

Department of Ophthalmology and Visual Sciences

UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



ANNUAL REPORT 2024

MISSION

Global leadership in saving sight.

VISION

To improve vision-related quality of life by collaboratively creating, integrating, transmitting, and applying knowledge in ophthalmology and visual sciences.

WELCOME FROM THE CHAIR BY THE NUMBERS THE YEAR IN PHOTOS

COMPASSIONATE CARE

FORMER OPHTHALMOLOGY PATIENT WORKS VISION REHABILITATION SERVICES UPDATE ... NEW OPHTHALMOLOGY ASSISTANT APPRENT INCREASED ACCESS TO CRUCIAL VISION TEST

GROUND BREAKING RESEARCH

ADAPTIVE OPTICS TECHNOLOGY MAY REVOLU CLINICAL EYE RESEARCH UNIT UPDATE "CELL" SEQUENCING SHEDS LIGHT ON CHILDI 4-YEAR-OLD ENTLEBUCHER LOST BOTH EYES NOVEL RESEARCH OFFERS HOPE FOR EARLY

WORLD CLASS EDUCATION ...

NEW HYBRID FELLOWSHIP PROGRAM OPHTHALMOLOGY RESIDENCY PROGRAM UP INDIA RESIDENT DISCOVERS A HOME-AWAY-F NEW OPHTHALMOLOGY PROFESSORSHIP AW PEOPLE FIRST CULTURE AMY WALKER NAMED 2024 DISTINGUISHED CC

COMMITMENT TO EXCELLENCE

HONORS WORKING TOGETHER IN SUPPORT OF OUR MIS DONOR HONOR ROLL

WHO'S WHO

WE ARE PLEASED TO WELCOME NEW FACULTY VISITING PROFESSORS CLINICAL AND RESEARCH FACULTY CLINICAL ADJUNCT FACULTY AFFILIATE FACULTY RESIDENTS, FELLOWS, POSTDOCTORAL AND RESIDENTS CLINICAL FELLOWS PRE-RESIDENCY FELLOWSHIP PROGRAM POSTDOCTORAL STUDENTS GRADUATE STUDENTS DEPARTMENT LEADERSHIP DEPARTMENT CHAIR AND VICE CHAIRS ... DEPARTMENT SERVICE CHIEFS DIRECTORSHIPS DEPARTMENT ADMINISTRATION ALUMNI ASSOCIATION BOARD EMERITIS FACULTY PUBLICATIONS

