

BUCKEYE OPHTHALMOLOGY



THE OHIO STATE UNIVERSITY

WEXNER MEDICAL CENTER



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Buckeye Character and Innovation

Employees Deliver Groceries to Patient in Need

During the 1st COVID-19 wave of rescheduling patients, Amber Skaggs spoke with Dr. Shelly Jain's patient, who was post-poned due to risk of advanced age. He is a US Army veteran and Amber learned that he only had three days of groceries, which was not enough to last his three-week isolation advised by his family doctor. Given no availability of our social work intern due to the pandemic, Amber and Shannon Leitwein delivered groceries to him.

This act of kindness spread throughout the department. Dr. Moroi reported this act of kindness during her Town Hall address as a testimony of BuckEYE character in the midst of the pandemic. Amber and Shannon made a second delivery, and he was so grateful.



Perfume Manufacturer Pivots to Hand Sanitizer



IMH LLC was founded by Hanan Malul, husband of Retina Fellow Irina Livshitz, MD. What started out as a chain of retail and online perfume stores called Scentology, has now blossomed into a manufacturing company that produces its very own line of scents, "Michael Malul." With the spread of Covid-19, Hanan took extraordinary measures to not only save the jobs of his employees, but to also make a difference in his community. He quickly mobilized his equipment and staff to begin producing a much-needed product: hand-sanitizer.

"It wasn't until our stores shut down that I realized I had to act fast. The first rule of business is: fill a need. I am happy to have helped in even the smallest way to preserve my employees' livelihood and serve the need of our community," Hanan explained.



Personal Protective Equipment Modifications

Our Staff and Physicians at The Ohio State Department of Ophthalmology and Visual Sciences are working to keep patients safe during this uncertain time.

Left: Resident Caroline Craven, MD models an indirect ophthalmoscope that she modified with a protective shield.

Right: Courtney Kauh, MD uses a portable slit lamp with protective shield modification.



View From The Chair

Dear Friends,

Recently, I shared a milestone with my 'Town Hall: My 1st 90 days' presentation. I immersed myself with leadership meetings, grant transfers, recruitments, field research to learn about the culture in the department, the hospital, and the medical school, and prepared for a major talk. The photo shows the tremendous 'bi-partisan' Michigan and Ohio State support after my 2020 American Glaucoma Society Clinician Scientist Lecture. While getting to know faculty, staff, residents, fellows, friends of the department, and alumni, I learned about the many great qualities about our work family and opportunities for change.

My initial impression of our department's relationships with programs across the hospitals, medical school and colleges was 'silos'. Enter the WHO declaration of a Public Health Emergency of International Concern on January 30th because of a new coronavirus pathogen, named COVID-19 on February 11th. On March 1st, a National Emergency was proclaimed. All of us changed behaviors to flatten the COVID-19 curve. Our department leadership stepped up and deputies were appointed to calm anxiety with weekly debriefs on COVID-19 to the entire department based on science, epidemiology, and safety for all. With the challenges of personal protective wear, SARS-CoV-2 testing, medical equipment, hospital capacity, medical staff, mental health, health care disparities, and public health messaging, I learned a great deal about the institutional character. My impression of 'silos' was shattered by being part of our institutional response to 'code yellow' disaster. I observed compassion, innovation, speed, and implementation of changes by cross-cutting teamwork across clinicians, researchers, local industry, local government and the FDA. Now, my impression is that Buckeyes are nimble movers, shakers and leaders.

As we emerge into a new normal, our department has committed to strategize and integrate new approaches to provide outstanding patient care that is safe for the patient and the health workforce. In this Spring 2020 issue, please enjoy learning about our safety innovations with equipment, telehealth growth, global outreach, research, innovation made possible by grateful patients, alumni spotlight, and faculty spotlights.

Sayoko E. Moroi, MD PhD
 William H. Havener, MD Endowed Professor
 Chair and Director of the Havener Eye Institute
 Professor of Ophthalmology
 Department of Ophthalmology & Visual Sciences
 The Ohio State University Wexner Medical Center

Sayoko Moroi, MD, PhD
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 Assistant Program
 Coordinator

