

# BUCKEYE OPHTHALMOLOGY

VOLUME 14 | FALL 2022

The Ohio State University  
Department of Ophthalmology & Visual Sciences



our  
vision

Data Collaboration - NIH P30 Core Grant  
Education in the Virtual Eye Hospital  
Outpatient Care Dublin Opening

# Message From the Chair

Dear Colleagues and Friends,

In this newsletter, we share stories of growth in research, expansion of clinical programs, accomplishments in development, and graduation events. I am so proud of our students, residents, fellows, staff and faculty, who have stayed overall positive during the past two years as we lived with the COVID-19 pandemic. All of us have been impacted by “the resignation”. **Our stories show the amazing “re-imagination” in the pursuit of excellence by embracing positivity and implementing changes with innovative programs.**

We are so grateful for “The” people who include the clinic staff, technicians, administrative staff, residents, fellows, post-docs, research staff, faculty, and you. Among the Havener family on location, these people work in various teams to provide hope to our patients, to decrease vision impairment and blindness, to advance knowledge for discovering new cures, and to train the next generation. For those of you who are not on site, we thank you for your encouragement and support to make advancements and discoveries. Collectively, we are committed and remain curious to fulfill our mission -- Restore, Preserve, and Enhance Vision to Improve Lives for All.

## **Sayoko Moroi, MD, PhD**

William H. Havener, MD Endowed Professor  
Chair, Department of Ophthalmology & Visual Sciences  
Havener Eye Institute



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614-293-8760

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*For updates, contact [eye@osumc.edu](mailto:eye@osumc.edu)*



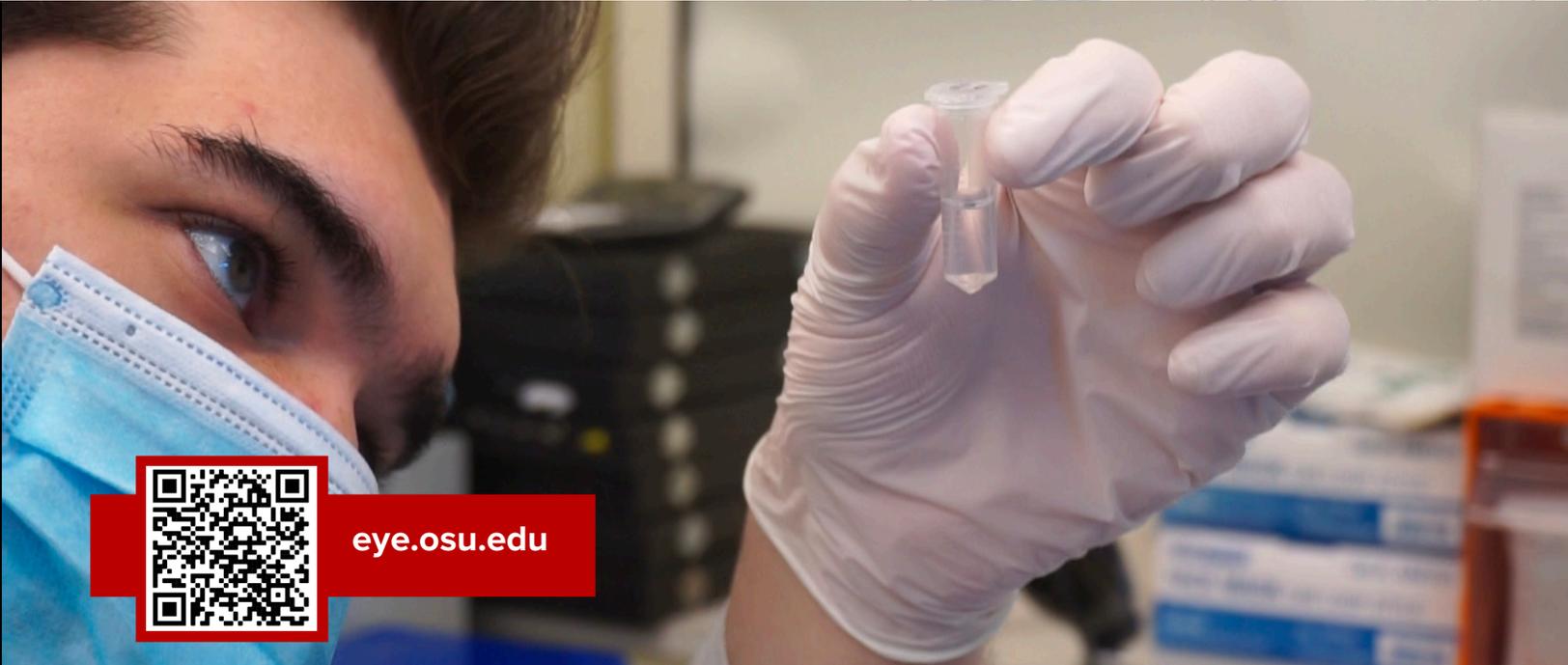
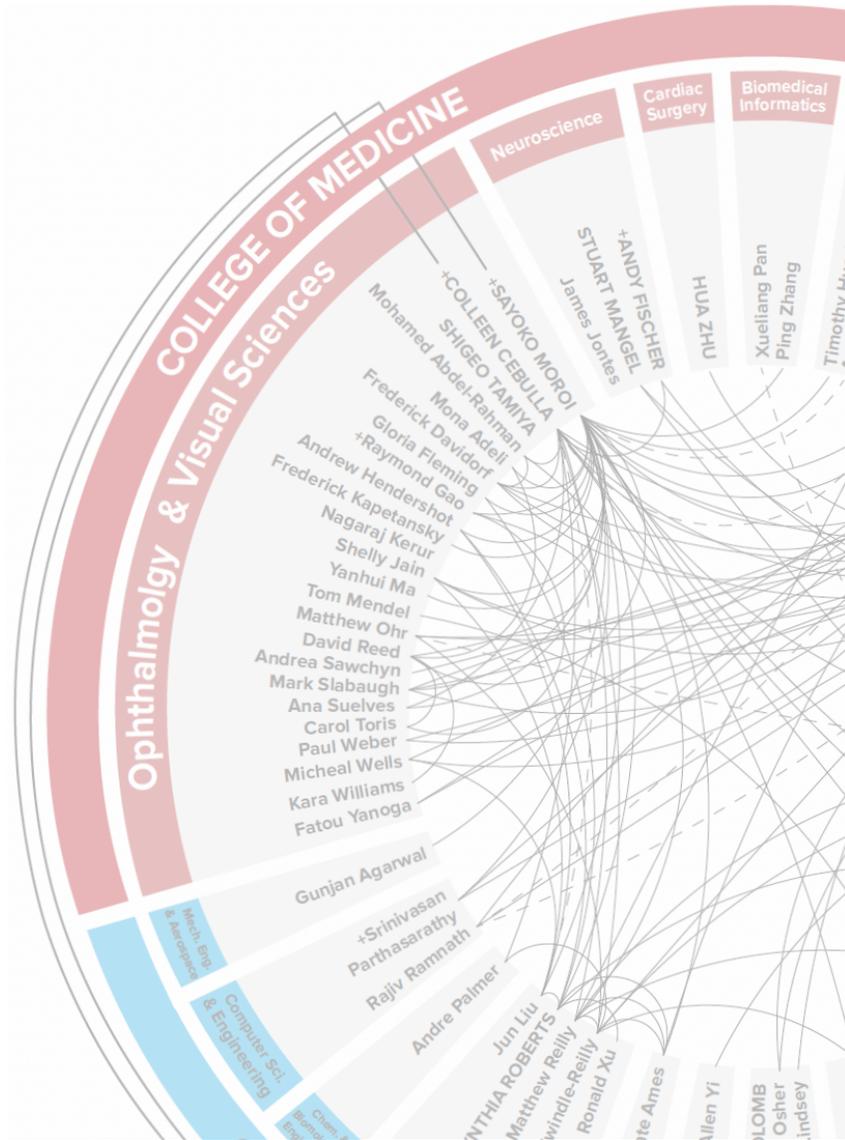
Now Open: Outpatient Care Dublin



# Data Collaboration - NIH P30 Core Grant

We will be awarded our first National Institutes of Health Center P30 Core Grant! This grant is a major accomplishment to help support shared resources and facilities for use by investigators to enhance their research toward multidisciplinary vision research. Our P30 grant is called The Ohio State University Vision Sciences Research Core Program (OSU-VSRCP). We designed our P30 with a multidisciplinary team among the vision research community that spans across the Colleges of Medicine, Optometry, Veterinary Medicine, Engineering, Arts and Sciences and Nationwide Children’s Hospital. These interconnections create opportunities to increase data diversity, include more disciplines, and encourage innovative collaborations.