TABLE OF CONTENTS

	01
	03
	05
	07
ALONGSIDE THE DOCTOR WHO TREATED HER	
	11
ICESHIP PROGRAM	12
ING FOR PREMATURE INFANTS	13
	15
JTIONIZE EYE CARE	17
	19
HOOD GLAUCOMA	20
STO GLAUCOMA BUT FINN STILL LOVES TO FETCH	21
DETECTION OF ALZHEIMER'S DISEASE	
	25
	27
DATE	28
	20
ARDED TO SUPPORT VETERANS	اك
	32
OMMUNITY EDUCATOR	33
	35
~~~~	
SSION	
	41
	43
Υ ΤΟ ΟΙ ΙΡ ΤΕΛΜ	
	4/
	48
	48
GRADUATE STUDENTS	49
	49
Λ	50
	51
	Ji
	53
	53
	53
	53
	54
	5/

#### A NOTE FROM THE CHAIR

#### Dear Friends.

I am excited to share with you our 2024 annual report, entitled *Focus on the Future*. True to its name, this report provides an inspiring portal of how the University of Wisconsin Department of Ophthalmology and Visual Sciences has steadfastly pursued its mission of saving sight and providing hope. It's a detailed story of all we've achieved today, to build a brighter, more hopeful tomorrow.

In the past year, we dedicated intentional time and efforts to advancing the future of vision care. We pushed the boundaries of discovery by finding new treatments and mechanisms for a variety of eye diseases, educating the next generation of vision care and science leaders, and advocating for and using the newest technologies and techniques to care for our patients with compassion and humility.

I invite you to join me in celebrating the incredible achievements of our clinical and research ophthalmologists and optometrists, clinical and administrative staff, scientists, educators, learners, and community partners. Together, we've shaped a future brimming with possibility and promise.

In our 2024 annual report, you'll read about:

- Novel research that utilizes "cell" sequencing to shed light on childhood glaucoma.
- A revolutionary new approach that increases access to vital screening for Retinopathy of Prematurity, a disease that can negatively impact premature and low birth weight babies.
- An innovative new Ophthalmology Assistant Apprenticeship program that is addressing a critical staffing shortage by recruiting, training, and growing its own.
- Exciting enhancements to our ophthalmology training residency and pediatrics fellowship programs that offer new learning opportunities to a new generation of doctors.
- A new professorship aimed at maintaining the highest level of care for our veterans.
- The inspiring journey of a former ophthalmology patient who now works in the operating room alongside the doctor who changed her life.
- And that is just the beginning!

Of course, we could not do any of this forward-looking work without your ongoing support. As a valued friend of the department, I extend my heartfelt thanks for your partnership. I also encourage you to become part of our collective future by making a charitable donation to a departmental endeavor that speaks to your heart. Together, we're not just focusing on what is ahead-we're shaping it!

Thank you, and On, Wisconsin!

Smit. gy MD

TERRI YOUNG, MD, MBA

Department Chair Peter A. Duehr Professor of Ophthalmology, Pediatrics and Medical Genetics President-Elect, The Association of University Professors of Ophthalmology



~ Terri Young, MD, MBA

# focusing on what is ahead –





CO

# **OUR IMPACT**



Best hospital in Wisconsin

\$11.6 MILLION

Total money in grants awarded in 2023

# 134,424

Total patient visits at all clinic sites (*between July 2023 and June 2024)

#6

In **NIH** funding in the U.S.



Surgeries performed (*between July 2023 and June 2024)

#### Department of Ophthalmology and Visual Sciences

*Our ophthalmology residents come from top medical schools across the country.* 



#### 2023 SEPTEMBER

Department faculty, learners, staff, family, and friends gathered at Schuster's Farm in Deerfield for "Fall on the Farm," an afternoon of fun with a corn maze, wagon rides, farm animals, food, and more.

#### 2023 **OCTOBER**

Faculty and staff participate in the annual Right to Sight Free Eye Clinic at the University Station Clinic in Madison, Wis.

#### 2023 NOVEMBER

Medical students learn how to do an eye exam as part of the "Mind and Motion" course.



#### 2024 **JANUARY**

Ophthalmology residents and fellows further their learning in the hands-on Global Simulation Wet Lab.

#### 2024 FEBRUARY

Ophthalmology residents and fellows are honored for their dedication and hard work during "Thank a Resident & Fellow Day."

#### 2024 MARCH

The Greater Dane County Low Vision Stakeholder Summit<br/>brought low vision rehabilitation providers to Madison, Wis. to<br/>discuss ways to assist patients with all aspects of their care.More than 100 vision science researchers attended the<br/>George Kambara, MD Vision Science Symposium at the Health<br/>Sciences Learning Center on the UW–Madison campus.



#### 2024 **MAY**

Creative costumes and medical simulations are on display at the "Odyssey Into Ophthalmology" event for local high school students provided by faculty and learners.

#### 2024 **JUNE**

Ophthalmology residents and fellows are honored at a graduation celebration held at the Pyle Center, Madison, Wis.

#### 2024 **JULY**

Faculty, learners, staff, family, and friends gather at Brittingham Park in Madison, Wis. for the annual first-ofthe-academic-year gathering, "The Eye Opener."

#### 2023 **DECEMBER**

UW Health opened doors to a new dedicated refractive surgery center in Middleton, Wis. The new clinic offers the most advanced laser technology available, including LASIK and personalized treatment options.

#### 2024 **APRIL**

#### 2024 **AUGUST**

Learners from 10 institutions nationwide participate in the annual two-day cataract surgery skills Phacoemulsification Course. (Hosted jointly by the UW Department of Ophthalmology and Visual Sciences, the UW School of Veterinary Medicine, the University of Iowa, and the Medical College of Wisconsin)

### COMPASSIONATE

AT 900°

C NAGSTREET

0

52

•

91

S



LED

m

 $\mathbf{O}$ 

45 30 15 0

#### **COMING FULL CIRCLE**

#### Former Ophthalmology Patient Works in the Operating Room, Alongside the Doctor Who Treated Her

ifteen years after her most recent strabismus surgery, Veronica Witt still finds herself in the UW Health eye clinic every week. But these days, it's for a much different reason.

The 40-year-old from Appleton, Wisconsin has been a regular in the eye clinic since 2008, when she moved to Madison and was hired as a receptionist to support the pediatric ophthalmology team. She recalls that, at the time, she knew she had strabismus, a condition in which the eyes do not look in the same direction due to weak or misaligned muscles.

"Double vision was an occasional, but regular, part of my life at that time," Witt said. "My first day on the job, I laughed when I got off the elevator because I saw the sign for the adult strabismus clinic and realized then I should probably learn what was going on with my eyes. That's exactly what I did."

Witt's initial exam revealed superior oblique palsy, a congenital condition that worsens with age. The condition brought her under the care of pediatric ophthalmologist, David Gamm, MD, PhD. In addition to his career as a pediatric ophthalmologist, Dr. Gamm is a professor with the UW–Madison Department of Ophthalmology and Visual Sciences and Director of the McPherson Eye Research Institute. He's also a world-renowned researcher,



Dr. Gamm and Witt, 2009

known for developing cell-based therapies to combat retinal degenerative diseases. He performed Witt's first corrective surgery in 2009.

"I had so many questions as I tried to understand what the muscles in my eyes were doing wrong," Witt said.



Dr. Gamm and Witt, together again in 2012

"Dr. Gamm was the perfect person for me because he loves to explain things. I'd think of a question and email Dr. Gamm. He'd email me right back."

"At the time I didn't think about how amazing that was, with as busy as he was," she continued. "But he was so responsive to my questions. I really appreciated that going into having my first major surgery. He made me feel a lot more comfortable because I knew I was in such good hands."

The procedure successfully resolved most of Witt's double vision, except for when she was reading.

"I knew I wouldn't simply wake up and have everything be perfect," she said. "My brain had learned to compensate for my strabismus over the years, and when we all of a sudden changed it, my brain needed to catch up."

In 2012, Witt decided to undergo her second surgery. At this point, she was working as a unit clerk at UW Health while studying to become an ophthalmic technician, which would prepare her to support and assist eye care providers.

This surgery was also a success, though eventually Dr. Gamm noticed Witt wasn't healing as well as they had planned. So, a few months later, she had a third surgery. It was nearly a decade later, in 2022, before Witt underwent her final surgery. By this time, she was working as a Certified Ophthalmic Surgical Assistant, helping the pediatric ophthalmology surgeons in the operating room. She credits the immense, positive impact Dr. Gamm had on her with inspiring her to pursue the extra training.

"One of my very first days in that role, I assisted Dr. Gamm in the operating room," Witt said. "It was an incredible experience. It was great to be on the other side of the operating table and learn the technical skills that were involved in my own cases. However, I noticed while looking through my loupes, that my double vision persisted."

So, in August of that year, she decided to do one more surgery. "This is the best I've ever been," Witt said. "I am nearly symptom-free and can read, work, and assist without any issues. It's amazing!"

"Not everyone will go through that many surgeries," she continued. "But it was the nature of the beast for me. I knew going into it that I was probably going to need more than one surgery. So, I was prepared."



Dr. Gamm and Witt, 2022

"Veronica has always been a very smart person, a skilled technician, and a good friend to everyone in the clinic and operating room, including me," Dr. Gamm said. "What I also learned over the course of caring for her eyes is that she is undaunted. She has a great sense of humor, too, and a long attention span. Those are three good traits to have when undergoing three eye surgeries with all those pre- and post-operative discussions with me."

Witt credits her personal experiences with making her better able to assist her patients, especially other adults who are going through the surgical process.

66

This is the best I've ever been. I am nearly symptom-free and can read, work, and assist without any issues. It's amazing!"

"When I share my story with patients, it opens the door for them to ask questions. It provides that layer of personal connection, and they often feel relieved to talk to someone who's experienced what they are going through. I can reassure them."

"It's hit me now," Witt said with a smile. "I've come full circle. I was a patient so many times and now here I am assisting with the same surgeon. It's really cool."



Witt and ophthalmology resident Breanna Aldred, MD, who assisted in surgery

#### **VISION REHABILITATION SERVICES**

Provides Comprehensive, Coordinated Care

or nearly a decade, the University of Wisconsin Department of Ophthalmology and Visual Sciences has been helping individuals live independently, despite a vision impairment. Under the leadership of Sanbrita Mondal, OD, our Vision Rehabilitation Services provides patients with services in low vision optometry, occupational therapy, and social work - all in a coordinated setting.

"This past year, we have been busy educating both the general public and the vision rehabilitation community about the importance of utilizing integrated services as a means of helping individuals with low vision live active, independent lives," said Dr. Mondal.

#### **IMPROVING PATIENT CARE THROUGH COLLABORATION**

Vision Rehabilitation Services hosted the Greater Dane County Low Vision Rehabilitation Stakeholder meeting in March 2024. The event brought low vision rehabilitation providers from Dane County and the surrounding area together at the Goodman Community Center in Madison, Wisconsin. Participants included representatives from organizations that assist patients with a variety of low vision rehabilitation programs and opportunities, including occupational therapy, low vision therapy, orientation and mobility training, and optometry.

"The purpose of the summit was to provide participants the opportunity to meet other providers in the field who can help contribute to successful patient outcomes," said Dr. Mondal, the program's co-creator. "Our goal is to not just talk about collaboration but to actually create a strong network of local providers to increase timely and efficient accessibility to care." The program was supported by the Lighthouse Guild Vision Rehabilitation Network, through funding granted to the department.

