and referred her to UI Hospitals and Clinics. Unsure of what to expect, Stengel worried about the possible diagnosis and the effect it would have on her athletic activities.

“I was especially concerned about swimming in the ocean and vision on the bike, as those require depth perception and peripheral vision,” states Stengel.



Triathlete and Eye Clinic patient Bridget Stengel shows off the medal she received from competing in her first triathlon after eye surgery.

An examination by a team of physicians including retina specialist **Vinit Mahajan, MD, PhD**, revealed that Stengel had a detached retina, and she underwent a vitrectomy surgery the next day. Her care plan included no strenuous exercise or training for six weeks – a tall order for Stengel. It was hard for her to put her passion on hold while her eye healed, but as soon as she received clearance from Mahajan, she was back to training.

Two days after that checkup, Stengel was on a plane for Florida to start training for her next competition. She competed in the Iron Man Florida triathlon, placing in the top third for her age group with a time of 14 hours, 29 minutes. She shared that her vision was great throughout!





A young Tyler Harson poses for a photo with doctors during one of his post-operative visits to the Eye Clinic. Recently graduated from high school, he plans to work in farming and construction.



### WORKING WITH HIS HANDS

While volunteering to help clean a flood-damaged home in 2008, Tyler Harson, now 19, suffered a serious eye injury. He was plying away damaged wood when a nail head disengaged and became lodged in his right eye. The family’s local eye doctor observed Tyler, prescribed eye drops to help with the swelling and apparent infection, and recommended an immediate trip to Iowa City.

His family rushed him to UI Hospitals and Clinics, where they were greeted by **Jim Folk, MD, Nick Patel, MD, MPH** (‘09F), and **Jordan Graff, MD** (‘07R, ‘09F). The team discussed a care plan that included surgery the next day. Reflecting on that first encounter, Tyler’s mother, Jill, shares, “Everybody was so wonderful. They were great about explaining everything, especially to Ty, who was a just a fourth-grader at the time.”

“Ty thinks of you so often and thanks God we got to meet you! We can’t thank you enough for all you and your team did for Ty.”

*Jill Harson – Tyler’s mother*

Tyler went through several eye surgeries for the injury, including treatment for a subsequent retinal detachment and a lens implant. Through it all he maintained a positive attitude about how the

injury impacted the choices he made during his adolescent life. Although he had to give up some of his favorite activities like playing football and riding a bicycle in order to reduce the risk of permanently damaging his eyesight, he focused on his schoolwork and pursued other interests.

Following his high school graduation this past spring, Tyler is now working toward a college degree in agricultural business at a local college. He plans to pursue two of his passions, farming and construction, where he can use his hands and vision.



### Duffel recognized for contributions to education

Department librarian and “go-to person” **Patricia (Trish) Duffel, MA, BS** (center), received the Interprofessional Excellence Award from the University of Iowa Graduate Medical Education (GME) Office. The award recognizes Trish’s outstanding contributions to education and practice. It was presented by **Mark Wilson, MD, MPH** (right), of the GME office, and **Thomas Oetting, MD**.

### Fellowship program changes

After 14 years of directing the UI Department of Ophthalmology fellowship training program, **Young Kwon, MD, PhD**, hands over the reins to **Scott Larson, MD**. Larson, a 2003 fellowship graduate of UI, is excited to take on the new role.

“I’m looking forward to getting to know all the fellows better and helping ease their transition to life in Iowa. I’m also excited about continuing to shape our fellowship programs into world-class educational opportunities for future ophthalmologists in training,” says Larson.

Also transitioning roles is **Culver Boldt, MD**, who has led the vitreoretinal fellowship program for 20 years. He turns the role over to **Elliott Sohn, MD**. During Boldt’s tenure, he has overseen the selection of over 40 fellows who have successfully pursued private practice and academic medicine positions across the country.



**The business side of ophthalmology**

Residents gathered to learn about what is involved in building a medical practice from consultant **Jill Maher, MA, COE** (pictured on right). The seminar, part of new practice management content being offered to University of Iowa residents and fellows, is intended to prepare Iowa’s trainees for more successful transitions into practice and careers in ophthalmology.

Former resident **Ed Hu, MD, PhD** (‘08R) (pictured in middle), is helping to support the development of business-oriented content and was on hand during the seminar to share his career insights.



**Ophthalmology residents lead in teaching awards**

Medical students from the University of Iowa Carver College of Medicine selected six resident physicians from a field of nearly 800 individuals to receive a Humanism and Excellence In Teaching Award. Two of those selected were ophthalmology residents: **Philip Niles, MD, MBA** (left), and **Thomas “TJ” Clark, MD**.