Rachel Nyland
 Graphic Design Intern



Teleophthalmology

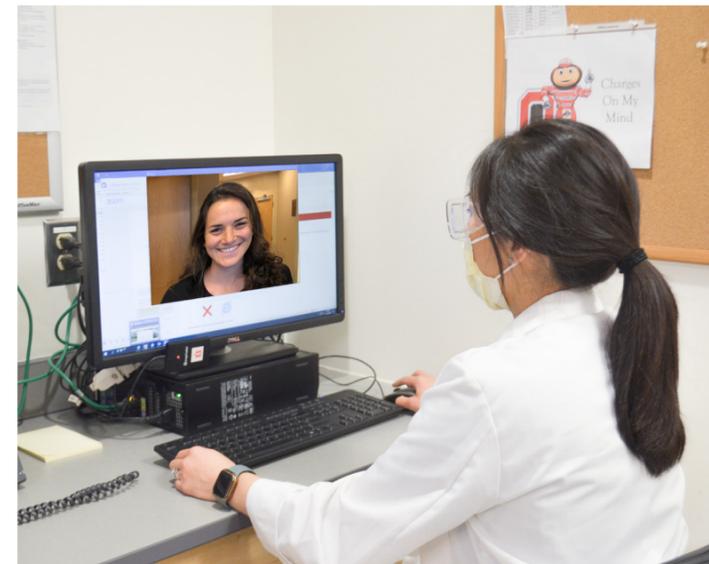
A silver lining of the COVID-19 pandemic is the rapid expansion of teleophthalmology. There are four areas of telemedicine:

- 1 'Store-and-forward' teleophthalmology where data is electronically transmitted to a provider for evaluation and action plan.
- 2 Live audio-video telemedicine in real-time, interactive communication with a patient that involves data collection, assessment, and action plan.
- 3 Remote physiologic monitoring involves health data collection by a patient and transmission to the provider for analysis and an action plan.
- 4 Mobile health uses mobile communication platforms, such as smart phones and tablets, and wearable technologies, such as fitness trackers, temperature, and physical location.



'Store-and-forward' Teleophthalmology

The first area of 'store-and-forward' telemedicine has been successful and is the most mature form of telehealth that improves access and outcomes for diabetic retinopathy (DR) and retinopathy of prematurity. Dr. Matthew Ohr partnered with family medicine and together they successfully implemented a protocol to screen for DR by placing Optos® imaging technology in the primary care offices for convenience of the patient with diabetes. In addition to the expected increased patient access, improved compliance with annual DR exam, and earlier detection of DR, additional benefits included the incidental detection of other eye diseases, such as glaucoma, macular diseases and other peripheral retinal conditions. 'Store-and-forward' telemedicine has now been expanded to other primary care sites and in the emergency department.



Live Audio-Video Telemedicine

The second area of real-time audiovisual telemedicine is being led by faculty champion Dr. Courtney Kauh. She is an amazing teacher in the face of implementation as we learn about the barriers of technology for physicians and the patients, of broadband speed at our institution and the patient and assuring compliance with privacy among the various audiovisual platforms. Dr. Kauh worked closely to develop templates to document consent and telehealth data, organized several teaching sessions for the technicians and providers, and on demand help with providers. Dr. Irina Livshitz worked with Dr. Kauh to create a database of apps and software on visual acuity, color testing, Amsler grid testing, and even perimetry. As we gain experience, we will learn the limitations, validity and reliability of live audio-video telemedicine.

Remote Physiologic Monitoring

The third area of remote physiological monitoring (RPM) is being introduced by Dr. Sy Moroi and Jesse Gilbert for glaucoma patient care. The Icare® HOME is a tonometer that has been approved by the FDA and allows patients to measure their own intraocular pressure (IOP) at home and in the real world. This instrument uses rebound technology and does not require anesthetic drops. The engineering design uses red and green light signals to help patients properly align the instrument and obtain good measurements. The IOP data is not visible to the patient and is stored in the instrument. The advantage of this technology is to increase IOP data sampling over 24 hours to understand an individual diurnal IOP variation and how stable the IOP is under treatment. Thus, this technology provides a telemedicine workflow for glaucoma management to characterize an individual patient's diurnal IOP variation under treatment, which is not possible with the traditional office-based visits. A limitation of this technology is the expense of the instrument, so we will implement RPM as a library loan program.



Research Eyelights

The Ohio State University Department of Ophthalmology and Visual Sciences' Research Team is on a mission to reverse and prevent blindness.



Mohamed Abdel-Rahman, MD, PhD

"More than 10 percent of uveal melanoma patients have an increased predisposition to cancer—not just eye cancer but a wide variety of cancers", says Mohamed Abdel-Rahman, MD, PhD. He and his team recently identified BAP1 as one of the genes predisposing patients to eye melanoma. The next question they will address, in a two-year \$375,000 National Institute of Health study, is how other genes could modify the effect of BAP1 in patients. "When we talk about hereditary predisposition, there are high-risk genes (or "high-penetrant" genes) and low-risk genes," Abdel-Rahman says. BAP1 is a high-risk gene. OCA2 is a low-risk gene. Dr. Abdel-Rahman and his team hypothesize that OCA2 plays a role in why some family members with BAP1 mutations develop one form of cancer while others develop a different form. "The grant will help us understand the mechanisms that OCA2 plays in modification of cancer risk of BAP1," he says.