#### **SAVING SIGHT**

In April 2024, Dr. Mondal and Kallie Harrier, OD, MPH, FAAO engaged the public in a discussion of low vision



If patients cannot get to us for care, we want to ensure we can get to them with locations closer to home"

rehabilitation services at a special in-person Saving Sight session at the Health Sciences Learning Center on the UW–Madison campus. The doctors' presentation "Beyond Sight Loss - Living Your Best Life While Waiting for a Cure" provided practical information about vision loss, vision rehabilitation services, resources, and the importance of asking for help early on.

#### **IMPROVING ACCESS TO CARE**

This past year, Vision Rehabilitation Services grew to expand access to services at the UW Health East Clinic with Dr. Harrier, as well as regional eye clinics in central Wisconsin with Emily Parker, OD.

"If patients cannot get to us for care, we want to ensure we can get to them with locations closer to home," said Dr. Mondal.

Availability for appointments has increased to four days per week with full-time in-house social work services.



Low Vision Rehabilitation Stakeholder Summit, March 2024





#### UW Launches New

#### **OPHTHALMOLOGY ASSISTANT APPRENTICESHIP PROGRAM**

he smile on Theo Harelimana's face is visible from across the classroom. For the Rawandan native, the opportunity to learn valuable new skills-on paid work time-is a dream come true. In October 2023, UW Health launched a new Ophthalmology Assistant (OA) Apprenticeship program, which provided eight employees, including Harelimana, the life-changing opportunity to receive on-the-job training and classroom instruction, while still receiving their full salaries and benefits.



Theo Harelimana talks with a colleague

"I was always fascinated by ophthalmology," said Harelimana, who has been employed at UW Health since 2019. "I always wondered how I could become involved in the field. Then, one day, I found an article about the new program while browsing UW Health's intranet. And it happened. My dream is happening."

Working under the supervision of an ophthalmologist or optometrist, ophthalmology assistants support the diagnosis evaluation, treatment and management, and care of patients with deficiencies and abnormalities in their vision.

"Ophthalmic assistants play a vital role in the patient experience by providing compassionate care," said Program Manager Morgan Laufenberg. "They see a wide variety of patients with a range of eye care needs. Taking a person from being unable to work or drive due to their low vision, to allowing them to keep their job and have their quality of life restored is an incredibly rewarding experience."

Eye care, like many areas of the health sector, is facing an ongoing personnel shortage. UW Health is hoping to address the challenge through this program by recruiting, growing, and training its own, and allowing participants to remain employed, while being able to concentrate on coursework. The UW Health OA Apprenticeship Program allows the participants to be registered apprentices through the state of Wisconsin Department of Workforce Development.

"Participants also receive course materials at no cost," said Laufenberg, who, as a certified optometric technician, has been seeing patients at UW Health since 2011. "Upon completion of the program, the apprentices are eligible to sit for their first-level certification exam through the nationally recognized accrediting body at no cost. And, they are guaranteed a position as an ophthalmic assistant with UW Health."

"Not only am I enjoying getting more knowledge and skills, which will make my dream come true," said Harelimana, "but this program serves as a pathway to excellent job opportunities – all while it enables me to continue serving UW Health and the greater community."

Hayley Eaton, who has been employed by UW Health for two years, loves the fact that the program allows her to help people. And, as a busy mother of two, she appreciates that the program enables her to maintain balance in her life.

"I've always known I wanted to go back to school," Eaton said. "But I kept wondering how I was going to be able to do that, be a mom, and work full time. I'm so glad I found this program and jumped in. It's a great opportunity for anyone who has a family or who has other financial debts. Plus, it's very rewarding when you see patients who go from having very low vision to, two weeks later, seeing significantly better."



Haley Eaton practices on a colleague

Eaton says she feels happier and more confident as her skills have grown, and, as a result, she is already planning to pursue the next level of certification – to become an optometric technician like Laufenberg – once this training is complete.

"Morgan (Laufenberg) is very helpful and supportive," Eaton said. "She is always here for us, and having an instructor like her makes all the difference. She is not going to let us fail. At UW Health, they are setting us up for success."

#### **CRUCIAL RETINAL CARE FOR PREMATURE INFANTS**

s part of their work as pediatric ophthalmologists at UW Health, Alexander Miranda, MD, Yasmin Bradfield, MD and Melanie Schmitt, MD see and treat infants in two Madison, Wisconsin neonatal intensive care units. There, they provide crucial screening and treatment for Retinopathy of Prematurity (ROP), a condition that affects some premature and low birth weight babies.

ROP happens when abnormal blood vessels grow in the retina, the light- sensitive layer of tissue coating the back wall of the eye. While some babies with ROP have mild cases that can improve on their own, others require treatment to protect their vision and potentially prevent blindness.

Because ROP often has no signs or symptoms, routine screening is necessary for at-risk infants.

"Premature and low weight infants need screenings to make sure their retinas are forming properly," explained Dr. Schmitt. "If a baby's retinas are not forming correctly, there can be devastating results. They can develop retinal detachments and hemorrhages, and they can even go permanently blind. It is important to catch things early and intervene immediately."

Screening requires a dilated retinal exam within a few weeks of birth. It is traditionally performed by an onsite ophthalmologist or trained retinal photographers, utilizing specialized cameras, which is then reviewed by an ophthalmologist.

If a baby's retinas are not forming correctly, there can be devastating results... It is *important to catch things early* and intervene immediately."

"Unfortunately, there is a shortage of pediatric ophthalmologists gualified to perform the exam and screen these at-risk babies," said Dr. Miranda, chief of the pediatric ophthalmology and adult strabismus service in the University of Wisconsin Department of Ophthalmology and Visual Sciences. "We didn't want this shortage to become a barrier to patient access and were motivated to find a solution."

The result was the Teleophthalmology for Retinopathy of Prematurity Program. Spearheaded by Dr. Miranda, the new telemedicine program allows the team of pediatric ophthalmologists in the University of Wisconsin Department of Ophthalmology and Visual Sciences to screen for ROP from their offices, using digital images taken with specialized photographic equipment.

"Research has shown that digital retinal photos are highly accurate for detecting clinically-significant ROP, and telemedicine-based retinal photography is comparable to in-person examinations," Dr. Bradfield adds. "And because the ophthalmologists do not have to be on-site, more are available to interpret the images and make diagnostic decisions. It is playing a crucial role in addressing the current workforce need."

Funding was secured to place the necessary photographic equipment at a Madison, Wisconsin hospital. The program started this summer with training photographers working alongside a pediatric ophthalmologist. The screening and evaluation process became fully operational in the fall of 2024.

"Once fully operational, the program should greatly improve patient access to this critical care," Dr. Miranda said. "In addition, this project has the potential to expand coverage to other neonatal intensive care units in Wisconsin and other states."

Dr. Schmitt in office





# **SUPPORT INITIATIVES LIKE THIS**



### **GROUND BREAKING**

THORLASS HCM2



#### ADAPTIVE OPTICS TECHNOLOGY

#### May Revolutionize Eye Care

ision scientists at the University of Wisconsin– Madison are pioneering a revolutionary approach to eye care by adapting a cuttingedge optical imaging technique from astronomy for use in eye imaging and diagnosis.

Jeremy Rogers, PhD, along with his team at the Wisconsin Advanced Imaging of Visual Systems (WAIVS) Lab, have harnessed the power of adaptive optics (AO) to dramatically enhance retinal imaging. This breakthrough technology promises to transform clinical practice by providing unprecedented clarity and detail on the cellular level, enabling earlier detection and monitoring of eye disease onset and progression. With this innovative work, Dr. Rogers and his team aim to create a valuable clinical tool that will significantly improve patient outcomes.

Founded in 2018, the WAIVS Lab brings together scientists from the Department of Ophthalmology and Visual Sciences, the McPherson Eye Research Institute, and collaborators from the University of Wisconsin and beyond. Dr. Rogers, a scientist with the Department of Ophthalmology and Visual Sciences, is the director of WAIVS and principal investigator of the AO project at UW–Madison.

AO technology was originally developed by astronomers to enhance the quality of telescope images of distant galaxies. In recent years, vision scientists have adapted the technology to capture high-resolution images of retinal



Advanced technology at the WAIVS lab

cells at the back of the eye. Even with high resolution cameras, imaging these cells is nearly impossible with standard clinical instruments. To address this, Dr. Rogers and the WAIVS scientists use state-of-the-art Adaptive Optics Scanning Laser Ophthalmoscope (AOSLO) technology to turn the eye into a living microscope. Dr. Rogers in his lab

"Adaptive optics technology enables us to see cellul life in the eye that was previously hidden or distorted by natural irregularities," explained Dr. Rogers. "It enables us to get very detailed information about th

> individual cells and microscopic structur in the retina, such as photoreceptors, blvessels, and support structures."

Adaptive optics technology enables us to see things going on in the eye that were previously hidden or distorted..."

The machines developed at UW–Madison include enhanced capabilities for improved contrast and visualization of retinal photoreceptor cells. The WAIVS Lab houses two such machines.

"The first one is designed for patient research," Dr. Rogers said. "It allows researchers and clinicians to understand retinal dysfunction on a cellular level in liv patients, and also to monitor cellular responses to new future treatments such as stem cell and gene therapie A second machine located nearby, is dedicated to developing and testing innovative features that will al scientists to "see even further."





lar d	Having the two machines in proximity will allow for rapid application of imaging breakthroughs.	
ne res ood	WAIVS is one of only about two dozen institutions in the world undertaking AOSLO research. But the UW–Madison lab is focusing on clinical applicability.	
	"Many of the instruments used today are optimized to image healthy, young eyes," Dr. Rogers said. "But the most clinical impact will come from instruments capable of imaging older eyes, or eyes that have undergone surgery, for example."	
	Dr. Rogers is developing a compact system that improves the patient experience in several key ways.	
′S	"For starters, we want to develop a system that works much faster, reducing the procedure time from 35-60 minutes, to about 5 to 10 minutes," Dr. Rogers said. "In addition, current systems are somewhat cumbersome. It takes two people to run the instrument, then up to two weeks to process the data. What comes back is not always easy for clinicians to interpret. We want to fix all of that."	
ving ew ies." Illow	In the end, Dr. Rogers hopes for a system that will lead to earlier disease detection and treatment.	
	"When we have achieved what we set out to do, we will have accomplished something amazing," Dr. Rogers said. "It will be a real game-changer."	

#### **CLINICAL EYE RESEARCH UNIT**

#### Sharing Expertise through Education in Clinical Research

he Clinical Eye Research Unit (CERU) has been on the forefront of vision research for more than 40 years. As an academic research arm of the University of Wisconsin Department of Ophthalmology and Visual Sciences, the CERU is an experienced team of investigators, coordinators, and administration that provides expertise and support for clinical research. This year alone, the CERU worked on 62 clinical research projects, covering virtually all ophthalmic subspecialties and reflecting the departments breadth of expertise and interests.