We defined three Cores: Core A to enhance gathering data at the level of cells to animal models of eye diseases; Core B to analyze large “-omics” data from genomics and future proteomics and lipidomics data and fundamental biostatistics services; and Core C to provide expertise in machine learning and deep learning applied to eye imaging data and electronic health record data.



[eye.osu.edu](http://eye.osu.edu)

# Core A

## Structural & Functional Assessments

Directors: Colleen Cebulla, MD, PhD (DOVS) & Andy Fischer, PhD (Neuroscience)



Core A provides technical expertise and state-of-the-art equipment for structural and physiological data acquisition. Equipment includes: angiography, electroretinography, fundus photography, laser system for photocoagulation to generate choroidal neovascularization, a variety of microscopes (i.e., for wide-field epifluorescence, confocal imaging, dissection microscope, and operating microscope), optical coherence tomography (OCT), and tonometry.

# Core B

## Biostatistics, Bioinformatics & Genetic Analysis

Directors: Raymond Gao, PhD (DOVS) & Lisa Jordan, MS, PhD (College of Optometry)



Core B provides a “one-stop” service for traditional statistics, statistical genetics, and bioinformatics and pathway analysis. Users can obtain consultation and training in research study design and data analysis, and large-scale genomic data mining that requires advanced computational analytics and specialized software for such statistical genetics.

# Core C

## Image Analysis & Data Science

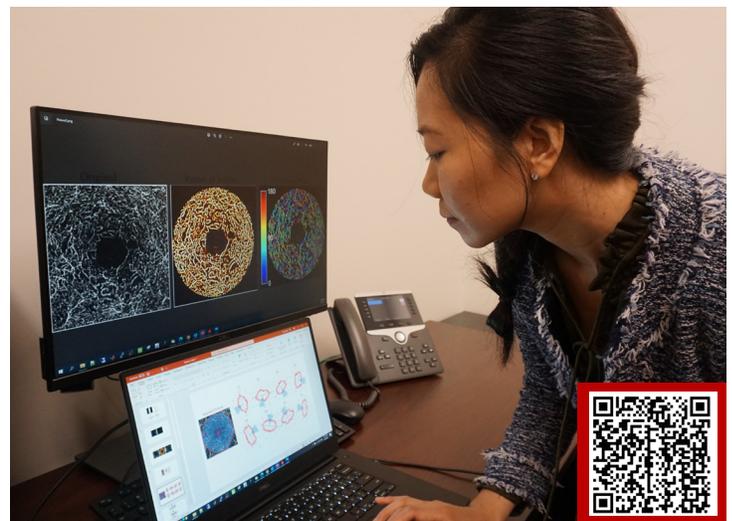
Directors: Nathan Doble, PhD (College of Optometry) & Srinivas Parthasarathy, PhD (College of Engineering, Computer Science)



Core C provides consultation and services for image processing and methods that encompass artificial intelligence/machine learning. We aspire to develop a Data Commons Architecture for the OSU vision community. This core will also leverage access to resources, such as the Translational Data and Analytics Institute and the Center for the Advancement of Team Science, Analytics, and Systems Thinking in Health Services and Implementation Science Research (CATALYST).

## Big Data with AI Learning

**Yanhui Ma, PhD** is building our artificial intelligence (AI) and machine-learning capacity to develop, optimize, and validate new quantitative ophthalmic imaging tools. These tools will facilitate earlier eye diagnoses and provide more sensitive measures of therapeutic outcomes. Dr. Ma has developed a novel approach with advanced imaging techniques to quantify the vascular orientation pattern, and has filed a U.S. provisional patent. Building the AI for retinal imaging analysis will improve understanding of ocular health and disease, and aid in the discovery of biological markers for systemic diseases.



Yanhui Ma, PhD



Thomas Mendel, MD, PhD

# Retinal Gene Therapy

**Thomas Mendel, MD, PhD**, is building his research program to develop and implement gene therapies for patients with inherited retinal eye disease (IRDs). Genetics research is essential for precision-based care to provide earlier diagnosis, improve outcomes, elucidate the genetic causes of disease, and determine the best treatments and their timing for each patient.

Patients who have IRDs experience diminished vision in low light or night blindness, loss of color vision, light sensitivity, and progressive vision loss due to degeneration of specific retinal cells. Dr. Mendel cares for adult and pediatric patients affected by IRDs.

**“We are at the very beginning of an exciting transformation to restore vision by gene therapy. These innovative treatments are possible due to the extensive support and successful research on inherited retinal disease.” says Dr. Mendel**



Analyzing a retina image

## Regenxbio ASCENT AMD Gene Therapy Clinical Trial

**Matthew Ohr, MD** is leading the Ascent Trial to evaluate the efficacy and safety of RGX-314 Gene Therapy in Participants with AMD.

Inclusion Criteria for Participants:

- 50-89 years of age with a clinical diagnosis of CNV secondary to AMD in either eye
- Must have received anti-VEGF therapy before screening visit and demonstrated fluid response
- ETDRS Best Corrected Visual Acuity (BCVA) letter score between 40-78 in study eye
- Must be pseudophakic (at least 12 weeks postcataract surgery) in study eye

Interested patient referrals: **(614) 293-5287** or **research@osumc.edu**



Raymond Gao, PhD touring the new Interdisciplinary Research Facility

## Genetic Data and Glaucoma

**Raymond Gao, PhD**, is focused to apply genetic markers linked to glaucoma to improve outcomes. He uses the UK Biobank dataset that includes genetic sequencing results and medical data. He is working to build a more comprehensive dataset at OSU that includes eye imaging and glaucoma testing data.

Over her 30+ year career, Sayoko Moroi, MD, PhD, has managed adult and pediatric patients with glaucoma and conducted research on glaucoma, genetics, imaging, vision impairment, and women's health. Drs. Gao and Moroi are working together to understand why individual patients respond

differently to treatments. They will approach this question by applying genetic factors of glaucoma and intraocular pressure to the physiology of intraocular pressure known as aqueous humor dynamics. This approach is precision medicine that aims to shift from "trial-and-error" to individualized treatment based on genetic factors coupled with clinical factors to prevent glaucoma-related blindness.



[go.osu.edu/glaucomagenetics](https://go.osu.edu/glaucomagenetics)

## Genetic Testing & Counseling

A genetic counselor is an important new ophthalmology team member, who provides patients with genetic counseling and education on genetic test results on inherited eye diseases and conditions. The genetic counselor works with patients who have inherited retinal dystrophies, glaucoma with a strong family history, and cornea conditions, such as keratoconus and corneal dystrophies.