The award, presented by the Arnold P. Gold Foundation, goes to those individuals who demonstrate the foundation’s and the Carver College of Medicine’s ideals of commitment to teaching and compassionate treatment of patients and families, students, and colleagues.



**Match results**

Ophthalmology residency match results for 2016 were revealed earlier this year. We are pleased that these individuals join us as transitional interns this summer and then as ophthalmology residents starting in July 2017. Pictured from left to right: Benjamin Janson, Matthew Benage, Austin Fox, Anthony Chung, and Heather Stiff.



**ALUMNICORNER**

**Council formed to advance department interests**

The Department of Ophthalmology and Visual Sciences established a new Alumni Advisory Council whose purpose is to provide input, ideas, and resources that will advance Iowa's Eye program. The group spans generations and features alumni from private practice and academic medicine.



The council gathered during the AAO 2015 meeting and includes Mark Alford ('96R, '98F), Matthew Rauen ('05MD, '09R, '10F), Tom Oetting ('95R, residency program director), Matthew Weed ('14R, '15F, '16F), Bruce Spivey ('59MD, '64R), Stephen Wolken ('68MD, '75R), Mark Wolken ('97MD, '01R), and Keith Carter ('88F, department head). Other council representatives not pictured are Gretchen Fuerste ('82R), Dennis Gordy ('78R), Jordan Graff ('07R, '09F), Ed Hu ('08R), Malcolm Mazow ('65R), Kean Oh ('99R, '01F), Carlos Omphroy ('84R), Rodolfo Perez ('77R, '78F), and Jennifer Simpson ('97R).

**Iowa alumni recognized for status with AAO**

Congratulations to the following alumni for inclusion as 2016 Life Fellow/Members of the American Academy of Ophthalmology (AAO).

- John B. Constantine, MD** ('74R)
- Ghassan Dagher, MD** ('79F)
- James J. Edwards, MD** ('78R, '79F)
- John Arthur Fabre, MD** ('78F)
- Mark J. Mannis, MD** ('80F)
- Peter Pavan, MD** ('81F)
- Norman D. Radtke, MD** ('80F)

**Remembrances**

- ❖ **Paul J. Hauser, MD** ('55F), passed away on Jan. 1, 2016, in Evanston, Ill.
- ❖ **Donald Doughman, MD** ('61MD, '67R), died on May 2, 2016, in Edina, Minn.
- ❖ **Meredith Saunders, MD** ('56MD), passed away on June 11, 2016, in Des Moines, Iowa

**Other Alumni Notes**



❖ **Karen Joos, MD, PhD** ('87MD, '90PhD, '92R), became the Joseph N. and Barbara H. Ellis Family Chair in Ophthalmology and Visual Sciences at Vanderbilt University.



❖ **Parisa Taravati, MD** ('09R), became associate professor of ophthalmology at the University of Washington in Seattle, where she also directs the residency program. Taravati recently visited the University of Iowa and presented during Ophthalmology Morning Rounds. While in town she met with residents to share her perspectives on a career in academic medicine.



- ❖ **Janet Tsui, MD** ('11R), is now chief of ophthalmology at Kaiser Permanente, Santa Clara, Calif.
- ❖ **R. Grey Weaver, Jr., MD** ('82R, '83F), became the Laura Lee and Kiper C. Nelson, M.D., Professor in Pediatric Ophthalmology at Wake Forest Baptist Medical Center.

**Ophthalmologist alumnus recognized for achievement**

The University of Iowa Carver College of Medicine honored **John Hoepner, MD** ('66MD), with a 2016 Distinguished Alumni Award for Achievement. The award recognizes Hoepner's career and contributions to the field of ophthalmology. Hoepner served as chairman of the Department of Ophthalmology at SUNY Upstate Medical University in Syracuse, New York, where he also co-founded and led the university's Center for Vision Research.

**Congratulations to our alumni and colleagues for their accomplishments and dedication on behalf of the field of ophthalmology. If you receive a special award or distinction, let us know. Email us at [iowaeyecare@uiowa.edu](mailto:iowaeyecare@uiowa.edu)**

# Recognizing a legend

Over 100 alumni, colleagues, friends, and family members gathered to celebrate the establishment of the *Robert C. Watzke, MD, Professorship in Retina Research* and selection of its first recipient.

The Robert C. Watzke endowment was created to honor Watzke for his outstanding contributions, humanitarianism, and effectiveness as a mentor. The fund, which supports research of the retina and vitreous, was converted to an endowed professorship as a result of the generosity of many individuals who are colleagues and friends of Watzke. Supporters include several alumni who trained under him while he was a UI faculty member from 1958 to 1984.