"The CERU has experienced a year of steady growth and an increase in new opportunities for our investigators, participants, and staff," said CERU Medical Director Mihai Mititelu, MD, MPH, FASRS. "We have had multiple opportunities to share our expertise by providing guidance, education, and training to our national and international partners, including pharmaceutical companies, vision researchers, and learners."



Medical student Britney Naolhu and Dr. Mititelu

In September 2024, the CERU hosted a training seminar for medical science liaisons from the biotechnology company Regeneron Pharmaceuticals. The full-day program, organized for the second time, helped participants better understand assessments and endpoints from the examiner's perspective as well as experience a clinical trial from a patient perspective. In addition, the session provided instruction on the potential challenges associated with clinical trials, as well as what is required regarding quality documentation.

"We additionally developed a training manual – a guide to managing clinical trials - to assist Dr. Shroff's Charity Eye Hospital in New Delhi, India," said CERU Operations Manager Jennie Perry-Raymond. "We were excited by the opportunity to share our knowledge with our global partners and assist them in getting their own clinical trials unit up and running."

CERU principal investigators and staff also presented at the annual meeting of the American Academy of Ophthalmology in Chicago in October 2024. The course



Regeneron training seminar, September 2024

titled "Orchestrating Clinical Research in Ophthalmology - A Sites Guide for Initiating Clinical Research in Your Practice" outlined the essential elements required for an ophthalmology practice - academic or private - to successfully participate in clinical trials. The course provided guidance on feasibility requirements, principal investigator responsibilities, budget and contract negotiations, recruitment and retention, compliance and documentation, as well as diversity in clinical trials.

Finally, the CERU was home to Britney Naolhu, a firstyear medical student, during the summer of 2024. Naolhu received financial support through the University of Wisconsin School of Medicine and Public Health's Shapiro Summer Research Program. The Shapiro Summer Research Program offers M1s an 8-10 week, mentored, paid-research experience during the summer between their first and second year of medical school.

Working under Dr. Mititelu's mentorship, Naolhu investigated the role of flavoprotein fluorescence, a novel imaging modality that evaluates mitochondrial function in geographic atrophy, an advanced form of dry age related macular degeneration. The Shapiro Summer Research Program is designed to educate students about the process of scientific research and to develop skills in research study design, methodology, statistical analysis, and presentation of findings.

"I have had an absolutely wonderful experience with the CERU," Naolhu said. "I've known for a while that I wanted to pursue ophthalmology, and connecting with Dr. Mititelu and the CERU has been an incredible opportunity for my career development. I felt instantly welcomed since my first day. Everyone has been so supportive of my journey and is always there to immediately answer my questions and advocate for me."

"By providing education and support to our patients, researchers, learners and sponsors, the CERU remains an integral component of the DOVS' mission to prevent and treat vision disorders," said Dr. Mititelu.

#### New Vision Research Utilizes "Cell" Sequencing to

#### SHED LIGHT ON CHILDHOOD GLAUCOMA

tuart Tompson, PhD and colleagues at the University of Wisconsin–Madison are exploring a novel cell profiling approach to understand Primary Congenital Glaucoma (PCG). PCG is a severe pediatric eye disease affecting 1 in

10,000 infants in genetically diverse populations. Patients with PCG may have a cloudy cornea – the front of the eye that is normally clear - and enlarged eyes. It results from elevated eye pressure that damages the optic nerve and can potentially lead to blindness. Current treatment involves surgery, and, in some cases, eye removal.



Dr. Tompson in his lab

The disease is not, at present, fully understood. Dr. Tompson, a researcher in the Department of Ophthalmology and Visual Sciences, is hoping to change that.

Research to date has shown that the disease is caused by a failure to correctly develop the structures of the aqueous humor outflow (AHO) pathway, which are crucial for regulating drainage of fluid from the eye. Mutations in four genes (CYP1B1, LTBP2, TEK, and ANGPT1) are currently known to cause the disease, and account for 25% of cases.

With funding from the NIH/NEI, Dr. Tompson is utilizing a new "cell" sequencing method to shed light on which genes are important for the development of AHO tissues and identify the underlying gene mutations in the remaining 75% of cases.

"We have hypothesized that the elusive genes underlying PCG are also critical for and therefore expressed during the development of the AHO pathway," Dr. Tompson said. "However, the scientific community currently lacks a comprehensive knowledge of the genes that are expressed during the formation of these important ocular structures."

Until recently, profiling the developing AHO pathway was not feasible because the diminutive and complex structures contain a diverse array of cell types. Dr. Tompson is now leveraging single-cell RNA sequencing

(scRNAseq) technology to broadly profile the gene expression in each of these individual cell types as the tissues form. His research utilizes rat tissues, which mirror human AHO pathway development.

"We will generate datasets from male and female tissues at various developmental timepoints," Dr. Tompson said. "This will enable us to identify differentially expressed

genes and pathways specific to each cell type, developmental stage, and gender. We will then use this resource

This will enable us to identify differentially expressed genes and pathways specific to each cell type, developmental stage, and gender...



Image courtesy of Dr. Tompson

to prioritize genes as candidates for disease-causing variants within existing exome sequencing data from molecularly unsolved PCG cases."

Ultimately, these studies aim to unveil novel molecular mechanisms underlying PCG, paving the way for genebased diagnostic testing, improved genetic counseling, enhanced clinical management, and the development of more effective drug treatments focused on disease biology rather than surgical interventions.

#### LOST BOTH EYES TO GLAUCOMA

#### but Finn Still Loves To Fetch

This article was originally published by the School of Veterinary Medicine. Photos of Finn courtesy of the Caho family.

Over the past five years,

McLellan, along with Dr.

Peter Muir, has led a team

of researchers working to

and causal variants that

predict the development

of glaucoma in this breed.

The end goal is to develop

a genetic test that will

lessen the occurrence

detect genetic associations

atching Finn and Luka, two beautiful and energetic Entlebucher Mountain Dogs, play fetch in their backyard in Texas, you likely would not notice that one of them relies on auditory and tactile cues to claim his prized tennis ball. Finn does this because, at just four years of age, he has already lost both eyes to glaucoma.

Across the country at the University of Wisconsin School of Veterinary Medicine, where Finn's eyes were shipped after removal, vision scientist Dr. Gillian McLellan prepares slides for analysis as part of an ongoing clinical study, Genetic Basis of Glaucoma in Entlebucher Mountain Dogs



other and to Dr. McLellan.

of this very painful and rapidly blinding disease in thousands of dogs – not Dr. Gillian McLellan just Entlebuchers. And back down in a different part of the Lone Star state, Christena Stephens monitors and fields a stream of emails and text messages as she strives to fulfill what she sees as one of her primary duties as president of the National Entlebucher Mountain Dog Association (NEMDA): to

connect Entlebucher owners to the organization, to each

The Entlebucher Mountain Dog is the smallest of the four Swiss Mountain Dog breeds. Known historically in Europe as an excellent herding dog, the breed is thought to have become nearly extinct around the time of World War I, after which renewed interest led to a small resurgence. Still, the breed's low numbers and lack of genetic diversity were predictably problematic. Today's Entlebuchers – considered a versatile, loving family pet – have a higher likelihood of developing certain health conditions, including glaucoma.

"Some people say glaucoma is only affecting some of our dogs, not necessarily a huge percentage, but there are still too many and we're missing something with breeding that we have to figure out," Stephens says. "We're so grateful for how receptive and generous our members are when it comes to this research, and to Dr. McLellan for all her progress and work."

Dr. McLellan, who previously identified a gene that causes glaucoma in cats, is now looking to isolate and identify the same in Entlebuchers with the hope of deepening our understanding of genetic determinants that cause glaucoma in animals and humans. "At this point, we are optimistic we'll soon have a DNA test that will help breeders identify which dogs have two copies of the gene variant that causes glaucoma, which are "clear," and which are carriers, since it is likely a recessive trait in this breed," she says. "Ideally, over time, that will be a factor in helping to reduce the significant occurrence of glaucoma in Entlebuchers."

Lilla Caho fell in love with the breed when she first discovered them, and she and her husband, Chris, worked diligently to find and secure Finn – no easy task considering Entlebuchers are still significantly fewer in number than more common breeds such as retrievers and labradors. But they persisted and brought Finn home in



(L-R) Finn was by all measures a healthy and happy dog until he very swiftly developed symptoms of glaucoma and lost sight in his left eye at age four.



Finn recovered and adapted well following the loss of his first eye with support from his sister, Luka.

spring of 2020, and by all measures he seemed to be healthy and happy pup. Two years later, they added L a female Entlebucher, to the family.

Finn's situation changed suddenly around Christmas One morning, Chris noticed that Finn's eye was cloudy he lacked energy and was moving clumsily. Even thou they immediately got Finn to his primary care veterina and a veterinary ophthalmologist, it was too late to sa Finn's eye. The veterinary ophthalmologist knew of Di McLellan's work and suggested they could help spare dogs from Finn's fate in the future if they submitted F eye to the University of Wisconsin.

Finn recovered from his first surgery and adapted well Unfortunately, his family knew the signs when Finn's remaining eye started showing symptoms of glaucoma about four months after he lost his first eye. They went through the same process, including donating his eye for research.

Dr. McLellan cites the support of Entlebucher owners, those willing to donate eyes, and NEMDA, as well as funding from the American Kennel Club's Canine Health Foundation, as critical to advancing the research.

"Clinical studies such as this one demonstrate why veterinary medical schools are often at the forefront of research that benefits both animals and humans," she says. "Every advancement we make as far as understanding the genetics and presentation of glaucoma in dogs is helping to also develop better treatment options and solutions for humans, too."

Despite everything he has been through, Finn continues to amaze Lilla and Chris with his resilience and adaptability. By early summer of this year, Finn was back to chasing tennis balls in the backyard – sometimes following Luka's cues

a .uka,	when he needs a little extra guidance. Thankfully, while the family watches her closely and ensures frequent check ups, Luka has not shown any signs of glaucoma.
2023. ly, lgh arian ave r. e Finn's	"It was so hard to see Finn in pain and to watch him need to make so many adjustments, and we certainly wish he hadn't had to go through any of this," Lilla says. "But we're incredibly thankful for the work of Dr. McLellan and for NEMDA under Christena's leadership – both have been so kind and supportive. Most of all, we're grateful that Finn today is just as happy and loving as ever."