**"If patients are willing to be tested and to be part of genetic research, then they contribute greatly to increasing genetic discoveries about their condition. The more genetic testing we do, the more we learn about the molecular causes so potential innovative treatments can be developed down the road." says Kara Williams, MS, LGS**

Ophthalmic genetic counseling and testing is available by referral at [go.osu.edu/geneticseye](https://go.osu.edu/geneticseye)



# BAP-1 Genetics Clinic

**Mohamed Abdel-Rahman, MD, PhD** and Ohio State colleagues investigate the genetic causes of uveal (ocular) melanoma with the goal to improve vision outcomes and save lives. Their collaboration led to the discovery of a new syndrome caused by mutation in the *BAP1* gene that predisposes patients and their family members to multiple different cancers. Since their discovery, *BAP1* gene mutations have been reported in more than 300 families, with thousands of affected family members. The *BAP1* gene is now included in genetic testing for cancer predisposition. Dr. Abdel-Rahman and investigators from various departments of the OSU James Comprehensive Cancer Center have established a multi-specialty clinic to diagnose and manage patients with the syndrome.

Discovery of the *BAP1* tumor predisposition syndrome was funded by a generous friend of the department, and recent funding from the National Cancer Institute and Department of Defense. Dr. Abdel-Rahman will expand his research to study other genes that could increase the risk uveal melanoma.



Mohamed Abdel-Rahman, MD, PhD

[go.osu.edu/eyeoncology](https://go.osu.edu/eyeoncology)



# Ocular Biomechanics

**Cynthia Roberts, PhD** and Phillip Yuhas, OD, PhD are investigating the biomechanics of the cornea and eye to understand the role of tissue biomechanics in health and ocular diseases. Differences in corneal and scleral (white portion of the eye) stiffness are studied among those of Sub-Saharan African, European, and mixed-race descent. Collected data includes structural measurements of the cornea, anterior chamber depth, lens thickness, and axial length, and measurement of intraocular pressure (IOP).

revealed a greater scleral response in individuals of Sub-Saharan African descent than European descent. Realizing the potential importance of this finding to the later development of glaucoma, the study has expanded study recruitment to include individuals with newly diagnosed glaucoma.

This study has also led to the initiation of a similar study that will investigate differences in the corneal and scleral biomechanics among individuals of South Asian, East Asian, and Hispanic/LatinX ethnicities. Additionally, a recent grant award will support testing of the study's DNA samples to identify known genetic markers of glaucoma and corneal biomechanics and additional subject enrollment.



The study originally focused on testing individuals with healthy eyes. However, preliminary findings from the first half of the study



Collaboration between Nagaraj Kerur, DVM, PhD & Shigeo Tamiya, PhD

# Immunology

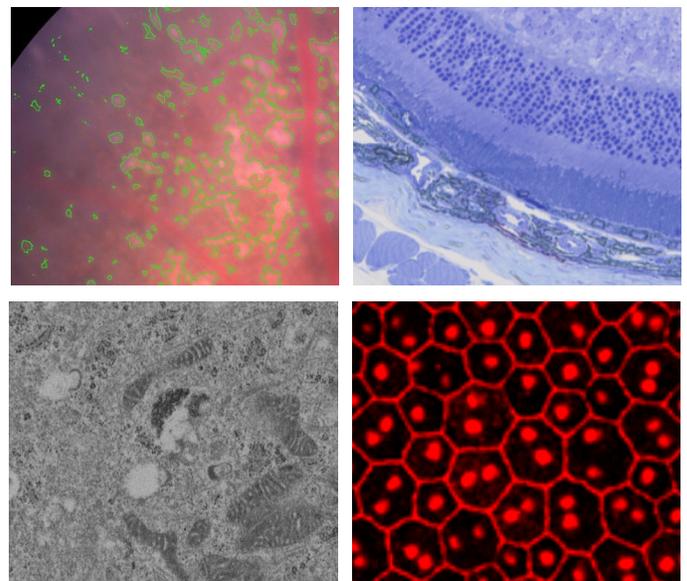
**Nagaraj Kerur, DVM, PhD** studies how the body’s natural defense system can damage cells, leading to degenerative conditions of the eye, such as age-related macular degeneration (AMD), and other chronic neurodegenerative diseases, such as Alzheimer’s disease. Many serious health problems are known to involve chronic, uncontrolled, or inappropriate inflammatory response, and Dr. Kerur believes that a better understanding of the immunological pathways activated during aging-associated inflammation will help us unravel promising therapeutic targets and new treatments for many human diseases.

**“It’s estimated that more than 50% of all deaths are attributable to inflammation-driven diseases, and inflammatory processes are involved in many more human ailments including macular degeneration. We are interested in identifying and testing critical components of the immune system for development of therapeutics for AMD.”**  
says Dr. Kerur

With funding from the National Institutes of Health, Ohio Lions Eye Research Foundation, and Alzheimer’s Association, Dr. Kerur’s team is actively investigating how the body’s own molecules become targets of the body’s immune system, triggering an inflammatory response. His laboratory applies various advanced molecular, biochemical, and imaging approaches to cell culture models with the goal of identifying new therapeutic targets for AMD that target inflammatory mechanisms.



Nagaraj Kerur, DVM, PhD observing sample



AMD pathology



Shigeo Tamiya, PhD observing tissue sample

## Retina Scarring & Wound Healing

**Shigeo Tamiya, PhD** and his team study cellular mechanisms involved in the pathogenesis of proliferative vitreoretinopathy (PVR) after retinal detachment surgery or eye injury. Excessive retinal scarring in patients with PVR can cause retinal folds or detachments that diminish visual acuity and remains a major challenge to vision restoration. The group is examining the phenotypic change of ocular cells into myofibroblasts, a key cell type involved in the development and contraction of scar tissue, and the potential role of the stiffening of connective tissue by scarring in causing this phenotypic change. Their research has identified several

signaling molecules, including channel proteins and intracellular signaling molecules and transcription factors, that play a key role in the process of wound healing.

**“Prevention of PVR is the goal, but even significant delay of early fibrotic changes will allow more treatment options.”**  
says Shigeo Tamiya, PhD

Dr. Tamiya hopes new knowledge gained from his studies funded by the NIH and the Ohio Lions may lead to novel drugs and/or treatment options that could benefit patients with PVR in the future.

## Aqueous Humor Dynamics Clinical Trial



**Sayoko Moroi, MD, PhD** is leading a clinical trial with **Carol Toris, PhD** to study how the fluid in the eye and eye pressure is affected by glaucoma medications.

Inclusion Criteria for Participants:

- At least 30 years of age with glaucoma, or with high eye pressures
- Able to remove contact lenses for all study visits and study meds

Interested patient referrals: **(614) 293-5287** or **research@osumc.edu**

# Remote Eye Pressure Monitoring

**Sayoko Moroi, MD, PhD** and physiologist **Carol Toris, PhD** study the anatomy and physiology of intraocular pressure regulation. Funded by the National Institutes of Health, Dr. Moroi leads three centers to understand why individual patients vary in their intraocular pressure (IOP) response to commonly prescribed glaucoma drugs. The three centers measure aqueous humor dynamics to assess the regulatory mechanisms of IOP.

The team is also collecting real world IOP data with the iCare HOME instrument. After training, individuals can measure their own IOP at any time of the day or night and thereby provide more data beyond IOP measured only during office hours.

By combining the aqueous humor dynamic data and the real world IOP data, Drs. Moroi and Toris expect to understand why some patients are “poor responders” while others are “good responders” to glaucoma medications. Using this approach, we hope to shift glaucoma care from trial-and-error treatment to precision-based approach, which will help toward decreasing glaucoma-related blindness.