Stacey Choi, PhD & Nathan Doble, PhD

When Stacey Choi, PhD and Nathan Doble, PhD came to The Ohio State University in 2013, they brought with them a remarkable imaging system based on technology used by astronomers and the military. It took nearly two and a half years to design, build and set up. Their system, called an Adaptive Optic Optical Coherence Tomography Scanning Laser Ophthalmoscope (AO-OCT-SLO), allows them to look deep into the eyes of living subjects. "We've essentially used the same technology to look closer rather than farther away, and made it less expensive and smaller as well," Dr. Doble explains. "It is very similar to commercial OCT systems you'd see in a clinic, just with some turbo charging on the imaging side of things. It has roughly a five times better imaging capability than commercial systems." The system allows them to see minute details, on the order of a couple of microns in size, and count single neurons at the back of the retina. Their goals in using the system are to identify the earliest biomarkers for disease in living patients, as well as to perform longitudinal studies of drug therapies and treatments.



Colleen Cebulla, MD, PhD

As she prepares to release the findings from a recent study of macrophage migration inhibitory factor (MIF), Colleen M. Cebulla, MD, PhD and her team are setting up a new study of the retina that builds on her previous work, thanks to a \$1.9 million grant from the Department of Defense. "We have been looking for the proteins that might be important for loss of neurons after retinal detachment, or scar tissue formation in the eye," Dr. Cebulla says. "We're interested in the inflammatory proteins that are involved in those processes. MIF looks interesting and has been implicated in a lot of diseases, but no one has looked at it as a therapeutic target for retinal detachment." Proliferative vitreoretinopathy (PVR) is the most common cause of failure of retinal detachment surgery, occurs frequently after retinal trauma, and there are no effective pharmaceuticals to prevent it. The study is investigating the effects of drugs that target MIF, which is produced at high levels in PVR, as well as testing the ability of different clinically relevant MIF inhibitors to block photoreceptor death and abnormal healing.

Raymond Gao, PhD

"One of my areas of interest is glaucoma-related genetics research," Raymond Gao, PhD says. "I find genetic markers associated with glaucoma and its quantitative traits such as intraocular pressure, vertical cup-to-disc ratio, and central corneal thickness. I also use genetic data and machine learning to try to predict glaucoma." Dr. Gao hopes his research leads to better understanding and earlier detection of glaucoma," Dr. Gao explains. "I find information that guides and helps to build models that better predict the onset of glaucoma before it causes ocular damage in patients." Glaucoma currently has no effective cure, making early detection critically important. "Having a way to predict who might have glaucoma before the symptoms appear would be extremely beneficial for patients," Dr. Gao says. "About 50% of patients with glaucoma are unaware they have this eye disease because typically there are no early symptoms."



Jun Liu, PhD

Jun Liu, PhD and her research team are looking at corneal biomechanics in a new way. Funded by a National Institute of Health grant and with software they developed over the past 10 years, the team is using an ultrasonic device, the Ocular Pulse Elastography, to view not only the structure of the cornea, but the function as well. Their laboratory uses high-resolution ultrasound imaging and elastography techniques to investigate the mechanical insults created by intraocular pressure at the site of glaucoma damage, the optic nerve head. This study aims to answer fundamental questions related to posterior eye biomechanics and will help develop better therapeutic interventions for patients at higher risk. They are also developing in vivo imaging techniques to evaluate corneal biomechanical properties that are diagnostic markers glaucoma and keratoconus progression. We have launched a human subject study applying the novel technique and data analysis algorithms to non-invasively determine corneal biomechanics in patients.

Katelyn Swindle-Reilly, PhD

When Katelyn Swindle-Reilly, PhD, came to Ohio State she realized there were strong collaborations available in Ophthalmology, Optometry and Biomedical Engineering. She decided to return to her early research on polymers for use in the eye. Dispersed in the vitreous humor after injection, drugs encapsulated in multi-layered polymer capsules could soon deliver an entire year's worth of medication in a single injection. These devices could lower costs, cause less pain, and reduce the risk of intra-ocular side effects without interfering with vision. Matthew Ohr, MD approached Dr. Swindle-Reilly about working together to develop a drug delivery device to extend the durability of monthly anti-VEGF injections patients receive for wet AMD. After collaborating with this idea, they received two years of funding from the Ohio Lions Eye Research Foundation, which has catapulted their project.