The inaugural holder of the new professorship is **Michael Abràmoff, MD, PhD**, professor of ophthalmology and visual sciences and professor of electrical & computer engineering and of biomedical engineering at the UI. Abràmoff's career has been dedicated to developing and implementing a method of diabetic retinopathy screening using a low-cost camera and automated software. He has developed imaging methods to understand 3-D structure of the retina using optical coherence tomography. He has used these imaging methods and his understanding to provide insight into the normal structure, functioning, and metabolism of the retina and optic nerve.

Abràmoff is associate director of the Department of Veterans Affairs Center for the Prevention and Treatment of Visual Loss and is also president and founder of IDx, LLC, a start-up company that provides low cost retinal imaging solutions and analysis.

**To support the Robert C. Watzke Endowment or retinal research, contact Sara Volz at [sara-volz@uiowa.edu](mailto:sara-volz@uiowa.edu) or 319-335-3305.**

**“This professorship will allow me to pursue science that challenges existing paradigms and will, hopefully, lead to better diagnosis and treatments for patients.”**

*Michael Abràmoff, MD, PhD*



In addition to being a distinguished and accomplished ophthalmologist, Robert Watzke is a highly respected and beloved colleague, mentor, and friend. He returned to Iowa City to help celebrate the professorship named in his honor.



Dr. Michael Abràmoff receives his professorship medallion from Vice President of Medical Affairs Jean Robillard, MD. Photos courtesy of University of Iowa Foundation.



## The University of Iowa Foundation

To learn more about how philanthropic support helps advance the work of the UI Department of Ophthalmology and Visual Sciences and Stephen A. Wynn Institute for Vision Research, please contact:

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 319-335-3305 or 800-648-6973

The UI acknowledges the UI Foundation as the preferred channel for private contributions that benefit all areas of the university. For more information or to make a donation in support of the eye program, visit the UI Foundation's secure website at [givetoiowa.org/eye](http://givetoiowa.org/eye).

# Behind the wheel again

Diagnosed with Fuchs dystrophy, Donna Johnson, 84, has had vision problems for much of her adult life. The progressive disease has caused the corneal tissue in her eyes to gradually thicken, robbing Johnson of her eyesight.

After a corneal transplant by her local physician left irreparable damage in her left eye, Johnson decided to pursue a different provider to preserve sight in her right eye. A family member's suggestion led her to an appointment with cornea specialists at University of Iowa Hospitals and Clinics—a decision for which she is eternally grateful.

Johnson started visiting doctors in the Cornea and External Disease Service, including **Michael Wagoner, MD, PhD**, and more recently, **Mark Greiner, MD**. Greiner continued to follow Johnson's condition and eventually performed a corneal transplant in her right eye with excellent results. In addition to crediting Greiner with saving her vision, Johnson has been able to coordinate appointments with other services at UI Hospitals and Clinics and is pleased with all of her care.

"I can see so well. I was able to pass my driving test and can drive again, which is something I had to give up. Now, I have the freedom to get to around town on my own and do things like visit the grocery store," states Johnson.

Johnson lives independently and is able to take care of herself, her cat, and her home. She is extremely grateful for the care she has received from Greiner over the past few years and for her vision. She knew she wanted to do something to show her lasting support. "I've benefited from the research that has been done before now. By continuing the research in Fuchs dystrophy and other corneal diseases, I may be able to help others just as I've been helped," she says.

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"He has given me my sight back! I want [Greiner] to continue the research to help others just as they have helped me."

*Donna Johnson*

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She reviewed her estate plans and decided to allocate a portion of her trust to the University of Iowa Foundation. A bequest gift establishing the *Donna M. Johnson Cornea Research Fund* was created as a way of supporting innovative cornea research in the Stephen A. Wynn Institute for Vision Research.

"I felt that he (Greiner) did such a wonderful job. He has given me my sight and, in turn, my life back. My hope is that he will continue with the research to help others as he has helped me. It's very important to me, so that is the reason for including the university in my estate plan."

Philanthropic support of vision research through wills, living trusts, IRA charitable rollovers, and other planned giving methods can have a lasting impact on the treatments available to patients in the future.

**To learn more about planned giving, contact Sean Matthys (319-467-3649 | [sean-matthys@uiowa.edu](mailto:sean-matthys@uiowa.edu)) or Sara Volz (319-467-3761 | [sara-volz@uiowa.edu](mailto:sara-volz@uiowa.edu)) at the University of Iowa Foundation.**



University of Iowa physicians like Mark Greiner, MD, spend time in the laboratory as well as the clinic with the goal of developing new and more effective treatments for Fuchs dystrophy and other eye diseases.