Unfortunately, just four months after losing his first eye, Finn developed glaucoma in his remaining eye. Despite now being fully blind, Finn is healed and, according to his family, is as happy and loving as ever. He has even gotten back to his favorite activity – fetching a tennis ball.

#### EARLY DETECTION OF ALZHEIMER'S DISEASE

ccording to the Centers for Disease Control, nearly 6 million Americans are living with Alzheimer's Disease (AD), a devastating progressive disorder that impairs the parts of the brain that control thought, memory, and language. It can seriously affect a person's ability to carry out daily activities. AD often starts with mild memory loss but can eventually result in the inability to carry on a conversation or respond to the environment. Scientists do not fully understand the underlying causes of AD, and, while limited treatments are available, there is no known cure.

Novel research from scientists in the University of Wisconsin Department of Ophthalmology and Visual Sciences may lead to a new, non-invasive method for the early detection of AD. Thanks to funding from the Wisconsin Alzheimer's Disease Research Center, Nader Sheibani, PhD and his team of researchers, including Christine Sorenson, PhD, UW-Madison Department of Pediatrics, Tyler Ulland, PhD, UW-Madison Department of Pathology, and Ramin Pahsaie, PhD, Florida Atlantic University, Department of Electrical Engineering and Computer Science, are exploring whether changes to the retinal neurovasculature function and integrity at the back of the eye can serve as an early warning sign for AD.

"Changes related to Alzheimer's Disease occur in the brain and are not easy to assess," said Dr. Sheibani. "Our team is developing non-invasive ocular vascular imaging as a way to utilize changes in retinal neurovasculature function as a means of predicting the progression and stage of Alzheimer's Disease."

In addition to cognitive decline and cortical changes, AD can also be characterized by declines in visual function. ranging from a diminished ability to differentiate among colors to complex object recognition.

"Visual deficit has been reported in the early stages of Alzheimer's Disease, even before a diagnosis is clearly established," Dr. Sheibani explains. "The effect of AD on visual attention and other higher visual functions can negatively impact a person's daily activities such as reading, route finding, object localization and recognition."

Dr. Sheibani says the long-term goal is to advance understanding of the underlying causes of ADassociated visual dysfunction and whether they stem from similar or distinct retinal or cortical abnormalities.



"The objective of this grant is to determine the extent

to which retinal neurovascular changes parallel AD etiology in the brain and whether they precede severe cognitive impairment."

The hypothesis behind Dr. Sheibani's research is that the production and accumulation of the amyloid  $\beta$  $(A\beta)$  in the retina impedes normal ocular neurovascular development and function, as well as inducing swelling in the blood vessels.

"Our rationale is that the identification of  $A\beta$ mediated ocular vascular changes will expedite the development of retinal biomarkers capable of identifying biological changes associated with AD and for tracking progression of the disease's severity over time. Ultimately, our findings could result not only in an improved understanding of the pathophysiology of this devastating disease, but also in its earlier detection and better management."

# CONTINUE







# EDUCATION

#### Combines Pediatric Ophthalmology and Comprehensive Ophthalmology

newly revamped program at the University of Wisconsin is offering ophthalmology fellows a unique combination of specialized clinical and surgical training in pediatric ophthalmology and adult strabismus, along with comprehensive adult cataract surgery.

The Department of Ophthalmology and Visual Sciences received approval from the Association of University Professors of Ophthalmology in May to begin offering the one-year hybrid pediatric ophthalmology/adult strabismus and comprehensive ophthalmology fellowship for the fall of 2025.

"This program has been designed to prepare our learners for the specific skills they will need in today's clinical settings," said Yasmin Bradfield, MD, fellowship codirector. "We have several pediatric ophthalmology/ adult strabismus fellowship alumni who joined practices where they perform adult cataract surgery in addition to practicing pediatric ophthalmology/ adult strabismus. We wanted to provide a program that addressed this specific need. The program is also a great fit for an ophthalmologist who may be deciding between practicing as a pediatric ophthalmologist or comprehensive ophthalmologist."

Fellows in the program can expect to be involved in over 400 surgical cases, many as a primary surgeon. Selected fellows will work closely with five pediatric ophthalmologists, who offer more than 80 years of experience in patient care at the University of Wisconsin and the American Family Children's Hospital, which fields

more than 7,000 sub-specialty outpatient visits per year. "In addition to pediatric ophthalmology, our fellows have the opportunity to gain extensive, up close clinical and research experience in the field of strabismus," Dr. Bradfield explained. "We have a wide referral base for treating complex strabismus in children and adults, and our surgical procedures include a wide variety of strabismus surgeries."

Fellows will work with five comprehensive ophthalmology specialists as well. The comprehensive ophthalmology component of the program focuses on providing both clinical and surgical care for adult patients with cataracts.

"In this program, a fellow will obtain a combination of clinical and surgical care in comprehensive ophthalmology with the direct supervision of multiple comprehensive faculty," said John Temprano, MD, comprehensive ophthalmology service chief and fellowship co-director. "In addition, fellows will work with our resident and medical student learners, participate in our comprehensive journal club, grand rounds, and provide call coverage consistent with other fellows in the department."

Fellows also complete an independent research project appropriate for presentation at a national meeting, participate in regular didactic lectures, and gain additional expertise in the field of ophthalmic genetics through participation in a monthly inherited retinal degeneration clinic.

Dr. Bradfield with a patient



#### **Ophthalmology Residency Program Offers**

#### **NEW EXPERIENCES TO MORE LEARNERS**

phthalmology residents at the University of Wisconsin will benefit from some exciting additions to their learning experience this academic year – and have the opportunity to learn with a larger group of peers.

Last year, the Accreditation Council for Graduate Medical Education (ACGME) approved the Department of Ophthalmology and Visual Science's request for a complement increase. As a result, the residency program was able to add one more resident to the PGY2 cohort for the 2024-25 academic year.



Dr. Momont (right) in clinic with ophthalmology resident Georges Guillaume, MD

"The addition of a fourth resident was certainly a clear indication of the ACGME's confidence in the excellence of our resident training program," said Anna Momont, MD, vice chair of resident education and residency program director. "One big advantage to having a fourth resident is that it gives us the ability to implement a consult rotation."

Treating emergency room and inpatient consults enables residents to gain exposure to a variety of ophthalmic diseases in the sickest patients. "This is a definite winwin," Dr. Momont said. "Not only does this further expand resident training, but it also improves access to quality care for our patients. It comes at a good time, too, as we have experienced a noticeable increase in the demand for our services as we treat an aging demographic."

"I have had the privilege of being the first resident on the new consult rotation," said Lucas Maakestad, MD. "In only a week's time I have already begun to appreciate the significant benefits to our patients' care and to resident education. My co-residents can focus on their clinic and OR education without concern of interruption by a new consult while I am able to spend time caring for each patient without feeling rushed after a full day. It's a great addition to the program."

In addition to the new consult rotation, ophthalmology residents complete rotations in oculoplastics, glaucoma, pediatrics, retina, neuro-ophthalmology, cornea, and comprehensive ophthalmology, as well as at the Veteran Affairs Hospital in Madison, Wisconsin. Ophthalmology



residents also participate in community clinics that serve the uninsured population and have opportunities to travel internationally to India and the Philippines to learn about ophthalmology treatments in a global context.

"We are so grateful that our program expanded to four residents per year," said Chief Ophthalmology Resident Breanna Aldred, MD. "This allowed us to revamp our curriculum to include more exposure to areas such as refraction, anterior segment surgeries, and urgent clinics while also decreasing our on-call burden. Our new consult rotation will greatly improve patient care by ensuring timely evaluation and continuity of care. Our new curriculum also allows for elective rotations which will allow residents to personalize their training experience and tailor it for their future career."

"Our residents have the opportunity to work with fulltime faculty who offer extensive experience in a variety of subspecialties," added Dr. Momont. "In addition to being



Dr. Momont (right) in clinic with ophthalmology resident Georges Guillaume, MD

world class clinicians and researchers, our faculty are amazing teachers as well. They strive to ensure that our residents reach their full potential as ophthalmologists."

"We are committed to providing outstanding education for our residents," said Dr. Momont. "An integral component to that is enhancing our offerings to ensure our learners obtain rich clinical and surgical experiences, top-notch mentoring and an unparalleled research experience. We

> are thrilled to be able to provide these exceptional training opportunities to a larger number of residents."

We are committed to... enhancing our offerings to ensure our learners obtain rich clinical and surgical experiences, top-notch mentoring and an unparalleled research experience."

#### A HOME-AWAY-FROM-HOME AT UW-MADISON

r. Rishabh Gupta came to Madison, Wisconsin to further his training in the field of ophthalmology. While he came away with new skills and enhanced confidence, he found a new family, too.

Dr. Gupta, a senior ophthalmology resident at Dr. Shroff's Charity Eye Hospital (SCEH) in New Delhi, India, spent a five-week residency research and clinical observership with the University of Wisconsin Department of Ophthalmology and Visual Sciences (DOVS) late last year.



Dr. Gupta enjoys UW-Madison sights (top) and with a patient (bottom)

Surgeons have the ability to treat a disease with their own hands."

The department's Global Ophthalmology Initiatives Research and Clinical Observership program started in 2017, thanks to a sponsorship from the non-profit Combat Blindness International (CBI) from 2017 – 2022. During that time, the UW and CBI sponsored four senior residents from the University of Sao Paulo, Brazil. This year, the program expanded and will now be offered on a rotating basis to all established global partners. Dr. Gupta is the first resident from SCEH to rotate at the UW through this program.

"I always wanted to be a surgeon," Dr. Gupta said, "because surgeons have the ability to treat a disease with their own hands - in real time. In medical practice, there's often a wait, as medications can take time to work on their own. But a surgeon treats disease with their own hands."

Dr. Gupta had several options after graduating from medical school. "I chose ophthalmology based on the excitement that you feel when you treat patients' eyes," he said. "And the satisfaction that you get when you enable someone to see."

This unique program provides a global ophthalmology resident the opportunity to spend five weeks with DOVS faculty, observing in clinic and the operating room, participating in educational opportunities, and contributing to research under the guidance of a faculty mentor.

Though he hasn't officially decided on a subspeciality, Dr. Gupta's interest in cornea, external disease, and refractive surgery led him to partner with UW Health cornea specialists Sarah Nehls, MD and Evan Warner, MD during his stay.

"Cornea as a subspeciality is appealing because of the number of diseases that you have the opportunity to treat," Dr. Gupta said.