Cynthia Roberts, PhD

One of the goals in Cynthia Roberts', PhD five-year, \$1.9 million National Institute of Health/National Eye Institute study is to find biomechanical biomarkers for different disease processes in keratoconus, diabetic retinopathy, glaucoma, and ocular hypertension using the Corvis ST the team is able to compare the biomechanics of eyes independent of Intra-ocular Pressure (IOP), which can vary widely between patients. Part of Dr. Roberts' goal is to pin down a good way to separate the effect of IOP from the effect of stiffness in the cornea of living patients, currently corneal properties are not being factored in accurately estimating IOP for living patients. Physicians are able to compensate for the effect of CCT with linear correction formulas, "but the error is not actually linear," Dr. Roberts says, "it's a function of the eye's properties. I'm hoping to understand this relationship better."

To learn more about Research visit eye.osu.edu/Research



Share Your Outreach Experiences With Us

We want to hear from you

The Ohio State University Department of Ophthalmology and Visual Sciences is proud of its faculty and alumni who have volunteered their time and efforts. The World Health Organization estimates that for every blind or visually impaired person, as many as three of their family members must stop work or school to care for them. Our Ohio State residents, fellows and alumni are sharing their talents in foreign environments and educating global medical professionals on the newest procedures for treating eye patients.

We are expanding our vision and hope you will join us to support the Global Outreach Project—a sustainable outreach and education program to restore sight and change lives in the developing world.

Coordination of these goals involves logistical challenges such as organizing travel, government relations, intake, organization and distribution of supplies with corporate partners. It also entails alumni support, and coordination with residents, fellows and alumni to secure travel plans and participation. Are you a global visionary who has helped bring eye care to those who need it most at home and abroad? We want to hear your story.



India



Ghana
Uganda
Kenya
Ethiopia



Contact eye@osumc.edu or 614-293-8760 with global destinations and photos to add to our map.

Buckeyes Volunteer Beyond Our Borders

Peru | November 2019

Alumni John Pajka, MD (90') and Dave George, MD (92') visited the isolated city of Abancay, Peru. They were joined by current resident Jack Li, MD on this outreach endeavor. "My Ohio State resident mates are lifelong friends and have been interested in helping with this goal through the years" explained Dr. Pajka. "Part of my mission is to provide opportunities for young resident doctors to see firsthand the global need for access to eye care."

Dr. George recalls the experience as "very worthwhile being able to help so many truly blind people. The people of Abancay were so appreciative and the local hospital staff was fabulous. I feel fortunate to be able to take part in these mission trips. I am thankful for the work Dr. Pajka does to organize these trips and that he continues to invite my team".

"The stories from these patients are emotional and truly inspiring" Dr. Pajka says. "Many have been blind for years, never having seen their grandchildren, or family who have been feeding them and caring for them. Taking their patches off and watching them see their faces for the first time is indescribable. Experiencing how much of the world has no access to eye care, and seeing the magnitude and severity of blindness, is to appreciate what a great opportunity we have as ophthalmologists to make a real difference."

Dr. Pajka believes exposing young eye surgeons to this need during their training, may spark a passion that stays with them for their entire career. That is exactly what happened for Dr. Jack Li. Global service drew him to ophthalmology. Dr. Li explains "Going to Peru has been a career changing experience. There is a large surgical log in the world and I look forward to a career improving vision worldwide."



Ghana | February 2020

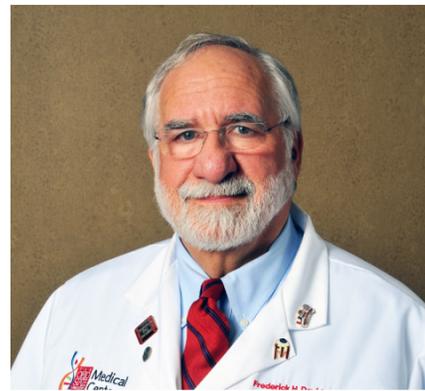
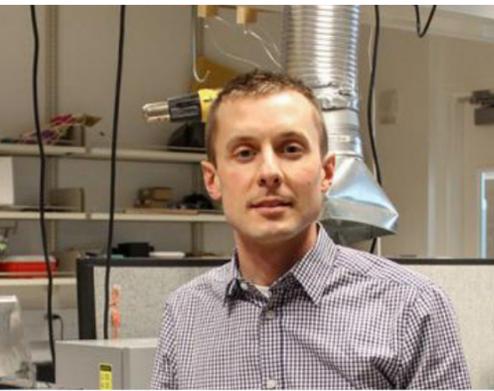
Amit Tandon, MD and John Pajka, MD (90') visited the Korle Bu Training Hospital in Accra, Ghana in February 2020. Supported by the Himalayan Cataract Project, they spent a week training senior surgical staff and residents. This was Dr. Tandon's 7th mission trip but his first visit to Ghana. "Our goal was to help create sustainable medical care in Ghana by teaching the local ophthalmologists how to do phacoemulsification" says Dr. Tandon.