Physicians, staff, and alumni of the department continue to explore and expand eye care and vision research collaborations around the world. These interactions impact how ophthalmology is practiced locally, nationally, and internationally.

## Surgeon taps Iowa Lions Eye Bank to restore man’s eyesight in Swaziland

While traveling on a mission trip to southern Africa, **Alex Cohen, MD, PhD** (‘10R, ‘11F), encountered a man with severe keratoconus, a degenerative disorder in which structural changes in the cornea cause it to thin and change shape, leading to considerable visual distortion. The man, Louis Abrahams, 43, would require a corneal surgery to have any chance of restoring useful sight. His—and then Cohen’s—challenge was locating a cornea in an impoverished country where one ophthalmologist serves the entire country and no cornea transplant had been done before.

Fortunately, Cohen knew who to call. “I wanted to do everything I could to help him, so I picked up the phone and called the Iowa Lions Eye Bank (ILEB) and said, ‘I’m in Africa. I need a cornea. Can you help me.’”, Cohen says. **Todd Shinkunas, BA, CEBT**, tissue distribution manager at ILEB, immediately got to work finding a cornea that matched the specifications Cohen needed for Abrahams. “We do occasionally send tissue to international surgeons, but in this case the timing and logistics were a big challenge,” says Shinkunas. “Fortunately we had the tissue he needed.”

To ensure the tissue got there in time for surgery, one of the nurses living in Swaziland called her mother, Ruby Miller, who happened to live in Iowa and asked if she would be willing to take the 18-hour plane ride from Iowa to Johannesburg, South Africa. “We gave her an hour to decide if she was willing to take the trip and transport the cornea in a cooler on her lap,” states Cohen. In addition to travelling with the cornea, Miller was faced with the task of collecting the appropriate surgical tools. “We needed to make sure we

“Iowa Lions Eye Bank” continues on page 10



Alex Cohen (right), a University of Iowa ophthalmology alumnus, was on a mission trip to Swaziland where he performed a cornea transplant on Louis Abrahams with tissue provided by the Iowa Lions Eye Bank. Image courtesy of Iowa Lions Eye Bank and Alex Cohen.

### Gaining international experience

**Mick Vanden Bosch, MD** (‘89MD, ’94R), practices at Sanford Health in Sioux Falls, S.D., and travels to the Dominican Republic each year to provide eye care through an organization called Children of the Nations. On his last trip, he had Iowa resident physician **Chris Kirkpatrick, MD** (‘16R), join him.

While there, the team was able to treat many people in clinic and perform multiple cataract, pterygium, and strabismus surgeries for people who otherwise had no access to eye care. In addition to providing much-needed eye care in an underserved corner of the world, Kirkpatrick gained insight into what health care abroad looks like.

“The people that we encountered were so grateful for anything that you could do for them and so humbling to work with,” states Kirkpatrick. “Overall, it was a great experience and very rewarding to be able to provide care to these people. Because of the level of pathology that we were treating, it was a very tangible reminder of how what we do can have a very big impact on the lives of our patients.”



Mick Vanden Bosch (left) and Chris Kirkpatrick provide post-operative care to a cataract surgery patient in Barahona, Dominican Republic.

had the correct scissors, trephine, forceps – all of that – so we had Ruby running around to collect everything. She almost missed her flight,” adds Cohen.

The supplies, tools, and tissue made it to Africa, where Cohen and his staff had converted one of the only air-conditioned buildings in the area into an operating room. Despite this and the many other challenges Cohen’s team had to overcome, Abrahams’ cornea transplant was successful. “Only one day after the operation, I was able to see five fingers about 50 centimeters in front of my face,” says Abrahams.

His vision continues to show substantial improvement, and Cohen plans to return to Swaziland for another mission trip. He says working with the Swazi people is the most amazing thing he’s done in his life.

“It was amazing to see people’s reactions at the post-op visits when the techs took off their eye patches. They’d look around and start smiling and dancing. You never see anything like that in the states – the sheer joy and gratitude on their faces to be able to see again,” says Cohen.

Swaziland’s very first cornea transplant recipient was also very grateful to have his vision restored. In a letter to his donor’s family, Abrahams wrote, “I will be eternally grateful that someone cared enough to donate a cornea, just so that I can see. Many people, some of whom I didn’t know, responded to assist me, just a normal man, in a tiny part of Africa who had a need of a cornea transplant.”

Abrahams also sent the Iowa Lions Eye Bank a heartfelt thank-you letter for the role its staff played in getting the tissue there in time. “It’s a wonderful reminder of why we do the work we do, on-call 24/7 recovering ocular tissue,” comments Shinkunas. “This man had no hope of having his vision restored, but because of a selfless donor in Iowa, we were able to play a part in his ability to see again.”