In addition to observations in clinical and surgical services, Dr. Gupta honed his skills with Dr. Warner in the wet lab and participated in the department's annual Right to Sight Eye Clinic, another partnership with CBI. He also collaborated with Dr. Nehls and cornea fellow Dr. Anna Walsh on a research project that analyzes the satisfaction of patients who underwent a specific type of cataract surgery - one that utilizes a new lens implant technique.

"We do this procedure in India," Dr. Gupta said. "But we are focused on the clinical outcomes - not patient satisfaction. Both are important. So, this project will add to the overall body of knowledge."



Dr. Gupta in the wet lab

Dr. Gupta noted differences between patient care in the United States and India. Surgical preparation is completed in the operating room in India, for example. But, in the United States, it often occurs elsewhere, like in an eye bank. Despite these differences, Dr. Gupta noted that the primary goal of providing excellent service is the same.

"How you approach the goal is different between the two countries," Dr. Gupta said. "For example, what we would consider the first step in the treatment of a particular disease – like glaucoma – in India would be the second step over here and vice versa. In India, we prefer trabeculectomy as first option in the treatment of glaucoma. And, if that doesn't work, we turn to tube shunts as a second procedure. It's done the other way around in the United States."

For Dr. Gupta, whose next step is to complete a fellowship back home at SCEH, the five-week observership was his first experience to study outside of his home country. "Having the opportunity to study in a foreign country has made me a better doctor," he said. "This is a great program because you get to experience a lot of different things - clinical activities, educational activities, operational activities, offsite clinic experiences, and wet lab in a short time."

"I will return to India with a lot of information on how to disclose information to patients and how to counsel them," Dr. Gupta added. "In India, the patient load is very high, so we don't get much time with each patient. That means some of the follow-up is performed by other professionals, not the doctor. But, in the United States, there is more direct doctor-to-patient contact. Back home, if I want to do that for some of my patients, I am more confident that I could do it well."

Dr. Gupta's experience in Madison wasn't all work. He found time for hiking, attending a concert, shopping, visiting the Memorial Union, and dining with the DOVS education team and the other ophthalmology residents. During his stay, Dr. Gupta built some strong bonds and credits the DOVS faculty and education team with making him feel comfortable. He specifically noted Senior Graduate Medical Education Program Manager, Hannah Baker, in his reflection. "I'm really grateful to Hannah," he said. "She was instantly a friend to me. In my first week, she helped me navigate the bus and the buildings. She took me to lunch. I had so many questions even before coming here, and she answered them all."

"Five weeks is not a long time, but it's not a short time either," Dr. Gupta said. "When you are away from your home, you miss it, and you miss your family. But I have a home now in Madison."

Drs. Nehls and Gupta

#### New Ophthalmology Professorship Awarded to

#### SUPPORT VETERANS

aniel Knoch, MD, a professor of Ophthalmology and Visual Sciences at the University of Wisconsin School of Medicine and Public Health, formally received the inaugural appointment to the Carl and Mary Ann Berg Family Professorship of Ophthalmology at a special celebration in December 2023. The professorship is the first of its kind and designed to attract the best physicians in order to maintain the highest level of care to our veterans.

Andrew Thliveris, MD, PhD, who retired from the department last September, stewarded the professorship

though his

relationship with

the Bergs. "This

professorship

would not have

been possible

without the

support of

Young and

Gillian Fink,"

Dr. Thliveris said. "This

designed to

bring the very

Department

Chair Dr. Terri

Senior Director

of Development

professorship is

personal



Dr. Daniel Knoch

best physicians to this very deserving population. And the professorship could not be awarded to a more dedicated and talented individual than Dan Knoch."

Dr. Knoch, who specializes in comprehensive ophthalmology, completed his ophthalmology residency training at the University of Wisconsin Hospitals and Clinics in 2007. Immediately following, he joined the UW faculty. He became a full professor in 2020 and currently serves as the Director of Ophthalmology Medical Student Education and the Vice Chair of Education and Faculty Development. In September 2023, Dr. Knoch became the Chief of the ophthalmology service at the William S. Middleton Memorial Veterans' Hospital in Madison, Wisconsin.

Throughout his career, Dr. Knoch has been honored locally, regionally, and nationally with multiple awards for his teaching and clinical service. These include being named Clinical Teacher of the Year by the ophthalmology residents three times, receiving the Dean's teaching

award, and receiving the national Award for Excellence in Medical Student Education from the Association of University Professors of Ophthalmology and the American Academy of Ophthalmology.

"It is an honor, and a privilege to call Dr. Knoch a colleague," said Department Chair Terri Young, MD, MBA. "His service and servant leadership makes him most deserving of this professorship."

"I am incredibly humbled," said Knoch. "This professorship is an ideal way to honor the partnership between the VA and the University of Wisconsin. The VA is vital to the education of our learners as well as to our veterans. This professorship has numerous facets and will allow us to best serve our wonderful veterans through new

opportunities in quality improvement, research, retention, and education."

This professorship is designed to bring the very best physicians to this very deserving population."

#### **ABOUT CARL BERG**

Carl Berg is a real estate investor and venture capitalist who has been included in Forbes magazine's list of the 400 richest people in America several times. Dr. Thliveris, who is Berg's second cousin, describes Berg as 'a man with an incredible work ethic and sense of humility.' Berg was born and raised in New Mexico. His mother was a schoolteacher, and his father was a heavy equipment operator, who died while trying to save two men from an equipment collapse when Carl was 12-years-old.

"Carl was a risk-taker and understands sacrifice," Dr. Thliveris said. "He recognized the importance of serving a population that put everything on the line, and paid the ultimate sacrifice, with their lives, like his dad. Because of that, Carl decided to fund the professorship."

#### **OUR PEOPLE FIRST CULTURE**

n the University of Wisconsin Department of Ophthalmology and Visual Sciences, we place people at the center of all we do. Recognizing the humanity, respecting and championing every person - no matter their race, gender identity, sexual orientation, age, ability, nationality, or creed is at the core of our ethos. We welcome and accept anyone where they are in collective and individual journeys leading to a more equitable and inclusive world.

We are committed to acting against racism, sexism, ageism, ableism, genderism and hate in our clinics, research laboratories, and in our administrative and learning spaces. We are revising policies and traditions that exclude or are inequitable. We work hard to dismantle hierarchies in our work environments, and to celebrate teamwork to ensure that all voices are heard and incorporated into mindsets and practice.

By providing programs and trainings for all faculty and staff, we have worked to ensure diversity, equity, and inclusion (DEI) considerations were integrated into everything we did in 2024. We were committed to tackling the untold histories of our people, communities, state, and nation by leaning towards and in. We recognize that this is an iterative process.

The department's Equity Alliance is a grassroots DEI continuous learning group and support community. It hosts monthly meetings for faculty and staff, targeted at personal growth, fostering inclusion, and encouraging open dialogue. In the past year, the Equity Alliance hosted quest speakers, film screenings, book discussions, and other activities.

The alliance's work covered a variety of topics, including women's rights, students' protests on campus, as well as a deep introspective look at our demographically varied patients evaluated at our

#### **READ MORE ABOUT OUR PEOPLE FIRST CULTURE**



#### *Celebrating the diversity of our department, our university, and our community*

outreach clinics. This has enabled gaining different insights into previously unrecognized challenges patients might face.

As a community, we also engage in the University of Wisconsin–Madison campus-wide common book program, Go Big Read. As part of this initiative, we read Sitting Pretty: The View from My Ordinary Resilient Disabled Body by Rebekah Taussig. Our Clinical Working Group, comprised of specialty provider service chiefs and clinical leadership, also read and discussed Under the Skin by Linda Villarosa.

We are committed to acting against racism, sexism, ageism, ableism, genderism and hate in our clinics, research laboratories, and in our administrative and learning spaces."



#### NAMED 2024 DISTINGUISHED COMMUNITY EDUCATOR

or Amy Walker, OD, MBA, FAAO, being a lifelong educator means not only teaching students, but learning from them as well.

Dr. Walker, a clinical adjunct assistant professor with the University of Wisconsin Department of Ophthalmology and Visual Sciences (DOVS), has been named the department's 2024 Distinguished Educator.

"I was very surprised when I learned I was receiving the award," said Dr. Walker, who is also an optometrist with UW Health in Madison, Wisconsin. "I am humbled that the Education Committee thought of me."

The Distinguished Community Educator Award, now in its 10th year, recognizes department faculty who have demonstrated an outstanding lifetime contribution to education.

After earning her Doctor of Optometry from the Illinois College of Optometry in Chicago, Dr. Walker began her career as an optometrist in the United States Air Force.

"At that time, I was a Clinical Adjunct Professor for UC Berkeley School of Optometry," Dr. Walker explained. "Berkeley would send two students each semester to the North Carolina base where I was stationed. I later became a Clinical Adjunct Professor for Pennsylvania College of Optometry, where I would see students at my location in Washington DC. The students were always a delight and taught me as much as I taught them."

As a clinical adjunct faculty member, Dr. Walker has been invaluable in teaching clinical and diagnostic skills"



Dr. Walker (right) with colleague Janet Cushing, OD

Dr. Walker joined the faculty at UW–Madison in the School of Medicine and Public Health in 2002.

"As a clinical adjunct faculty member, Dr. Walker has been invaluable in teaching clinical and diagnostic skills to our Phase 2 medical students," said Department Chair Terri Young, MD, MBA. "This is a pivotal point in a medical student's life, and teaching requires not only exceptional knowledge and skill but also clear communication, enthusiasm, and certainly a great deal of patience. As an educator, Amy is known for all of these."

Over the past two decades, Dr. Walker has made notable contributions to DOVS, including serving as Optometry Service Chief from 2006 - 2017 and Co-Vice Chair of Clinical Affairs from 2017 to today. She also holds a leadership role in the department's diversity, equity, and inclusion initiatives, which she incorporates into her teaching.

"Dr. Walker is an exemplary educator," said Daniel Knoch, MD. "Her evaluations are always stellar. For example, she has been instrumental in teaching our medical students as part of Mind and Motion, teaching our introductory session to the Phase 2 students, and teaching as part of our Case Based Learning sessions. Her inclusive nature has been greatly appreciated by all her learners, as well as her colleagues."



Dr. Walker with a patient

Dr. Walker's service to the department and her commitment to her learners extends beyond the criteria of the award. She has, for example, been instrumental in launching the Ophthalmology Assistant Apprenticeship program at UW Health. This program fills a crucial need while offering participants the life changing opportunity to receive on-the-job training and classroom instruction, while still receiving their salaries and benefits.

Dr. Walker takes responsibility for shaping the next generation of eye care professionals very seriously.