Self-Monitoring



Assisted Monitoring

# Retinal Dystrophy Signaling

**Colleen Cebulla, MD, PhD** and colleagues study the signaling pathways involved in the repair and protection of the retina. They focus on the role of macrophage migration inhibitory factor (MIF) in different types of injuries to the retina. They identified that MIF is a potential druggable target and that inhibitors of MIF may be developed as potential treatments for sight-threatening retinal conditions.

With funding from the National Institutes of Health and the Department of Defense, her team is conducting genetic and pharmacologic studies to understand the role MIF in retinal repair and neuronal protection. MIF inhibitors have already been successfully employed in clinical trials to treat diseases such as multiple sclerosis and certain cancers. By dissecting the mechanistic details in specific cells of the retina, she and her team will generate the data to explore the use of the MIF inhibitors in animal models and then translate to human clinical trials for patients with retinal diseases and glaucoma.



# Advanced Specialty Contact Lens Clinic

Optometrists **Chantelle Mundy, OD**, and **Stephanie Pisano, OD**, have developed and lead the Advanced Specialty Contact Lens Clinic. They are committed to help maximize vision and improve quality of life by providing the highest level of treatment and care for patients with diseases of the ocular surface and advanced corneal conditions.

## Scleral Lenses

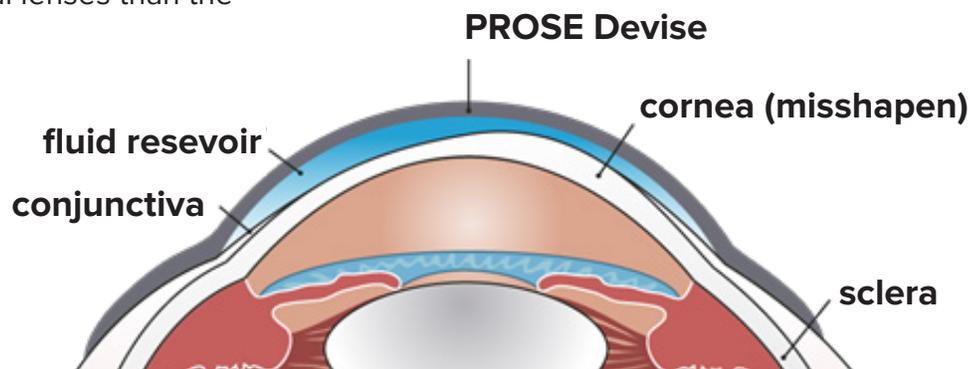
Scleral contact lenses may be an effective and more comfortable alternative to improve vision in patients, who have an irregularly shaped cornea, inflammatory diseases of the ocular surface, or severe dry eye that was not successfully managed with off-the-shelf contact lenses. Scleral lenses are customized to a patient using a gas-permeable plastic material with the outer edge resting on the conjunctiva, or white portion of the eye, instead of the cornea. This design creates a liquid barrier of preservative-free saline and tears between the external environment and the ocular surface, which improves comfort. The Advanced Specialty Contact Lens Clinic offers three scleral lens technologies for evaluation, diagnosis, and fitting – SMap3D Eye Profiling, EyePrint Pro Technology, and PROSE. Having three technologies in one clinic sets OSU apart as these technologies allow us to fit a higher percentage of patients for scleral lenses than the national average.

## PROSE Devices

PROSE is a medical treatment by BostonSight that can restore sight in individuals with diseases of the ocular surface. It is often the only treatment option to restore visual function and end suffering from devastating eye issues resulting from complications of severe dry eye, keratoconus, ocular graft-versus-host disease (GVHD), Sjögren's syndrome, Stevens-Johnson syndrome, corneal damage or injury, and other corneal diseases.

**“This treatment adds to our ability to provide the highest level of treatment and care for our patients with ocular surface disease and advanced corneal conditions,” says Dr. Pisano.**

**“I’m looking forward to offering this customizable device to improve our patients’ vision and quality of life,” says Dr. Mundy.**



### Why choose Ohio State?

- 1 of 85 clinics in the US to offer SMap3D
- 1 of 3 clinics in Ohio to offer EyePrintPRO
- 1 of 15 clinics in the US to offer PROSE

Schedule an Appointment:  
[go.osu.edu/visionhealth](http://go.osu.edu/visionhealth)  
**614-293-8116**

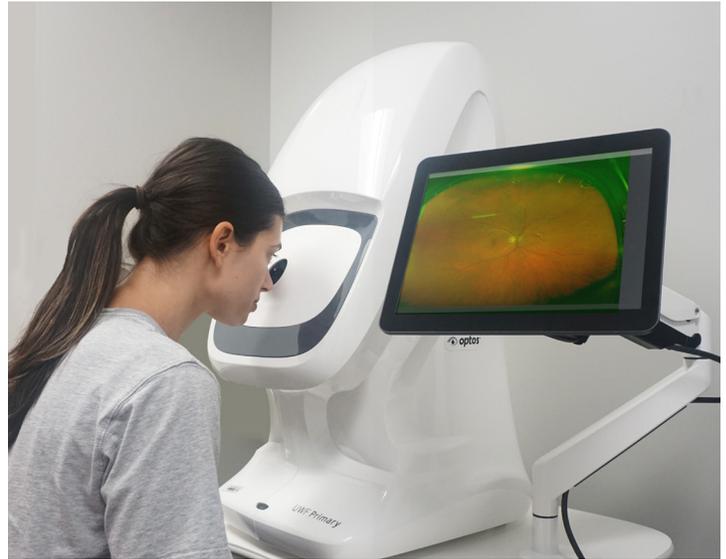


# Teleophthalmology

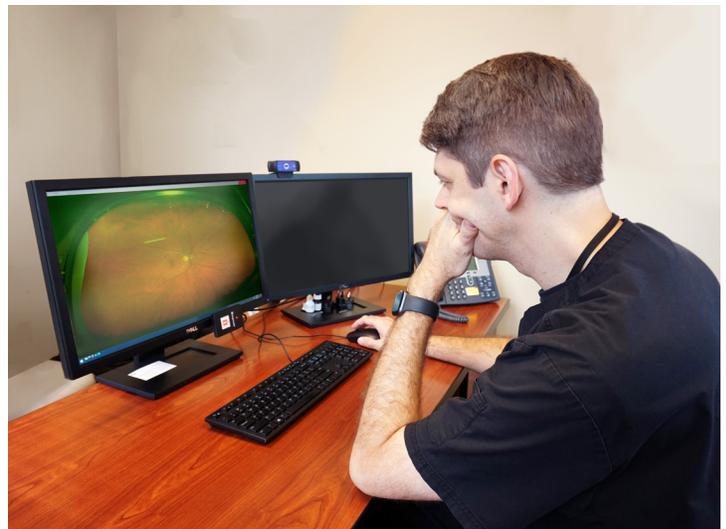
In 2019, the diabetic retinopathy telemedicine program was initiated by **Matthew Ohr, MD** an experienced vitreoretinal specialist, and his team. Teleophthalmology is an important community health outreach that offers convenience to patients with diabetes for diabetic retinopathy screening using a simple camera at their primary care clinicians' office or emergency department.

**“Early identification and intervention of disease has been shown to result in better outcomes. There’s also a cost-saving component. If patients don’t receive treatment early, the amount and cost of treatment is significantly higher later when there has been more progression.”**  
says Dr. Ohr

Teleophthalmology screenings are not intended to replace the in-person visit with the eye doctor. Rather, this program offers convenience for the annual screening for diabetic retinopathy with proper follow-up hand offs to ophthalmology to determine if specialist intervention is indicated. This technology will improve access and the health of our communities, and we are working to expand our reach beyond the greater Columbus area.