## Vision research organization extends funding to University of Iowa

Research to Prevent Blindness (RPB) awarded a grant of \$115,000 to the Department of Ophthalmology and Visual Sciences. The funding supports research into the causes, treatment, and prevention of blinding diseases.

“Support from Research to Prevent Blindness is vital to helping early-stage and promising research projects get off the ground. These projects could lead to potential treatments for our patients and others who are experiencing vision loss,” states **Keith Carter, MD**, professor and chairman of the department.

RPB is the world’s leading voluntary organization supporting eye research. To date, the organization has awarded grants totaling over \$5 million to the University of Iowa Carver College of Medicine.

**For more information on RPB and RPB-funded research, go to [rpbusa.org](http://rpbusa.org).**

**Learn more about the University of Iowa’s vision research at [wivr.uiowa.edu](http://wivr.uiowa.edu).**

## Fight for Sight recognizes UI researcher

**Vinit Mahajan, MD, PhD**, clinical assistant professor of ophthalmology and visual sciences at the University of Iowa, received the 2016 Alumni Achievement Award from Fight for Sight. The award was presented during Fight for Sight’s Weisenfeld Reception at the 2016 ARVO Annual Meeting.

Fight for Sight invests in the future of eye and vision research by funding promising scientists early in their careers. The organization has provided important funding to dozens of clinician-scientists at the UI. Its first Alumni Achievement Award was given to the UI’s Dr. Randy Kardon.

Mahajan is a vitreoretinal surgeon and directs the Proteomics Lab at the University of Iowa.



Arthur Makar, executive director of Fight for Sight, presented the 2016 Alumni Achievement Award to Dr. Vinit Mahajan (right). Image courtesy of Fight for Sight.

# Exploring the disease mechanisms in AMD

The leading cause of untreatable, central vision loss in the western world is age-related macular degeneration (AMD). Scientists from the University of Iowa Stephen A. Wynn Institute for Vision Research are seeking a better understanding of the disease mechanisms of this blinding disease in an effort to pave the way for new treatments.

An interdisciplinary group led by **Elliott Sohn, MD**, associate professor of ophthalmology, is pursuing research into how the choroid – the complex vascular tissue supplying the outer retina, photoreceptors, and retinal pigment epithelium – degenerates with age and is involved in the pathogenesis of AMD. A multi-year RO1 grant from the National Institutes of Health-National Eye Institute will allow Sohn and other UI vision scientists to explore the molecular and genetic basis for atrophy of the choroid and determine how this tissue changes in age-related macular degeneration.

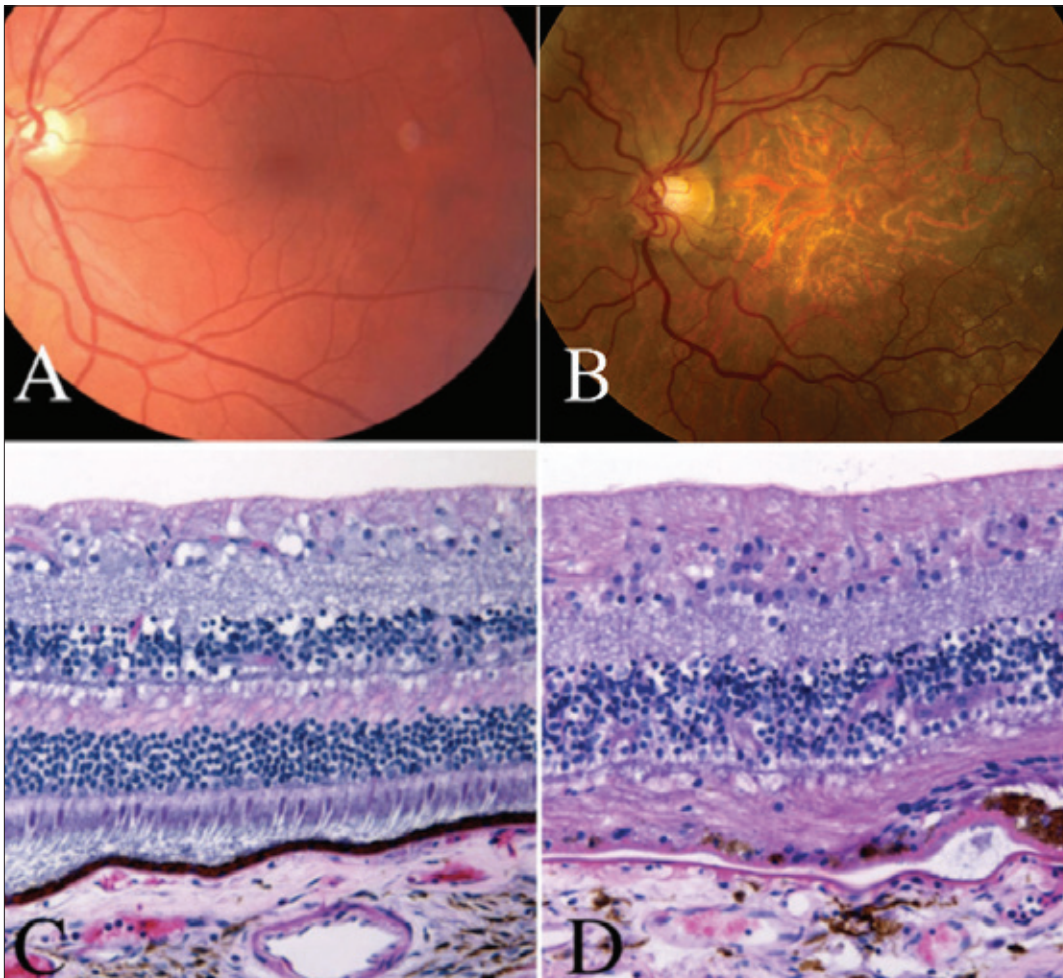
The team’s multifaceted approach involves human donor eyes, mice, and *in vivo* human optical coherence tomography imaging. The group will utilize human donor eyes to determine