"I always begin the Introduction to Ophthalmology course by thanking the students for choosing to be physicians because our communities need them no matter what specialty they choose," she said, "We are expecting so much of this next generation of medical leaders not only for their care, but also to care for our planet and make us a more compassionate, peaceful nation. With the time I have spent with them, there is no doubt we are in good hands."

"I'm proud to be a veteran, and I'm proud to have dedicated my life to the service of others." Dr. Walker added. "I know I have helped improve sight, save sight and sometimes even save lives."





Dr. Walker joins Jonathan Chang, MD in clinic



Dr. Walker addresses learners in the Ophthalmology Assistant Apprenticeship program





Left to Right: Terri Young, MD, MBA; Yao Liu, MD, MS; Daniel Knoch, MD; Shaoqin "Sarah" Gong, PhD

#### THREE DEPARTMENT FACULTY HONORED BY THE SCHOOL OF MEDICINE AND PUBLIC HEALTH

at investiture ceremony in June 2024

Three department faculty were honored by the School of Medicine and Public Health at an investiture ceremony in June 2024. The ceremony honors these individuals for their new appointments of endowed

faculty positions. These endowed designations are supported through philanthropy and signify the highest honor the school can bestow on its faculty members.

The following faculty were honored:

Shaogin "Sarah" Gong, PhD Advancing Vision Science Professorship

Daniel Knoch, MD Carl and Mary Ann Berg Family Professorship of Ophthalmology Yao Liu, MD, MS William and Phyllis Huffman Research Professor

#### New

#### **SERVICE CHIEFS**

The University of Wisconsin Department of Ophthalmology and Visual Sciences named two new clinical service chiefs in 2024.

Drs. Altaweel and Warner officially began their new roles in January 2024.

Seven accomplished ophthalmology faculty members in the School of Medicine and Public Health successfully campaigned and received approval of their promotion dossiers. Congratulations Drs. Domalpally, Hoon, Kopplin, Liu, McDowell, Momont, and Schmitt!





AMITHA DOMALPALLY, MD, PHD was promoted to Associate Professor (Clinical Health Sciences track).

**MRINALINI HOON, PHD** was promoted to Associate

Professor with tenure.



**COLLEEN MCDOWELL, PHD** was promoted to Associate Professor with tenure



#### MICHAEL ALTAWEEL, MD

is the Retina Service Chief. Dr. Altaweel, a professor also serves as co-director of the Vitreoreintal Surgery Fellowship program and co-director of the Wisconsin Reading Center. He attended medical school and completed his ophthalmology residency training at Dalhousie University in Halifax, Nova Scotia. He completed his retina fellowship training with the University of Wisconsin Hospital and Clinics. Dr. Altaweel joined the department in 2000.



#### EVAN WARNER, MD

is the Cornea and Anterior Segment Service Chief. Dr. Warner, an assistant professor, is also medical director of Lions Eye Bank of Wisconsin. He completed medical school, an ophthalmology residency, and a fellowship in cornea, external disease and refractive surgery with the University of Wisconsin Hospital and Clinics. Dr. Warner joined the faculty in 2018.





LAURA KOPPLIN, MD, PHD was promoted to Associate Professor (Clinical Health Sciences track).



YAO LIU, MD, MS was promoted to Associate Professor with tenure.



ANNA MOMONT, MD was promoted to Associate Professor (Clinical Health Sciences track).



**MELANIE SCHMITT, MD** was promoted to Associate Professor (Clinical Health Sciences track).

#### MORE GOOD NEWS



#### **DEPARTMENT CHAIR, TERRI YOUNG, MD, MBA**

is the new president of the Association of University Professors of Ophthalmology, an organization of department chairs and their leadership teams from academic ophthalmology training and research programs nationwide. Dr. Young was voted into the role at the organization's national meeting in Austin, Texas.



#### **KIMBERLY STEPIEN, MD**

is one of only 12 individuals selected for the Association of University Professors of Ophthalmology's Academic Leadership Development Program. The program, which identifies individuals with the interest in and potential for leadership positions in academic ophthalmology, began with an in-person meeting in Chicago, Illinois in July.





#### **JENNIFER LARSON, MD & TRAVIS RUMERY, DO**

served as co-directors of the department's 2024 cataract extraction phacoemulsification course. Medical and veterinary ophthalmology residents, University of Wisconsin and visiting medical students, and preresidency fellows from around the country attend the program to learn the latest in cataract removal techniques. Dr. Larson served as director of lectures and Dr. Rumery served as director of the wet lab. The course is billed as the longest running cataract extraction phacoemulsification course in the country.



#### **BURTON KUSHNER, MD**

received the Bronze Marshall M. Parks Medal from the Children's Eye Foundation of the American Association for Pediatric Ophthalmology and Strabismus. The award recognizes outstanding achievement in pediatric ophthalmology and strabismus.



#### **PROFESSOR EMERITUS RICHARD DORTZBACH, MD**

received a Lifetime Achievement Award from the University of Wisconsin Department of Ophthalmology and Visual Sciences in recognition of his commitment to educating residents and fellows and for his dedication to alumni and the University of Wisconsin Ophthalmology Alumni Association. Affectionately known as 'Dortz,' Dr. Dortzbach has been recognized nationally and internationally as one of the top professionals and most respected educators in the field. Among his many accomplishments, Dr. Dortzbach established the White Coat Society, a DOVS alumni organization that fosters a sense of community and excellence among ophthalmic plastic and reconstructive professionals across the globe.

#### **WORKING TOGETHER**

#### in Support of our Mission

Dear Alumni, Friends, Donors, Supporters, and Families,

As we reflect on the past year, we are filled with deep gratitude for your unwavering support of the Department of Ophthalmology and Visual Sciences (DOVS) at the University of Wisconsin–Madison. Your generosity and partnership have empowered us to continue advancing our mission of treating vision loss, improving sight, and preventing blindness; and to that end, changing lives through cutting-edge research, top-tier education, with skilled and compassionate patient care.

This past year, your contributions, however they were made, have enabled us to make significant strides in our groundbreaking research initiatives. Our dedicated team of clinicians and scientists is exploring innovative treatments and solutions for some of the most pressing challenges in eye health – from age-related macular degeneration and glaucoma to diabetic retinopathy and pediatric eye diseases; to corneal transplantation and cataracts, to so much more. With your help, we are driving discoveries that hold the promise of restoring vision and enhancing guality of life for patients locally and across the globe.



Equally important is the compassionate care we provide to our patients. Our clinicians are not only leaders in their fields but are deeply committed to delivering personalized, world-class care to everyone who walks through our doors. Your support helps us ensure that all patients, regardless of their circumstances, receive the lifechanging treatments they need. Yet, while we have accomplished much together, there is still so

much more to do. As we look to the future, we invite you to continue to be a part of our journey. Whether through a donation, sharing our mission with others, testimonials of the care you received, your presence at events in-person or remote; or engaging with us on new initiatives. Your support remains essential to our success! With your help, we can continue to push the boundaries of what is possible in vision care, education, and research – bringing hope and healing to more patients than ever before.

Thank you for believing in the work we do. Together, we are changing lives and shaping a future where everyone can have a chance to experience the gift of sight. I look forward to engaging with you all this year, and further sharing what you have had a hand in creating, and then help you to make a meaningful impact moving forward that is intentional and fits. And that just might be you telling your story and inspiring hope.

With heartfelt appreciation and a shared vision,

On Wisconsin! Go Badgers!

Cecil Martin Director of Development

In the classroom, we remain committed to educating the next generation of leaders in ophthalmology. Thanks to your investments, our residency and fellowship programs continue to attract and train the brightest minds in the field. These aspiring physicians and researchers will carry forward the department's legacy of excellence, ensuring that future generations receive the highest standard of care.

## Donor

#### **HONOR ROLL**

Many thanks to the generous donors who help advance vision research and support training the next generation of eve surgeons and researchers. This list represents gifts to the University of Wisconsin Department of Ophthalmology and Visual Sciences between July 1, 2023 and June 30, 2024.

#### \$**100,000** +

(Dr. Andrew T. Thliveris co-trustee), Carl & Mary Ann Berg Charitable Remainder Trust

Diane Kammer

#### ^{\$}10,000 - 99,999

Anonymous Anonymous Anonymous Anonymous Anonymous Carole Anderson

Claude & Marilyn Boles Fidelity Charitable Irving & Dorothy Levy Family Foundation Inc. Paul & Margaret Kaufman **Raymond Malayter** 

Muskingum County Community Foundation Arthur & Nancy Nesbitt Mary Pratt Frederick H Reeser & Rhonda P Reeser **Retina Research Foundation** 

#### ^{\$}5,000 - 9,999

Kathryn & James Allen Hope & Robert Christmann Morgan Stanley Global Impact Funding Trust **Robert Nickells** 

Michael T Nork Sunlight Foundation Terri Young

Guirish & Rashmi Agni Michael Altaweel & Janice Ferguson **Richard & Alice Appen** Charles Benson Curtis Brandt Cambridge Country Veterinary Svcs LLC Robert Castrovinci & Kay Rutlin Jonathan & Karina Chang Gordon & Heather Crabtree Timothy & Rebecca Daley Peggy & Richard Daluge Eau Claire Community Foundation Marshall & Lisa Flax Nicholas & Michelle Frame Ellen Geishirt

Jonathan Gunther Sarah Nehls Jocelvn Rowe Kathleen Schildroth Joseph Schmutz

Donna & George Beestman Paul & Missy Boeke Merle & Barbara Clucas Katherine Dalzotto Sheryl Handler & Donald Kohn

Daniel Knoch Jennifer Larson Yao Liu Anna Momont

Robert & Beverly Acker Richard Albert & Barbara Billings Living Trust Lois Anderson Amy Badger-Asaravala & Manish Asaravala Kenneth & Nood Baum Nancy & Edwin Bingham Patricia & Roger Birkett Marv Brand Judith Brannstrom Kitty & James Brussock Mark & Gail Bundner Joan & Douglas Butcher Deborah Cardinal & Burt Walter Klio Chatzistefanou Christine Crawford Kurt De Venecia & Kathryn Wolberg-De Venecia Laurie Elwell & Richard Niess Alan & Ramona Ehrhardt Bobby Faulkner

Judith Fuerstenberg Susana Garcia Kathleen Genin Dalia Girgis Laura Gjestson Patricia Gottfredsen Frank Grenzow Andrew & Denise Halada Andrews W Harris **Gregory Hottman** Karen Ingmundson Joanne Jeanguenat Sharon & Walter Keehn Laura Kopplin Stephen Kraft Roman Krivochenitser Gerald & Janet Kulcinski Daniel Laux Sarah & Monte Leidenix

#### ^{\$}1,000 - 4,999

- **Goddard Family Foundation** Heidi Jarecki & Robert Murphy Jasperson Family Foundation Thomas S Kemp Foundation Burton & Dale Kushner
- Trenton & Deanna Pitcher Karen & Walter Pridham Renee & John Reback
- James Trotter & Katharine Struck Charles & Joan Sholdt Melissa & Wrede Smith Kimberly Stepien & Andrew Maulbetsch Jeremy Van Buren Vanguard Charitable Endowment Program Amy Walker & Heidi Hoffland Waukesha Kennel Club Western Waukesha County Dog Training Club

#### ^{\$}500 - 999

- Julie Mares & Gary Schlichting

Alexander & Laura Ringeisen Travis & Melissa Rumery Evan Warner & Marie Daleo Wittenberg Lions Club

Claire & Robert Leverich



- Patricia & Paul Fritschel Richard & Mary Ann Ihlenfeld Gundega Korsts & James Holden
- Kali Loberger Nathan Mathews Laurie & Scott McCallum Mary Mcgowan Mary Lou Miller Frank & Helen Myers David Oldenburg James & Carole Peterson Lucille & Charles Ramshaw Connie & Dan Ryan Carl Schmidt Tetyana Schneider Mary Scidmore Dan & Sandi Simos Matthew Thompson Becca Raven & John Uminowicz Lvnn Waishwell Angeline Wang





#### We Are Pleased To

#### WELCOME NEW FACULTY TO OUR TEAM

#### **CLINICAL FACULTY**



Gordon Crabtree, MD

EDUCATION Vitreoretinal Surgery Fellowship: University of Wisconsin School of Medicine and Public Health, Madison, WI **Ophthalmology Residency:** Geisinger Eye Institute, Danville, PA Internship: Reading Hospital, Reading, PA Medical School: Jefferson Medical College, Philadelphia, PA