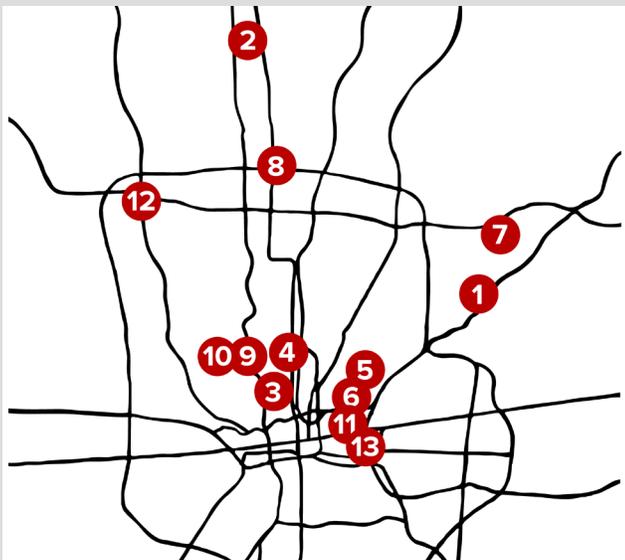


Remote Site Imaging Camera



Dr. Matthew Ohr evaluating images

Teleophthalmology at OSU has grown to 13 primary care sites including 2 emergency department locations, and 1 hematology/oncology clinic.



- |  |  |
|--|--|
| <p><b>1</b> OSU Family Medicine Gahanna<br/>920 N Hamilton Rd, Ste 300<br/>Gahanna, OH 43230</p> <p><b>2</b> OSU Family Practice<br/>6515 Pullman Dr<br/>Lewis Center, OH 43035</p> <p><b>3</b> OSU Wexner Medical Center<br/>Emergency Department<br/>410 W 10th Ave<br/>Columbus, OH 43210</p> <p><b>4</b> Rardin Family Medicine<br/>2231 N High St<br/>Columbus, OH 43201</p> <p><b>5</b> Family Med Care Point East<br/>543 Taylor Ave<br/>Columbus, OH 43203</p> <p><b>6</b> OSU Out Patient Care East<br/>General Internal Medicine<br/>543 Taylor Ave<br/>Columbus, OH 43203</p> | <p><b>7</b> New Albany Primary Care<br/>543 Taylor Ave<br/>Columbus, OH 43203</p> <p><b>8</b> Worthington Family Medicine<br/>160 W Wilson Bridge Rd, Ste 100<br/>Worthington, OH 43085</p> <p><b>9</b> Martha Morehouse General Internal<br/>Medicine<br/>2050 Kenny Rd Pavillion, Ste 2400<br/>Columbus OH, 43221</p> <p><b>10</b> Sickle Cell James Care East<br/>181 Taylor Ave Tower, Floors 13 &amp; 14<br/>Columbus OH, 43203</p> <p><b>11</b> OCD General Internal Medicine &amp;<br/>Endocrinology<br/>6700 University Blvd<br/>Dublin OH, 43203</p> <p><b>12</b> East Emergency Department<br/>181 Taylor Ave<br/>Columbus OH, 43203</p> |
|--|--|



Laretta and Jerry Owens

# Generous Planned Research Gift

**Laretta (Schneider) Owens** was a lifelong resident of Columbus. She taught third grade in Columbus Schools and was married to Jared “Jerry” Owens, a local real estate investor. Laretta was fond of her nephews, Michael Ismon and William (Margaret) Ismon and niece, Trudi Merryman.



Laretta on vacation in Europe

At the age of 91 Laretta moved to Westminster Thurber and met a retired nurse Emily Schornstein. Emily and she quickly became friends and travel companions until she was 100 years old. Laretta received eye care from Ohio State Alumnus, Dr. Jeffrey Oehler at Northwest Eye Surgeons. She passed away in August 2021 at 104. We appreciate her generous gift to support age-related macular degeneration research under the direction of Nagaraj Kerur, DVM, PhD.



Laretta Owens on her 100th Birthday

## Dr. Kerur Receives AMD Research Support

Support from Laretta Owen will be used to increase understanding of inflammation pathways of macular degeneration that can be targeted to develop new treatments. This award provides key seed funding to generate preliminary data that begin to answer innovative questions. This data is critical for federal grants which will be critical to develop potential new druggable targets to improve outcomes for patients with macular degeneration.

Dr. Kerur and ophthalmologist Dr. Irina Livshitz met with Laretta Owen’s niece Trudi on August 23rd. Trudi remembers Laretta as “...**kind, fiercely independent and extraordinarily generous.**”



Laretta’s niece Trudi, Dr. Livshitz, and Dr. Kerur

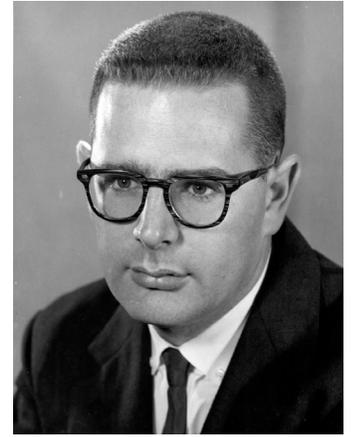
# Kapetansky Early Career Professorship

In 1961, Senior Resident Kapetansky graduated from the residency program and commenced to build a remarkable career in Columbus, Ohio. With the support of his wife, Audrey, he dedicated his professional life to the care of patients with glaucoma, a chronic eye disease that can lead to blindness. Dr. Kapetansky represents best in class for compassionate care and commitment to preventing glaucoma-related blindness. He built lasting relationships with patients with glaucoma. He received the American Academy of Ophthalmology Senior Achievement Award, and was a founder of the Midwest Glaucoma Symposium, and charter member of the American Glaucoma Society. As a teacher, the OSU ophthalmology residents honored him with the resident teaching award.

Dr. Kapetansky is known as an “innovator” and “early adopter” of ocular surgeries, imaging, and therapeutics. As part of his legacy for future clinician scientists or vision scientists, he created the Frederick M. Kapetansky, MD Career Development Professorship Fund to support innovative eye research for individuals beginning their careers. Contributions to the fund will support a young scientist with extraordinary potential to create a legacy for future generations of scientists.



Dr. Kapetansky



Residency in 1961



Audrey and Fred Kapetansky

## Career Celebration

Over 125 patients, faculty, staff, and family joined to celebrate his more than 60 year career of excellence. They gathered August 11th, 2022 to honor his patient care, teaching and research legacy with an afternoon reception at the Eye and Ear Institute located on Olentangy River Road.

[go.osu.edu/drkfund](https://go.osu.edu/drkfund)  
(614-561-4703)  
Fund Number: 483860



Dr. Kapetansky with Dr. Jain



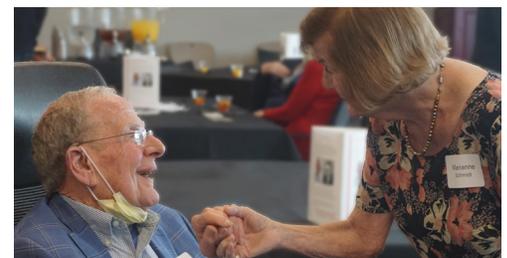
Grateful Patient Carl Eriksson's wife Linda



Presentation by Dr. Moroi



Grateful Patient Louise Warner with Dr. Moroi



Grateful Patient Marianne Schmidt

# Paul A. Weber, MD Celebration

On April 7th, 2022, Dr. Paul A. Weber, family, friends, grateful patients and colleagues gathered to celebrate the establishment of the \$2 million Dr. Paul A. Weber Endowed Chair. This endowed chair supports a physician faculty for research in the department. In addition during this celebration, Dr. Weber was announced as a new member in the Mazzaferri-Ellison Society of Master Clinicians, an award recognizing his excellence in clinical practice, teaching, mentoring, professionalism, leadership and service.