For Dr. Pajka, global ophthalmology has been a career long passion and part of who he is. "We as ophthalmologists all have experienced the tremendous impact that cataract surgery can have on a blind person's life. In the developing world, they say "A blind person is a mouth with no hands". It affects not only that blind person who can no longer work to support themselves or their family, but those who must take care of them."

Restoring sight with cataract surgery is not just life changing, but in many cases life saving. "Here in the United States, we take our access to great eye care for granted. In the developing world, we are trying to provide access to excellent eye care," shares Dr. Pajka. His aim is to work with local doctors and nurses to provide training and support in obtaining equipment, supplies, and education. "The ultimate objective is to form partnerships to form sustainable eye care delivery systems that will continue after we are no longer there".



To Learn More About Our Global impact visit eye.osu.edu/outreach



Left: Dr. Ryan Harne, an engineering professor in the Department of Mechanical and Aerospace Engineering
 Right: Dr. Frederick Davidorf, a retina specialist in the Department of Ophthalmology and Visual Sciences

Fighting Cancer with Ultrasound

High-Intensity Focused Ultrasound (HIFU) Project Started Because of Generous Patient Donations

The Ohio State University Department of Ophthalmology and Visual Sciences has been on the forefront for treatment of uveal melanoma (UM). Uveal melanoma is the most common primary intraocular cancer in adults.

William Havener, MD former department chairmen and retina specialist with a special interest in uveal melanomas began treating these tumors at The Ohio State University in the late 1960s. He worked with Dr. Frank Batley to introduce the concept of radiation therapy for the tumors. Before radiation was an option, surgery to remove the entire eye called enucleation, was the only choice for patients. Radiation therapy uses high-powered energy, such as protons or gamma rays, to kill cancer cells. While radiation therapy has revolutionized the treatment of uveal melanoma, it is impossible to avoid creating collateral damage to adjacent tissues during the procedure.

High-intensity focused ultrasound (HIFU) is a recent treatment that can be used to destroy tissue, such as tumors, through a number of mechanisms. The technology can be used to treat a range of disorders and as of 2015 is at various stages of development and commercialization. Ultrasounds have become common use in today's medical world, a high-intensity focused ultrasound creates a high temperature to destroy the tumor but keeps the integrity of surrounding tissues.

Frederick Davidorf, MD a retina specialist, at The Ohio State University, became interested in using this therapy to destroy tumors within the eye. Dr. Davidorf was connected with Ryan Harne, PhD, an engineering professor in the Department of Mechanical and Aerospace Engineering and an expert in HIFU. They have been collaborating to create a probe similar to the larger scale device that has been approved in treatment of prostate cancer.

Dr. Davidorf is very fortunate to have two grateful patients, Warner Blow and Sam Baker, who donated the seed money for the early development to create a probe that can be applied to the eye. Dr. Davidorf says "the challenge is miniaturizing the system since many people don't realize the diameter of the human eye is no larger than the size of a quarter". It will be a journey to develop a probe that can be applied to the surface of the eye, localize the tumor, generate settings geared toward destroying a tumor without destroying other tissues and keeping the integrity of the sclera.



Left: Harne holding the foldable transducer
 Right: LSVR's Origami-Inspired Loudspeaker Array



"I am very fortunate to collaborate with the College of Engineering and Department of Mechanical and Aerospace Engineering coupled with a generous donation from a grateful patient."

- Frederick Davidorf, MD

Restoring Sight

Grateful Patient Judy Fanning

A couple of months after cataract surgery, Judy Fanning lost most of her vision. Terrified, she turned to the Ohio State Department of Ophthalmology and Visual Sciences. She hoped for a miracle.

Matthew Ohr, MD and his team diagnosed her with bilateral endogenous endophthalmitis- an eye infection that can rapidly lead to blindness. Needing to work quickly, they leapt into action and completed Judy's surgery within days of her diagnosis.

Given the state of Judy's eyes, her care team expected a modest improvement. When the time came, they removed the bandages and she got her miracle. Judy emerged with excellent vision.

Judy is grateful for her sight every day. Now, she is able to see and enjoy her cats, her garden, and the faces of her friends, again.

"Every time I tell this story, I cry. The whole experience was so incredible," Judy says.