the morphological and biochemical features that distinguish atrophic from healthy choroids in normal aging and AMD. They will determine the impact of choriocapillaris ablation on the structure and composition of Bruch’s membrane, retinal pigment epithelium and photoreceptors, and assess features of dry AMD. Evaluating the genetic basis of choroidal atrophy is another of the team’s objectives.

Experiments will begin to define the mechanism by which the choroid and choriocapillaris influence the pathogenesis of AMD. These translational studies will provide new information about the pathophysiology, genetics, and biochemistry of the choroidal atrophy that occurs in normal aging and AMD, and will direct researchers toward new therapies for AMD.

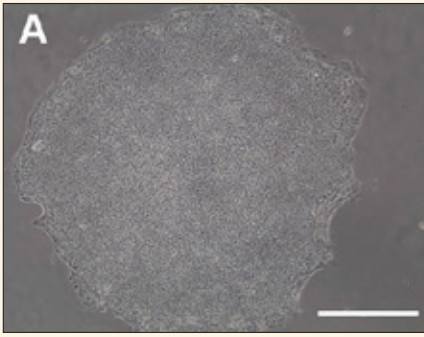
Co-investigators on the grant include **Robert Mullins, PhD**, **John Fingert, MD, PhD**, and **Michael Abramoff, MD, PhD**.

**Learn more about vision research taking place at the University of Iowa by visiting [wivr.uiowa.edu](http://wivr.uiowa.edu).**



Funduscopy (A, B) and histological (C, D) appearance of unaffected eyes (A, C) and eyes with geographic atrophy in AMD (B, D). Note the disruption of the normal retinal architecture in advanced dry AMD (D).





Colonies of stem cells (shown in left image) have been produced from skin biopsies collected from patients with glaucoma caused by the TBK1 gene.

## Lab awarded grant to study glaucoma using adult stem cells

The Glaucoma Genetics Lab was awarded a grant from the National Institutes of Health-National Eye Institute to study glaucoma caused by the TBK1 gene. The two-year R21 grant titled “TBK1-Related Glaucoma” will provide resources for the lab to collect skin cells from patients with low pressure glaucoma caused by a TBK1 gene defect. These skin cells will be reprogrammed to become pluripotent stem cells that then will be used to produce cells that have features of the optic nerve – the tissue damaged by glaucoma.

Researchers in the Glaucoma Genetics Lab will investigate the steps by which defects in the TBK1 gene damage the optic nerve and cause glaucoma. Studies will lay the groundwork for testing new treatments for TBK1-related glaucoma and the development of restorative optic nerve therapies.

Key investigators include **John Fingert, MD, PhD**, **Budd Tucker, PhD**, and postdoctoral fellow **Tasneem Sharma, PhD**.

Learn more about glaucoma genetics research at the University of Iowa by visiting [glaucomagenetics.org](http://glaucomagenetics.org)



## ARVO acknowledges UI vision researchers

**Robert Mullins, PhD** (top left), and **Stephen Russell, MD**, were recognized earlier this year for their service to the eye and vision research community by the Association for Research in Vision and Ophthalmology (ARVO). The pair was also selected as 2016 ARVO Silver Fellows.