Known for his sunny disposition as well as his legacy in ophthalmology, Dr. Weber has served The Ohio State University Wexner Medical Center in many leadership roles and has contributed extensively to the education of residents, medical students, and practicing physicians while providing excellent care to his patients.



Dr. Paul A. Weber



Dr. Ohr, Moroi (current chair), Weber, and Mauger.

Support the Paul A. Weber Innovation and Research Fund | Number: 317479 [eye.osu.edu/give](https://eye.osu.edu/give)

## Thank You 2021 Donors

### \$150,000 and Above

Warner Blow  
Graham Rogers

### \$20,000 - \$149,999

Martin and Diane Lubow\*

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Michelle Fulks  
Karen Levin  
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Stephen & Ami Orr  
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Elena Geraymovych  
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Denny & Suzanne Mardas  
Karl Pappa  
Mike & Stephanie Pisano  
Kurt & Marni Yerak

### \$1,000 - \$2,499

Pamela Bertram  
Richie & Leslie Cohen-Smith  
Mark & Alma Drabkl  
James Garland & Carol Andreae  
Carolyn Greshemer  
Michal & Joyce Hallet



### \$1,000 - \$2,499

Thomas & Lee Ann Igoe  
George Jones  
Charles & Ellen Leone  
Elliott Luckoff  
Robert Lytle  
James Magnuson  
James McHale  
Sayoko Moroi-Fetters  
Chantelle Mundy  
Robert & Pamela Newcomb  
Matthew & Jennifer Ohr  
Julie Palomaki  
Randall & Nancy Pemberton  
Robert Small & Cynthia Roberts  
William & Joyce Roberts

### \$500 - \$999

William Banks  
Margaret Bellows  
Ross & Susan Bloomberg  
Virginia Hess  
Phillip & Anupama Horne  
Paul Ponomarev  
Lawrence & Jacki Ronning  
Ed Schechter  
Donald Schriver

# Global Outreach

## Dominican Republic

Holding two large duffel bags full of surgical supplies, **Christine Martinez, MD** stepped onto a plane headed to the Dominican Republic. She was met by Dr. Carlos Gomez, a physician with more than 30 years' experience, who leads Cataract and Anterior Segment Surgery at Elías Santana Hospital in Santo Domingo.

Supplies were donated by Surgical Eye Expeditions (SEE) International and Alcon. Surgery was performed using a technique called manual small-incision cataract surgery (MSICS), commonly employed in resource-limited settings because it does not require the expensive machine normally used in cataract surgery to emulsify the eye's internal lens using an ultrasonic probe and aspiration. Dr. Martinez observed Dr. Gomez perform several procedures, gradually began to participate and master the scleral tunnel incision, and then, by the end of the second surgery, was able to perform ten MSICS surgeries independently.

**“We traveled two hours from the capital to a small mountain town called Cotui and performed 32 cataract surgeries in two days.” said Dr. Martinez**

Dr. Martinez described this trip as an incredible training experience with direct benefits for patients in Cotui. She looks forward to use her new MSICS skills and experience to help restore vision loss from cataract and educate local providers in global communities in the future.



Drs. Martinez (center) & Gomez (2nd from left) with team



Dr.s Martinez holding the Lions club banner with Dr. Gomez



Clinic with post-surgery patients



Linda Pajka, BSN preparing a surgery patient

## Jamaica

**John Pajka, MD**, OSU alumnus and wife Linda Pajka, BSN traveled to Montego Bay, Jamaica to perform cataract surgery for local residents. The trip was through the non-profit organization Mission of Sight located in Marion Ohio. Dr. Pajka performed multiple MSICS. The city is going through a large period of modernization. Several phases to build infrastructure have been initiated which will hopefully help give access to those in need of ophthalmology services.

## Bolivia

**John Pajka, MD** will be traveling to Tarija, Bolivia in late October 2022. The trip will be funded through FUNDESSOL (Fundación Desarrollo y Salud Solidaria or the Solidary Health and Development Foundation).

**SUPPORT GLOBAL OUTREACH**



# Make the Virtual Eye Hospital a Reality

## Educate Future Generations

Construction of the Education Center will create state-of-the-art immersive training for residents, fellows, and community learners. Ophthalmology learners will benefit immensely from equipment in four education modules. Module 1 is an updated 3-D virtual reality surgery simulator, which helps teach the fundamental principles of eye surgery. Module 2 includes three Haag-Streit surgery wet lab stations, which provide a risk-free environment to practice surgery. Module 3 includes a slit lamp simulator, which allows learning to use this essential equipment to examine the eye. Module 4 includes an indirect ophthalmoscope simulator, which allows learning to use this instrument to examine the retina. Having all four modules in an education center will make OSU a leader and exemplar in resident medical education.

### Current Equipment



### Proposed Expansion

We are limited to a single surgical simulator. This outdated device has reached its limit on available curriculum modules and software upgrades.

Module 1: Updated surgical simulator  
Module 2: 3 Haag-Streit wet lab stations  
Module 3: Slit lamp simulator  
Module 4: Indirect ophthalmoscope simulator

## Module 1: Updated Surgical Simulator

Offers immersive simulation training of surgical steps for either cataract or posterior segment surgery. This includes life-like instruments and realistic simulation of intraocular structures and the behavior of tissue in real-time.

## Module 2: 3 Haag-Streit Wet Lab Stations

Realistic surgical training with the ability to record the virtual procedures via a high-resolution microscope at each station. Video feed can be simultaneously displayed on the LED monitor at the front of the room or recorded to view at a later time.



## Thank You to our Initial Donors

We are grateful for the generous gifts of our initial donors to support this very important aspect of our educational program, which will have enduring impact on our future learners and leaders. We invite you to join them, **Jared Nodelman**, a grateful patient of Dr. Hendershot, and alumni **Dr. Jack Dingle**, representing the Brown Lectureship, alumni **Dr. Steve Orr**, and **Dr. Mitch Opremack**, in supporting the construction of our virtual eye hospital and the education of all those who will benefit from this extraordinary facility.

## Donate to the Virtual Eye Hospital

[eye.osu.edu/VirtualEyeHospital](http://eye.osu.edu/VirtualEyeHospital)  
Fund Number: 308826  
614 293-5287



**“The virtual eye hospital is a crucial piece of our recruitment efforts to attract the best and brightest trainees, fellows, and faculty from across the country. It will also allow all of our providers to remain on the cutting edge of new surgical and diagnostic technologies and better adapt to new techniques. Finally it will allow us to spread our educational mission to medical students and providers in other fields who need to examine the eyes and visual system of their patients.”**

**- Dr. Hendershot, Director of Residency Program**

### Module 3: Slit Lamp Simulator

Has all functions of a real slit lamp examination. The highly realistic simulation of intraocular structures in real-time allows learners to practice both the complex handling of the slit lamp and recognition of relevant clinical conditions and diseases.



### Module 4: Indirect Ophthalmoscope Simulator

Indirect ophthalmoscopy requires fine motor skills and the ability to interpret an inverted retina image. With a patient model head, two lenses, and a head-mounted display, the simulator mimics all features and challenges of diagnosing with a real indirect ophthalmoscope.