Buckeye Benefactors



Recognizing Our 2019 Generous Donors

\$200,000 & Above

Warner Blow

\$100,000– \$199,999

Sam Baker
 Alan & Susan Letson
 John & Linda Pajka

\$10,000 – \$99,999

Ronald Erkis
 Michelle Fulks
 Mitchel & Pamela Opremcak
 Gale Shamansky
 Amit & Sarah Tandon

\$5,000 – \$9,999

David Kingrey
 Carl & Joan Minning
 Andrew Sainato
 Abby & Don Robinson
 Paul & Lesley Weber

\$2,500 – \$4,999

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 Michael & Jean Griffith
 Phillip & Anupama Horne
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 George Jones

Elliott Luckoff
 Robert Lytle
 James Magnuson
 Julie Meadows
 Robert Small and Cynthia Roberts
 Blii & Linda Rothman
 Marianne Schmidt
 Doug & Laura Sladoje
 Marjorie Ward

\$500 – \$999

Margaret Bellows
 Richie Cohen-Smith
 Dennis Corbett
 Richard Miller
 Chantelle Mundy
 Randall Pemberton
 Lawrence Ronning
 Donald Schriver

Matt Finkes - Director of Development | 614-561-4703 Matthew.Finkes@osumc.edu



Will Anninger, MD pictured with son Noah, wife Carol and daughter Lily.

Academic Medicine is the Perfect Fit

Alumni Spotlight: Will Anninger, MD

Will Anninger, MD had no ties to the Buckeye state when he arrived in Columbus from the East Coast in the summer of 2002. He grew to cherish his time in the Clintonville neighborhood near campus where he could take his young children to the Park of Roses.

Dr. Anninger made a strong connection with former Department Chairman, Paul Weber, MD, during his interview and residency. They shared a passion for aerobic activity, and Dr. Anninger was impressed by the healthy work-life balance centered on family that Dr. Weber practiced. He remembers his days in the resident clinic, "there was a great link with the community ophthalmologists who helped to staff the clinic, their commitment to teaching was excellent and enriching".

Dr. Anninger felt that under then Residency Director Robert Chambers', MD guidance, "Ohio State offered an environment that was sincere and supportive, and dedicated to the teaching of all aspects of ophthalmology". He fondly remembers Elson Craig, MD teaching pathology in the back corner of the building, soaking up his calm demeanor and great wisdoms on both life and ophthalmology.

Mary Lou McGregor, MD is also a mentor that made a difference. "Dr. McGregor had a wonderful approach to pediatric patients while juggling life as a super mom to 4 children; she was inspiring and I still teach my fellows some of her surgical techniques."

Dr. Anninger chose to follow his dream of becoming a pediatric ophthalmologist and accepted a fellowship at the Children's Hospital of Philadelphia (CHOP). Following the fellowship he joined the faculty at CHOP.

"The best place to be a pediatric ophthalmologist is in an academic medical center. The variety and complexity of patients and parents, the teaching and monitoring of residents and fellows make for rewarding and complex days. I am lucky to practice at a remarkable hospital like CHOP, which is the pediatric teaching hospital for the University of Pennsylvania and the Scheie Eye Institute." He chose his specialty because he loves being around kids and has a passion for caring for children with vision issues. Dr. Anninger was also drawn to pediatric ophthalmology because it is a generalist field in ophthalmology, and requires caring for children with systemic and genetic diseases.