## Annual event highlights research

Earlier this year, the department hosted its annual Resident and Fellow Research Day. This training program highlight featured 16 presentations by residents and fellows. Dr. Emily Y. Chew, Deputy Director of the Division of Epidemiology and Clinical Applications at the National Eye Institute and current President of ARVO (front row, sixth from left), was the guest faculty member.



The P.J. Leinfelder Research Award recognizes the residents and fellows with the best research presentations during Research Day. This year’s recipients (left to right) include:

**Christopher Kirkpatrick, MD** – “Definition of a positive apraclonidine pupil test in the diagnosis of an oculosympathetic palsy: evaluation of normal, physiologic anisocoria, and Horner syndrome populations”

**Andrew Carey, MD** – “Cost-benefit comparison of intravitreal anti-VEGF injections for neovascular age-related macular degeneration on a treat-and-extend regimen”

**Jesse Vislisel, MD** – “Incidence and outcomes of positive donor corneoscleral rim fungal cultures after keratoplasty”

**Lindsay McConnell, MD** (not pictured) – “Analysis of conjunctival map biopsies in sebaceous carcinoma”

## AGS educator award to Alward

Wallace L. M. Alward, MD, was selected as the inaugural recipient of the 2016 American Glaucoma Society (AGS) Outstanding Educator Award. The award recognizes his extraordinary commitment to advancing glaucoma education to residents, fellows, and colleagues.

Alward created and maintains Gonioscopy.org, a valuable educational tool dedicated to teaching gonioscopy through the use of videography. The website covers the basic examination techniques and more advanced techniques. He also recently produced and released a teaching website for residents and others interested in learning about glaucoma. The Iowa Glaucoma Curriculum breaks glaucoma into bite-sized lectures that average 14 minutes in length. It is highly visual with over 900 images and 90 movie clips covering all aspects of glaucoma. Visit [curriculum.iowaglaucoma.org](http://curriculum.iowaglaucoma.org).

A professor of ophthalmology and vice-chair of the department, Alward directs the Glaucoma Service at UI Hospitals and Clinics and also holds the Frederick C. Blodi Chair in Ophthalmology.



Alward (right) was recognized for his commitment to education by American Glaucoma Society President David Greenfield, MD. Image courtesy of American Glaucoma Society.

## UI professor one of world's most influential ophthalmologists



*The Ophthalmologist* magazine recently named Edwin Stone, MD, PhD, to the 2016 Power List, a list of the most influential people in the world of ophthalmology. Stone is a professor of ophthalmology and visual sciences at the University of Iowa and is the director of the Wynn Institute for Vision Research.



Stone and his lab lead interdisciplinary efforts to develop cost-effective, cutting-edge technologies for diagnosing and treating eye disease. Their research focuses on the genes linked to macular degeneration, glaucoma, and heritable photoreceptor degeneration.

The complete 2016 Power List is at [theophthalmologist.com/issues/0416/welcome-to-the-power-list-2016](http://theophthalmologist.com/issues/0416/welcome-to-the-power-list-2016).

## Greiner selected among Faculty of the Year



Assistant professor Mark Greiner, MD, was chosen by UI Carver College of Medicine students to receive a Resident and Faculty Excellence in Teaching Award. The award recognizes those faculty members who demonstrate the highest level of teaching excellence.

## Fingert becomes member of American Ophthalmological Society

Professor of ophthalmology John H. Fingert, MD, PhD, is the newest member of the American Ophthalmological Society (AOS). The AOS is a prestigious professional society that was established during the Civil War. Dr. Fingert joins Dr. Edwin Stone and Dr. Stanley Thompson (emeritus) as other current members of the AOS who are on the faculty at the University of Iowa.





**Faculty additions**



**Vera Howe, OD**, joins the department as a new clinical assistant professor of ophthalmology and visual sciences. She received her optometry degree at the Illinois College of Optometry, where she also completed residency training in cornea and contact lens. Howe provided eye care for several years in private practice before joining the UI's Eye Clinic at the UI Health Care – Iowa River Landing location.



The Stephen A. Wynn Institute for Vision Research added a new research assistant professor of ophthalmology and visual sciences. **Luke Wiley, PhD**, completed his PhD training in Molecular, Cellular and Systemic Physiology at Southern Illinois University-Carbondale. He pursued post doctorate studies in the areas of eye development and retinal immunity at Washington University.

Wiley's experience throughout the eye in cell, molecular biology, developmental and immune biology is allowing him to use patient-derived induced pluripotent stem cells to model rare inherited eye diseases. Working in the Steven W. Dezii Translational Vision Research Facility as director of functional analysis, he assists in the generation of clinical-grade adeno-associated viral vectors and transplantable human photoreceptor precursor cells that will be used for gene and cell replacement therapies.