# Eye Technician Training Program

In 2021, the Department of Ophthalmology and Visual Sciences established a 12-week ophthalmic personnel training program. The goal was to create new opportunities in healthcare for high school graduates and others looking for a career change. The program teaches trainees all the necessary skills to work in an ophthalmology clinic while preparing them for certification through the Joint Commission on Allied Health Personnel in Ophthalmology. The program includes classroom learning, skills labs, anatomy dissection, and apprentice-based clinic rotations for hands-on work with patients. Part of the training also includes job placement of the recent technician graduates into permanent full-time employment.

**“I enjoyed how we learned so much during the training program, ... especially the hands-on portion. We learned how to take a history, refract, check IOP, and use a slit lamp and even went as far as learning eye anatomy by dissecting a cow’s eye!” – Kelsey Kayser, Technician**

Kudos to our first 2021 graduates! We are grateful to the staff, technicians, optometrists, and ophthalmologists who made the first year of this program a success. We look forward to grow this important educational program to train the next generation of ophthalmic technicians.



Dr. Shelly Jain with trainee



Eye anatomy course with Dr. Ana Suelves

## Join Our Team, Help Save Vision

### Requirements

1. High school graduate
2. Short (500 words or less) essay
3. Background checks and drug testing
4. Typing test
5. Interviews
6. Professional references - If you have no formal job references we accept references from a teacher or professor

**APPLY:** [go.osu.edu/personneltraining](https://go.osu.edu/personneltraining)

Next training session begins January 23, 2023  
Application deadline is January 1, 2023

Questions:  
[Amanda.simmons@osumc.edu](mailto:Amanda.simmons@osumc.edu)



# BUCKEYES at NATIONAL MEETINGS

## ARVO

Association for Research in Vision & Ophthalmology - Denver 2022



Cynthia Roberts, PhD - Matthew Ohr, MD - Mohamed Abdel-Rahman, MD, PhD - Kyle Cotten, MD - Kayla Knoll, MS - Nagaraj Kerur, PhD - Yanhui Ma, PhD - Shigeyo Tamiya, PhD - Tyler Heisler Taylor, PhD - Raymond Gao, PhD - Jun Liu, PhD

## AGRCS

Advances in Glaucoma Research & Clinical Science Meeting - Amsterdam 2021



Carol Toris, PhD

## NAEVR

National Alliance for Eye & Vision Research Day on Capitol Hill - Wash DC 2021



Katelyn Swindle-Reilly, PhD

## RS2021

54th Annual Retina Society Meeting - Chicago 2021



Colleen Cebulla, MD, PhD

## ISOO

International Society of Ocular Oncology Congress - Leiden 2022



Colleen Cebulla, MD, PhD  
Mohamed Abdel-Rahman, MD, PhD

### Your Vote Matters

<https://www.doximity.com/>

If you have a Doximity profile, then you will receive an email survey link in Spring to nominate U.S. News "Best Hospitals" in your specialty. Please consider selecting The Ohio State University Wexner Medical Center Department of Ophthalmology and Visual Sciences as one of your choices.



## 2022 Resident Graduates



(From left to right)

- Maggie Casey, MD** UCLA Neurophthalmology Fellow
- Jessica Crawford, MD** UCLA Oculoplastics Fellow
- Mitchell Romito, MD** Pajka Eye Center Lima, OH
- Imran Khatri, MD** Ohio State University Surgical Retina Fellow
- Tiffany Huang, MD** UCLA Pediatric Ophthalmology Fellow
- Alyssa Darrah, MD** Fairview Eye Center Cleveland, OH

## 2021 Resident Graduates



(From left to right)

- Lisa Chung, MD** Ohio Eye Associates Mansfield, OH
- Greg Sovinski, MD** St. Mary's Hospital Madison, WI
- Julianne Matthews, MD, MPH** Washington Univ. Cornea Fellow
- Shane Seipel, MD** Fairview Eye Center Cleveland, OH
- Mercy Kibe, MD** Yale School of Medicine Retina Fellow
- Jack Li, MD** University of Utah Glaucoma Fellow

Interested in residency? View video testimony from Lisa Chung, MD →



## 2022 Fellow Graduates



**Rishi Singhal, MD**  
Carolina Centers  
for Sight  
Duluth, GA



**Reza Alizadeh, MD**  
Central Valley Eye  
Medical Group  
Stockton, CA



**John Kroger, MD**  
Marion Eye Center  
Marion, OH

## 2021 Fellow Graduates



**Jennifer Hartel, MD**  
Prisma Health  
Columbia, SC



**Matt Karl, MD**  
Retina Consultants  
of Nashville  
Nashville, TN



**Jorge Jimenez, MD**  
Retina and Vitreous  
of Louisiana  
Baton Rouge, LA



**Frini Makadia, MD**  
Wheaton Eye Clinic  
Wheaton, IL



**Sarah Smith, MD**  
Eye Care  
Associates Inc  
Boardman, OH

## Optometry Resident Graduates



2022  
**Conner Haugen, OD**  
Wolfe Eye Clinic  
Ames, IA



2021  
**Stephanie Tran,  
MS, OD**  
Coastal Vision  
Orange, CA

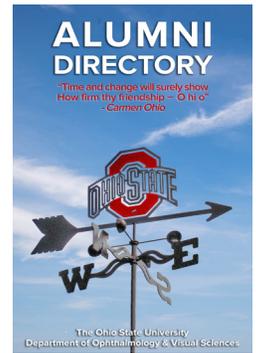
### Underrepresented in Medicine (URIM) Visiting Student Program

Participate in a one-month rotation and a diversity scholarship. Career development and mentoring provided. Apply:  
[go.osu.edu/eyemedstudents](http://go.osu.edu/eyemedstudents)

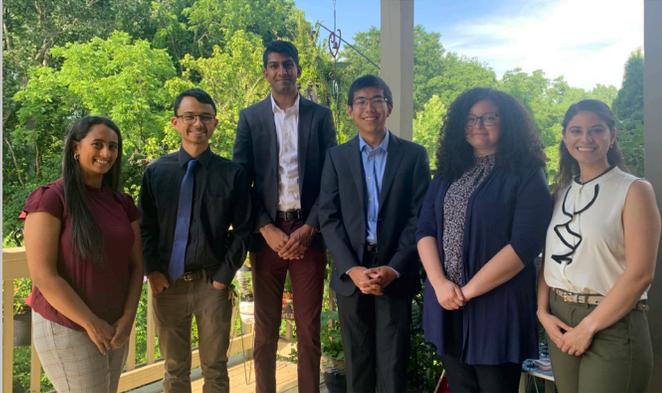
# Alumni Directory Update

Our new alumni directory has been updated as of Fall 2022. It displays **359** residents, **103** fellows, and **259** College of Medicine alumni.

View the online digital PDF at [eye.osu.edu](http://eye.osu.edu) under the alumni tab. If you have any updates or would like a physical copy please email us at [eye@osumc.edu](mailto:eye@osumc.edu).



## Medical Student Summer Research



(Left to Right) Neha Vazzalwar, Christian Wong, Vamsee Vemulapalli, Max Liu, Jasmine McMillan, & Jessica Ghobrial. (Not Pictured: Amanda Martinez, Paige Santee, & Ronald Thompson)

Over the summer, medical students connected with scientists and clinicians to collaborate and learn about research, writing manuscripts, reviewing articles and discussing ethics.