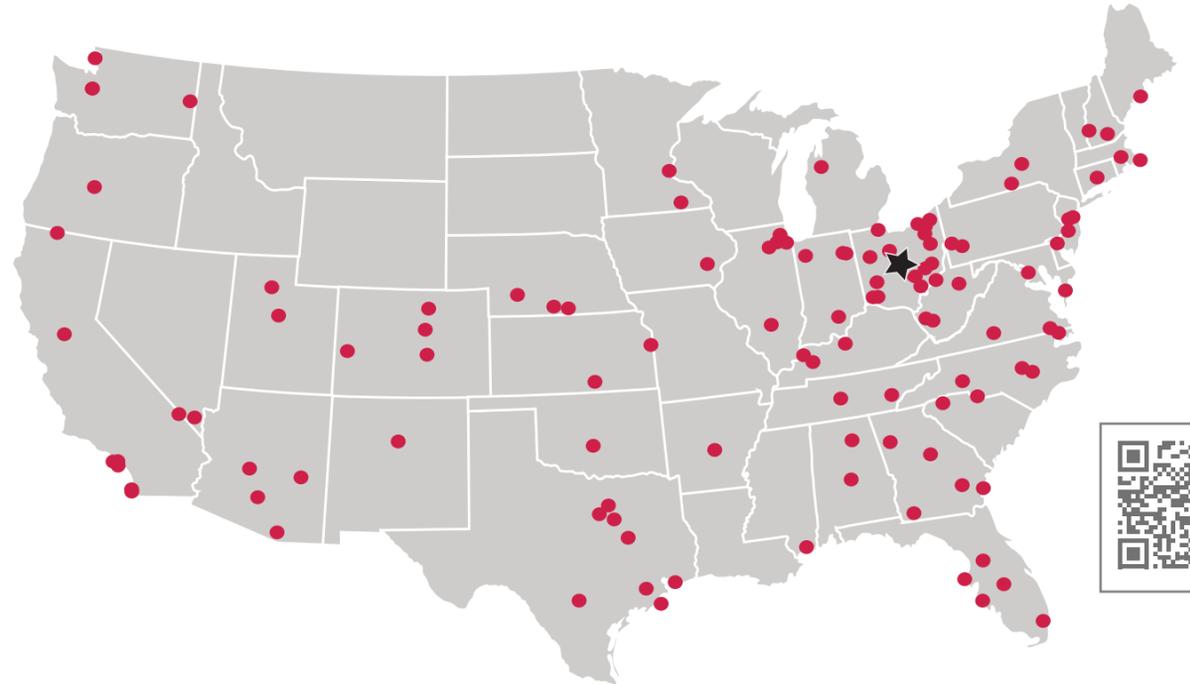


Dr. Anninger with Ayub during his last visit before returning to Tanzania. Ayub underwent cataract surgeries with IOLs in each eye, and then a strabismus surgery in 2019.

"I love being part of providing excellent clinical experiences and outcomes for kids and their families."

Where Do Our Alumni Practice?

Over 300 Ohio State Alumni are practicing all over the country. These are the cities you will find Ohio State Ophthalmology Alumni. Visit go.osu.edu/alumni-directory to connect with your fellow alumni.



Your Vote Matters: Please Vote for Us!

The U.S. News and World Report collaborates with Doximity to survey ophthalmologists for its annual ophthalmology ranking.

Below are instructions to register for Doximity. If you are a new Doximity member please register your account to vote for The Ohio State Department of Ophthalmology and Visual Sciences during the next voting window.

✿ New Doximity Members

1. Enter your First and Last name in the appropriate fields and click Find My Profile
2. Fill in the appropriate fields regarding your occupation and practice location
3. Provide your email address and create a password then select Complete Registration
4. Doximity has a few stages of verification. Fill in the fields where an asterisk is marked
5. Your profile is now registered! Select get verified located in the orange ribbon to proceed
6. Vote for The Ohio State University Department of Ophthalmology and Visual Sciences

✿ Existing Doximity Members

1. Enter your First and Last name in the appropriate fields and click on Find My Profile
2. If you have a profile already claimed, the screen will guide you how to reset your password



We appreciate your time and your vote! Visit Doximity.com

Faculty Recognition



Cynthia Roberts, PhD Receives Distinguished Scholar Award Eye and Ear Institute | April 2020

Dr. Roberts was honored for her exceptional scholarly accomplishments and substantial body of research by the University.

Recipients are nominated by their departments and chosen by a committee of senior faculty, including past award recipients. Distinguished Scholars receive an honorarium and a research grant to be used over the next three years. The award is supported by the Office of Research.

Department Chair, Sy Moroi, MD, PhD Keynote Speaker at The American Glaucoma Society Annual Meeting Washington D.C. | February 2020

Clinician Scientist Lecture: Illuminating our Blind Spots and Preventing Blindness presented by Department Chair Dr. Sy Moroi.

Attendees from OSU: Dr. Gloria Fleming, Dr. Shelly Jain, Dr. Kristen Ann Mendoza, Dr. Sy Moroi, Dr. Andrea Sawchyn, Dr. Mark Slabaugh and Dr. Paul Weber



Prevent Blindness Forum Keynote Speaker Fatoumata Yanoga, MD Eye and Ear Institute | November 2019

Our very own Fatoumata Yanoga, MD was the keynote speaker at the research scientific forum on *Bringing Research to the Public: A Challenge to Women in Science*. Other Presenters were recipients of the 2019 Prevent Blindness Young Investigator Student Fellowship Awards for Female Scholars in Vision Research.



Recent Publications

December 2019 - April 2020

Awad H, Bai M, Ramadan ME, Shabsigh A, Backes F, Craven MA, Abdel-Rasoul M, Bergese SD, Slabaugh MD
The Effect of Increased Intraocular Pressure During Steep Trendelenburg Positioning in Robotic Prostatectomy and Hysterectomy on Structural and Functional Ocular Parameters | *Anesthesia & Analgesia* | December 2019

Nguyen BA, Reilly MA, Roberts CJ
Biomechanical contribution of the sclera to dynamic corneal response in airpuff induced deformation in human donor eyes
Experimental Eye Research | December 2019

Colleen Cebulla, MD, PhD, Sumaya Hamadmad, Mohd Hussain Shah, Rania Kusibati, Bongsu Kim, Brandon Erickson, Tyler Heisler-Taylor, Sanjoy K. Bhattacharya, Mohamed H. Abdel-Rahman, MD, PhD
Significant upregulation of small heat shock protein α A-crystallin in retinal detachment | *Experimental Eye Research* | December 2019