**Forbes again ranks UI Health Care as a top employer**

*Forbes* magazine released its 2016 list of "America's Best Employers" and has again rated University of Iowa Health Care as one of the best places to work in the United States. UI Health Care was ranked No.

7 overall and No. 1 among health care employers.



The magazine surveyed more than 30,000 American workers at large U.S. companies, nonprofit institutions, government agencies, and American divisions of multinational corporations. The result was a list of 500 companies from industries including retail, education, health care, restaurants, and information technology.

Several ophthalmology physicians were featured in a short video celebrating the recognition. **Check out [youtube.com/watch?v=fLuDwm09p-w](https://www.youtube.com/watch?v=fLuDwm09p-w).**

**Ophthalmologists and alumni gather for Iowa Eye Meeting**

An excellent educational program and numerous extracurricular activities contributed to the largest attendance in recent years at this year's Iowa Eye Annual Meeting and Alumni Reunion. The program featured keynote lectures, clinical and research updates, and case presentations from faculty, trainees, guest alumni, and other distinguished speakers.

**See who was there and more photographs from the weekend at [iowaeyealumni.shutterfly.com](http://iowaeyealumni.shutterfly.com).**

The 2017 meeting is scheduled for June 9-10, when we will welcome back the class of 2007. All alumni are encouraged to attend.



The resident class of 2006 enjoyed getting together. Present were Erin Shriver, Erin Schotthoefer, Jeff Maassen, and James Coombs. Unavailable was Dr. Reid Longmuir.



## Indy race car raises awareness for vision research

For the second time in three years, race car driver and former Indy 500 winner Buddy Lazier took to the track to help raise awareness for the University of Iowa Stephen A. Wynn Institute for Vision Research.

Lazier qualified and raced in the 100th Indianapolis 500 over Memorial Day weekend.

Read more at <http://bit.ly/1qJiJRr>.



## Join us in Chicago

For alumni and friends attending the American Academy of Ophthalmology Annual Meeting this fall in Chicago, make plans to join us at the Iowa Eye Reception on Sunday, Oct. 16. We will gather in the Edelweiss Penthouse of the Swissôtel Chicago.



## Golf skills on display

For one cold Saturday afternoon last February, the Eye Clinic was converted into an indoor mini-golf course for staff members and their families. The Fifth Ophthalmology Miniature Golf Tournament featured 18 creative holes that challenged even the best golfers.

## IOWA VISION

*IOWA VISION* is published for alumni, colleagues, and friends of the Department of Ophthalmology and Visual Sciences at the University of Iowa.

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The department has several  
ways to help alumni and  
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@UIowaEye  
@IowaEyeAlumni  
@EyeRounds



/UIowaEye  
/IowaEyeAlumni  
/EyeRounds  
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medicine.uiowa.edu/eye  
eyerounds.org  
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## IOWA VISION UPCOMING EVENTS

### Ophthalmology Clinical Conferences

**Sept. 23, 2016**

**Retina / Uveitis** - Jose Pulido, MD, Mayo Clinic

**Nov. 4, 2016**

**Oculoplastic Surgery** - Jonathan J. Dutton, MD, PhD, FACS,  
University of North Carolina Kittner Eye Center

**Feb. 2, 2017**

**Neuro-ophthalmology** - Patrick Sibony, MD, Stony Brook School  
of Medicine

**March 3, 2017**

**Cornea and External Disease** - Keith H. Baratz, MD, Mayo Clinic

**April 7, 2017**

**Cataract / Comprehensive** - John Berdahl, MD,  
Vance Thompson Vision

### Other Events

**Aug. 5, 2016**

**Midwest Eye Research Symposium 2015, Iowa City**

**Sept. 29-30, 2016**

**UI Carver College of Medicine Alumni Homecoming Weekend**  
(Classes of '81, '86, '91, '96, and '06), Iowa City

**Oct. 15-18, 2016**

**AAO 2016 Annual Meeting, Chicago**

**Oct. 16, 2016**

**Iowa Alumni Reception at AAO, Swissôtel Chicago, Chicago**

**Nov. 13, 2016**

**UI Carver College of Medicine Mini-Medical School featuring  
Ophthalmology, Seattle**

**April 21, 2017**

**Resident and Fellow Research Day, Iowa City**

**May 7-11, 2017**

**ARVO Annual Meeting and Iowa Alumni Reception, Baltimore**

**May 19, 2017**

**19th Annual Iowa Optometric Conference, Iowa City**

**June 9-10, 2017**

**Iowa Eye Annual Meeting and Alumni Reunion, Iowa City**