Collaborations: Jessica Ghobrial and Amanda Martinez with Sayoko Moroi, MD, PhD; Max Liu with Carol Toris, PhD; Jasmine McMillan with Shigeo Tamiya, PhD; Paige Santee and Morgan Perryman with Maged Constantine, MD, Neha Vazzalwar with Jun Liu, PhD; Vamsee Vemulapalli with Fatoumata Yanoga, MD; Christian Wong and Ronald Townsend with Colleen Cebulla, MD, PhD

## Our Patient Care Locations



### Schedule An Appointment:

[go.osu.edu/visionhealth](http://go.osu.edu/visionhealth)  
(614) 293-8116

### Refer a Patient

Download our patient referral form at [eye.osu.edu](http://eye.osu.edu) or  
(614) 293-8116 Option 1



## Our Faculty provide excellent eye care in Columbus & beyond central Ohio.

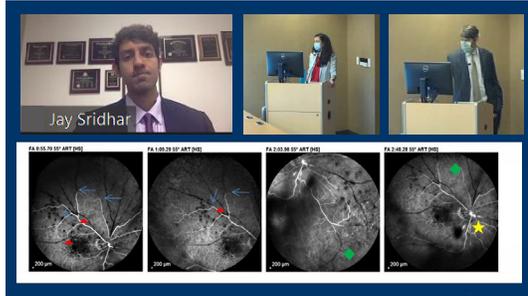
- 36 Clinicians
- 10 Clinician & Research Scientists
- 11 Pediatric Clinicians



# BuckEYE Events & Presentations

## RETINA CASE FORUM

Jayanth Sridhar, MD  
Bascom Palmer Eye Institute



## OCULAR ONCOLOGY SYMPOSIUM

Arun Singh, MD Cleveland Clinic  
Basil K, Williams, Jr, MD Cincinnati Eye



2020

21st

12th

JULY

AUG

SEPT

OCT

NOV

DEC



## GUEST LECTURE

George Bartley, MD  
Mayo Clinic

## RETINA CASE FORUM

Christina Weng, MD, MBA  
Baylor College of Medicine



## GRAND ROUNDS

Michael F. Chiang, MD  
Director of the National Eye Institute



**ViSOR**  
Amany Mohamed Tawfik, MD  
Augusta University



**ViSOR**  
Ayellet Segre, PhD  
Massachusetts Eye & Ear



**ViSOR**  
Mary Hoffman Pancake, MS, PMP  
Ohio State University Engineering

2021

13th

3rd

20th

14th

28th

9th

JULY

AUG

SEPT

OCT

NOV

DEC

For more information on speakers & events: [eye.osu.edu/education](http://eye.osu.edu/education)

**ViSOR**

David Antonetti, PhD  
University of Michigan



**MOSES LECTURESHIP**

Paula Anne Newman-Casey, MD, MS  
University of Michigan



**VIRTUAL ARVO 2021**

Sayoko Moroi, MD, PhD; Mohamed Abdel-Rahman, MD, PhD; J Massengill; Colleen Cebulla, MD, PhD; Frederick Davidorf, MD; Gloria Fleming, MD; Raymond Gao, PhD; Marion Chiariglione, MS; Andrew Hendershot, MD; Rebecca Kuennen, MD; Jun Liu, PhD; Thomas Mauger, MD; Tyler Oostra, MD; Matthew Ohr, MD; Tiffany Huang, MD; Cynthia Roberts, PhD, David Reed, Yanhui Ma, PhD; Katelyn Swindle Reilly, PhD; Carol Toris, PhD; Kara Williams, MS, LGC



**ViSOR**  
Post Doc  
Presentations



**ViSOR**

Barbel Rohrer, PhD  
Medical University of South Carolina

**2021**

9th

8th

22nd

1st-7th

11th

**JAN**

**FEB**

**MAR**

**APR**

**MAY**

**JUN**

**POST GRADUATE SYMPOSIUM**

Speakers: Kendall Donaldson, MD, MS Bascom Palmer Eye Institute, Debra Goldstein, MD Feinberg School of Medicine, Laura Green, MD Krieger Eye Institute, Stephen Odaibo, MD, MS, University of Houston, Elliot Sohn, MD, FSARS, University of Iowa Health, Robin Vann, MD Duke Health



**ARVO 2022**

Sayoko Moroi, MD, PhD; Mohamed Abdel-Rahman, MD, PhD; Colleen Cebulla, MD, PhD; Frederick Davidorf, MD; Gloria Fleming, MD; Raymond Gao, PhD; Andrew Hendershot, MD; Nagaraj Kerur, PhD; Alan Letson, MD; Jun Lui, PhD; Yanhui Ma, PhD; Matthew Ohr, MD; Cynthia Roberts, PhD; Mark Slabaugh, MD; Shigeo Tamiya, PhD; Carol Toris, PhD



**MOSES LECTURESHIP**

Elizabeth A. Martin, MD  
Indiana University

**ViSOR**

Christine Curcio, PhD  
University of Alabama



**2022**

11th

7th

14th

1st-7th

**JAN**

**FEB**

**MAR**

**APR**

**MAY**

**JUN**



# PLANT THE SEEDS OF SUCCESS



**RESIDENTS:** 18 Ophthalmology, 1 Optometry  
**FELLOWS:** 1 Cornea, 1 Glaucoma  
1 Neuro, 4 Surgical Retina

## Education

Our learners are the healthcare leaders and providers of tomorrow. We pride ourselves in having state-of-the-art research and education facilities, exceptional clinical education, cutting-edge equipment including surgical simulators. Unite with us to ensure tomorrow's healthcare heroes are equipped with top-tier education.

[go.osu.edu/supporteducation](http://go.osu.edu/supporteducation)



10 Federal Grants, 10 Research Scientists  
68 Research Studies, 15 Clinical Trials  
37 Active Research Collaborations

## Research

Innovative research allows us to discover new treatments and improved imaging equipment helps us identify eye diseases earlier and develop new treatments faster. Unite with us in our mission to continuously improve the way we provide eye care and dedicate our work to saving vision for our Buckeye family.

[go.osu.edu/supportresearch](http://go.osu.edu/supportresearch)



104,476 Patient Encounters  
19,773 Surgical Procedures

## Patient Care

Your contributions can change lives by supporting care to save vision everyday. Our donors – alumni, grateful patients, friends, and family – have made an impact with generous donations. Give the gift of sight and unite with our Buckeye family to save vision.

[go.osu.edu/supportcare](http://go.osu.edu/supportcare)

[go.osu.edu/ophthalmologygiving](http://go.osu.edu/ophthalmologygiving)  
614 293-5287



# OUR BUCKEYE TREE IS **GROWING**



Maxwell Scoville, MD  
Comprehensive



Zachary Mikolaj, MD  
Glaucoma



Sruti Akella, MD  
Oculoplastics



Xiaojun Zhang, MD  
Neuro-ophthalmology



Nagaraj Kerur, DVM, PhD  
Scientist



Thomas Mendel, MD, PhD  
Retina



Hersh Varma, MD  
Neurophthalmology



Shigeo Tamiya, PhD  
Scientist



Yanhui Ma, PhD  
Scientist



Interdisciplinary Research Facility



New Outpatient Care Dublin  
6700 University Blvd Dublin, OH



New Albany  
6100 N. Hamilton Rd Westerville, OH

As Buckeyes, we are bold thinkers, creative problem solvers, and innovative dreamers. The journey toward new discoveries takes investments from federal agencies, private foundations, and philanthropic gifts. We welcome your partnership to fulfill our mission:

**“Restore, Preserve and Enhance Vision to Improve Lives for ALL”**



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WEXNER MEDICAL CENTER

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## Upcoming Events

For event info and registration contact [eye@osumc.edu](mailto:eye@osumc.edu)



### AAO

Chicago Reception  
Saturday Oct 1, 2022

### ARVO

New Orleans Reception  
Sunday April 23, 2023

## Doximity VOTE

Register at [www.doximity.com](http://www.doximity.com)

National reputation ranking for ophthalmology is determined by peer voting. Please vote for:

The Ohio State University Wexner Medical Center

For questions: [eye@osumc.edu](mailto:eye@osumc.edu)

 doximity