Kara A. Dolezal, Cagri G. Besirli, Shahzad I. Mian, Alan Sugar, Sayoko E. Moroi, Brenda L. Bohnsack
Glaucoma and Cornea Surgery Outcomes in Peters Anomaly
American Journal of Ophthalmology | December 2019

Jack Li, MD, Trevor Hodson, BS, and Courtney Kauh, MD, MS Edited By: Steven J. Gedde, MD
The Case of the Eye Shadow Bump | *EyeNet Magazine* | January 2020

Jiang P, Chaparro FJ, Cuddington CT, Palmer AF, Ohr MP, Lannutti JJ, Swindle-Reilly KE
Injectable biodegradable bi-layered capsule for sustained delivery of bevacizumab in treating wet age-related macular degeneration | *The Official Journal of the Controlled Release* | January 2020

Clara Castillejo Becerra, Yue Ding, Beatrice Kenol, Andrew Hendershot, Alexa Simon Meara
Ocular Side Effects of Antirheumatic Medications: A Qualitative Review | *BMJ Open Ophthalmology* | April 2020

Martine Jager, Carol Shields, Colleen Cebulla, Mohamed Abdel-Rahman, Hans Grossniklaus, Marc Henri Stern, Richard Carvajal, Rubens Belfort, Renbing Jia, Jerry Shields, Bertil Damato
Uveal Melanoma | *Nature Reviews Disease Primers* | 2020 April

E-ARVO 2020

Monday May 18th 9am - 12pm

The Department will be hosting a virtual ARVO with streamed video talks and narrated posters

✿ Department of Ophthalmology and Visual Sciences ✿ Department of Biomedical Engineering ✿ Department of Neuroscience
✿ Division of Human Genetics ✿ College of Optometry



Bradley Dougherty, OD, PhD

Use of a Naturalistic Test of Silent Reading and Reading in People with Low Vision



Erica Shelton, OD, MS

Assessing county-level longitudinal changes in vision impairment national health surveillance data in the United States



Thomas Raasch, OD, PhD

Effects of pupil size and position on aberrometry-derived refractive



Rebecca Deffler, OD, MS

Mediators of the relationship between socioeconomic status w acuity in age-related macular degeneration



Yanhui Ma, PhD

Mapping and quantifying the retinal microvasculature organization optical coherence tomography angiography



Bharat Kumar, BS

Changes in the localization of lens epithelial cell proliferation response to stretching



Katelyn Swindle-Reilly, PhD

Methods to Improve Vitamin C Stability in Hydrogel Vitreous to Prevent Cataract



Matt Reilly, PhD

Biomechanical model of lens growth and stretching



Jun Liu, PhD

Age-associated increase in pulsatile axial motion of the cornea



Cynthia Roberts, PhD

Comparisons of Novel Stress-Strain Index and Other Clinical Measures of Ocular Stiffness in Normal and Pathologic Cohorts



Pengjing Xu, PhD

Mapping visual field with Bayesian-adaptive eye-tracking method



Mingzhai Sun, Visiting Scholar

Application of Retina Oximetry with Deep Learning Based Information Fusion



Raymond Gao, PhD

Multi-trait polygenic risk scores improve glaucoma prediction



Elizabeth Urbanski, BA

MIF Inhibitor Ibudilast Prevents Retinal Cell Death in Chick Retinal Damage Model



Sumaya Hamadmad, PhD

Differential effects of MIF inhibitors on an in vitro PVR model



Mohd Hussain Shah, PhD

Significant Up-regulation of PRDX1 in Retinal detachment



Saurabh Pancholi, BS

Somatic Alterations in Uveal Melanoma Tumors from Patients with Personal and/or Family History of Cancer



Mohamed Abdel-Rahman, MD, PhD

Study of the role of germline variants in MBD4 in uveal melanoma and exceptional clinical outcomes.



Warren Campbell, BS

Midkine signaling in the chick retina is neuroprotective to damage and promotes the formation of Müller glia derived progenitor cells



Stuart Mangel, PhD

Role of circadian clock-controlled increase in GABA inhibitory to cones at night

Upcoming Events

Moses Lectureship | May 14 | Postponed

Resident Research Day | June 12 | Virtual

Resident and Fellow Graduation | June 12 | TBD

Ocular Oncology Symposium | September 12 | Virtual



3rd Annual Retina Case Forum | August 21
Eye and Ear Institute
Reception Following at The Juniper Rooftop



AAO Alumni Reception | November 14
Las Vegas BlackTap Outside Patio



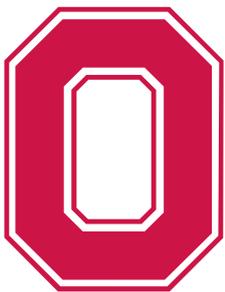
Learn more about our events visit eye.osu.edu/events



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