#### MEDICAL AND SURGICAL INTERESTS

Age-related macular degeneration (both dry and wet), diabetic macular edema, nonproliferative diabetic retinopathy, proliferative diabetic retinopathy, retinal vein occlusion, retinal artery occlusion, macular holes, epiretinal membranes, symptomatic vitreous opacities, retinal detachment, choroidal tumors, choroidal melanoma.

#### **OPTOMETRY FACULTY**



**Emily Parker, OD** 

#### EDUCATION Doctor of Optometry:

The Ohio State University College of Optometry, Columbus, OH

#### MEDICAL AND SURGICAL INTERESTS

General eye care for acute and chronic eye conditions, including: eye irritation and redness, dry eyes, glaucoma and flashes or floaters, and assisting patients who are blind or visually impaired manage compromised vision.

#### Visiting

#### **PROFESSORS**

#### Michele Bloomer, MD

University of California -San Francisco **GRAND ROUNDS** "Infectious Pathology" July 21, 2023

#### Samer Hattar, PhD

National Institute of Mental Health FRONTIERS IN VISION RESEARCH "Beyond Vision: Impact of Flight on Behavior" December 15, 2023

Julia Busik, PhD, FARVO University of Oklahoma

FRONTIERS IN VISION RESEARCH "Cholesterol Crystal Formation and the Development of Diabetic Retinopathy" May 17, 2024

#### Karl Csaky, MD, PhD

Retina Foundation of the Southwest MATTHEW D. DAVIS MD LECTURE ON CLINICAL RESEARCH "What Is the Future of Our Management of Age-related Macular Degeneration" October 13, 2023

#### John Fingert, MD, PhD

Carver College of Medicine, University of Iowa GEORGE KAMBARA, MD VISION SCIENCE SYMPOSIUM "Glaucoma genetics – Functional Analyses of Risk Factors for Polygenic Glaucoma" April 12, 2024

#### Benjamin Frankfort, MD, PhD

Cullen Eye Institute, Baylor College of Medicine FRONTIERS IN VISION RESEARCH "Glaucoma Threshold Effects in Humans and Mice" October 20, 2023

Invasive Glaucoma Disease" April 19,2024 Umang Mathur, MD Shroff's Charity Eye Hospital **GRAND ROUNDS** "Reaching the Unreached -Sustainable Eve Care" September 15, 2023 **Gregory Schwartz, PhD** 

Winberg College of Arts and Sciences, Northwestern University GEORGE KAMBARA, MD VISION SCIENCE SYMPOSIUM "The Humbling Complexity of Retinal circuits: Multimodal Classification of Amacrine and Ganalion Cells and How They Can Help Us Understand Visual Processing" April 12, 2024

#### Omolola (Lola) Idowu, MBCHB,

MRCS (Ed) LongView Eye Associates, Maryland **GRAND ROUNDS** "Primary Open Angle glaucoma (POAG): 2 + 2 = 5" November 10, 2023

#### **Michele Lim, MD**

University of California, Davis **GRAND ROUNDS** "Filling The Gap: Less Invasive Glaucoma Surgery For More

#### Deepak Shukla, PhD

University of Illinois College of Medicine GEORGE KAMBARA, MD VISION SCIENCE SYMPOSIUM "From Eve to Brain: Tracing the Pathogenic Mechanisms of HSV-1 in Vision Impairment and Neurological Dysfunction" April 12, 2024

#### **Budd Tucker, PhD**

Carver College of Medicine, University of Iowa GEORGE KAMBARA, MD VISION SCIENCE SYMPOSIUM "Using Patient Derived Induced Pluripotent Stem Cells to Model and Treat Inherited retinal Disease" April 12,2024

#### Fasika Woreta, MD, PhD

John Hopkins University **GRAND ROUNDS** "Building an Inclusive Workforce in Ophthalmology: A Program Director's Perspective" May 3, 2024

#### Shunbin Xu, MD, PhD

Wayne State University FRONTIERS IN VISION RESEARCH "S(c)ensory control by MicroRNAs in Corneal Homeostasis and Bacterial Keratitis" March 22, 2024

#### **CLINICAL AND RESEARCH FACULTY**

#### Michael M. Altaweel, MD

Professor, Retina Service Chief, Vitreoretinal Surgery Fellowship Co-Director, Co-Director of the Wisconsin Reading Center, Monroe E. Trout Chair in Eye Research, McPherson Eye Research Institute

Barbara A. Blodi, MD Matthew D. Davis Professor, Retina Research Foundation Daniel M. Albert Chair, Wisconsin Reading Center Medical Director

#### Yasmin S. Bradfield, MD

John W. Doolittle Pediatric Ophthalmology Professor, Co-Director Global **Ophthalmology Initiatives** 

Curtis R. Brandt, PhD UW Medical Foundation Professor, Vice Chair of Research

Cat N. Burkat, MD, FACS Professor. Co-Director Global Ophthalmology Initiatives

Jonathan S. Chang, MD Associate Professor, Vitreoretinal

Surgery Fellowship Co-Director, Associate Residency **Program Director** 

Roomasa Channa, MD Assistant Professor

Yanjun (Judy) Chen, MD, PhD Associate Professor, Neuroophthalmology Service Chief

Gordon Crabtree, MD Assistant Professor

Amitha Domalpally, MD, PhD Associate Professor, Wisconsin Reading Center Research Director

David M. Gamm, MD, PhD

Professor, Sandra Lemke Trout Chair in Eye Research, Retina Research Foundation Emmett A. Humble Distinguished Directorship, Director of the McPherson Eye Research Institute

Shaoqin (Sarah) Gong, PhD Vilas Distinguished Professor and Advancing Vision Science Chair Professor

Justin L. Gottlieb, MD Professor

Mrinalini Hoon, PhD Associate Professor, Retina Research Foundation Rebecca Meyer Brown Professor, McPherson Eye Research Institute

Abigail Jebarai, MD Assistant Professor

Paul L. Kaufman, MD Ernst H. Bárány Professor of Ocular Pharmacology, Department Chair Emeritus

Daniel W. Knoch, MD Carl and Mary Ann Berg Family Professor, Vice Chair of Education and Faculty Development . William S. Middleton Memorial Veterans Hospital Ophthalmology Chief, Director of Ophthalmology Medical Student Education

Laura J. Kopplin, MD, PhD Associate Professor, Uveitis Service Chief

Jennifer C. Larson, MD Assistant Professor, Surgical and Procedural Care Department Block Leader

Yao Liu, MD, MS Associate Professor, William and Phyllis Huffman Research Professor, Director of Teleophthalmology, Glaucoma Service Chief, Glaucoma Fellowship Director

Mark J. Lucarelli, MD, FACS Richard K. Dortzbach Professor of Ophthalmic Facial Plastic Surgery,

Oculoplastic and Reconstructive Surgery Service Chief, UW Health University Station Eye Clinic Medical Director

Colleen M. McDowell, PhD Associate Professor Gillian McLellan, BVMS, DACVO, DECVO, PHD Professor

Alexander R. Miranda, MD Assistant Professor, DOVS Physician Informaticist, Pediatric Ophthalmology and Adult Strabismus Service Chief

Mihai Mititelu, MD, MPH Associate Professor, Clinical Eye Research Unit Medical Director

Anna C. Momont, MD Associate Professor, Vice Chair of Resident Education, Residency Program Director, Director of DOVS Saturday Free Clinics

Freya Mowat, PhD, BVSc Assistant Professor

Sarah M. Nehls, MD Professor, LASIK Center Medical Director

Donna M. Neumann, PhD Associate Professor

**Robert W. Nickells, PhD** Frederick A. Davis Chair of Ophthalmology and Visual Sciences Professor

T. Michael Nork, MD, MS, FARVO Professor

**Heather Potter, MD** Professor, Ophthalmic Pathology Service Chief, DOVS Wellness Director

Travis C. Rumery, DO Assistant Professor, Surgical Skills Training Facility Medical Director

Patricia C. Sabb, MD Assistant Professor

Stephen K. Sauer, MD Associate Professor

Kathleen R. Schildroth, MD Assistant Professor

Melanie Schmitt, MD Associate Professor, John W. and Helen Doolittle Professor, Director of Patient Centered Care Committee

Nader Sheibani, PhD Professor, Retina Research Foundation Alice R. McPherson Research Chair

Douglas Snyder, MD Assistant Professor, DOVS Medical Director of Quality and Safety

# Ocular Genetics

John E. Temprano, MD Associate Professor, Comprehensive **Ophthalmology Service Chief** 

Assistant Professor

#### **CLINICAL ADJUNCT FACULTY**

James Bell, MD	Richard Heckert, MD	John G. Rose, MD
Joseph T. Bergmann, MD	Amol D. Kulkarni, MD	Jeffrey L. Shere, MD
Thomas Castillo, DO, MBA	Bradley M. Lemke, MD	Amy Walker, OD, MBA, FAAO
Dongmei Chen, MD	Michele Martin, OD	Wei-Chaun Wang, MD
Karina Conlin, OD	Sanbrita Mondal, OD	Kevin Wienkers, MD
Mark Duffy, MD, PhD	Asha Okorie, MD	Mitchell Wolf, MD
Daniel Fary, MD	Brett Pariseu, MD	Lee Woodward, MD
Sarah Groessl, MD	Nayan Patel, OD	
Kara Harbick, MD	William J. Reynders, MD	

#### **AFFILIATE FACULTY**

Anne Griep, PhD Professor, Cell and **Regenerative Biology** 

Natascha Merten, PhD, MS Assistant Professor, Population Health Sciences

Bikash Pattnaik, PhD, MPHIL Associate Professor, Pediatrics, Retina Research Foundation M.D. Matthews Research Professor

**Donna Peters, PhD** Professor, Pathology and Laboratory Medicine

#### Kimberly E. Stepien, MD

John W. and Helen Doolittle Professor of Ophthalmology, Co-Vice Chair of Clinical Affairs, Director, Adult Inherited Retinal Disease Clinic, Co-director,

#### Suzanne W. van Landingham, MD

#### Evan J. Warner, MD

Assistant Professor, Cornea & Anterior Segment Service Chief, Lions Eye Bank of Wisconsin Medical Director

#### Eric Weinlander, MD, FACS

Assistant Professor

#### Terri L. Young, MD, MBA, FARVO

Chair. Peter A. Duehr Professor of Ophthalmology, Pediatrics and Medical Genetics

#### Ismail Zaitoun, PhD

Assistant Professor



#### Raunak Sinha, PhD

Assistant Professor, Neuroscience, - David and Nancy Walsh Family Professorship in Vision Research

#### Yuhang Zhao, PhD

Assistant Professor. Computer Science

#### **RESIDENTS, FELLOWS, POSTDOCTORAL & GRADUATE STUDENTS**

#### RESIDENTS

#### CLASS OF 2024 ____

Jacob Abou-Hanna, MD MEDICAL SCHOOL: University of Michigan Medical School, Ann Arbor, MI

Kevin Elwood, MD MEDICAL SCHOOL: University of Texas at Austin Dell Medical School, Austin, TX

Nenita Maganti, MD MEDICAL SCHOOL: Northwestern University Feinberg School of Medicine, Chicago, IL

#### CLASS OF 2025

Breanna Aldred, MD MEDICAL SCHOOL: University of Wisconsin School of Medicine and Public Health, Madison, WI

Georges Guillaume, MD MEDICAL SCHOOL: Washington University School of Medicine, St. Louis, MO

Samuel Whittier, MD MEDICAL SCHOOL: University of Utah School of Medicine, Salt Lake City, UT

#### CLASS OF 2026 ____

**Jackson Korger, MD** MEDICAL SCHOOL: University of Wisconsin School of Medicine and Public Health, Madison, WI

Rushi Mankad, MD **MEDICAL SCHOOL**: University of New Mexico, Albuquerque, NM

#### Kevin Schneider, MD

MEDICAL SCHOOL: University of Michigan Medical School, Ann Arbor, MI

#### CLASS OF 2027 ____

Aziza Dhalai, MD MEDICAL SCHOOL: Kirk Kerkorian School of Medicine University of Nevada Las Vegas, Las Vegas, NV

Thomas Emmet, MD MEDICAL SCHOOL: University of Texas Southwestern, Dallas, TX

Claire Hermsen, MD MEDICAL SCHOOL University of Wisconsin School of Medicine and Public Health in Madison, WI

Lucas Maakestad, MD MEDICAL SCHOOL: University of Iowa Roy

J. and Lucille A. Carver College of Medicine, Iowa City, IA

#### **CLASS OF 2028**

Alana Bryant, MD MEDICAL SCHOOL: Meharry Medical College, Nashville, TN

Sabrina Fleege, MD MEDICAL SCHOOL: University of Wisconsin School of Medicine and Public Health, Madison, WI

Colin Froines, MD MEDICAL SCHOOL: University of Washington School of Medicine, Seattle, WA

Caroline Kim, MD MEDICAL SCHOOL: Virginia Tech Carilion School of Medicine, Roanoke, VA

#### **CLINICAL FELLOWS**

#### **CLASS OF 2024**

#### **Emerson Kendall, DO**

Glaucoma **RESIDENCY:** Beaumont Taylor, Tyler, MI MEDICAL SCHOOL: West Virginia School of Osteopathic Medicine, Lewisburg, WV

#### Paige Richards, MD Vitreoretinal Surgery

Madison, WI Rapids, MI

#### CURRENT CLINICAL FELLOWS

#### Tyler Etheridge, MD

Vitreoretinal Surgery, 1st year MEDICAL SCHOOL: UW-Madison School of Medicine and Public Health, Madison, WI PRE-RESIDENCY PATHOLOGY FELLOWSHIP: UW-Madison Wisconsin Reading Center, Madison, WI **RESIDENCY:** University of Utah School of Medicine, Salt Lake City, UT

#### **Elleny Gutierrez, MD**

Glaucoma MEDICAL SCHOOL: LSU School of Medicine-Shreveport, Shreveport, LA **RESIDENCY:** LSU School of Medicine-Shreveport, Shreveport, LA

## Medicine, Aurora, CO

#### PRE-RESIDENCY FELLOWSHIP PROGRAM

#### Cole Basig, DO

Ophthalmic Pathology / Imaging Fellow MEDICAL SCHOOL: Des Moines University, West Des Moines, IA

## Imaging Fellow

**RESIDENCY:** University of Wisconsin-INTERNSHIP: Spectrum Health, Grand

MEDICAL SCHOOL: Michigan State University College of Human Medicine, East Lansing, MI

#### Anna Walsh, MD

Cornea, External Disease, Refractive Surgery **RESIDENCY**: Louisiana State University, Shreveport, LA MEDICAL SCHOOL: U Tennessee HSC College of Medicine, Memphis, TN

#### Sina Rashidi Kikanloo, MD

Cornea, External Disease, **Refractive Surgery** MEDICAL SCHOOL: Albert Einstein College of Medicine, Bronx, NY **RESIDENCY:** University of Louisville School of Medicine, Louisville, KY

#### **Ryan Larochelle, MD**

Oculofacial Plastic Surgery **RESIDENCY**: University of Colorado MEDICAL SCHOOL: NYU Grossman School of Medicine, New York, NY

#### Amr (Mohammad) Sabbagh, MD

Vitreoretinal Surgery, 2nd year **RESIDENCY**: Illinois Eye and Ear Infirmary, Chicago, IL MEDICAL SCHOOL: University of Michigan Medical School, Ann Arbor, MI

#### Maria Schultz, MD

Ophthalmic Pathology / MEDICAL SCHOOL: East Tennessee State University Quillen College of Medicine, Johnson City, TN

#### Sairi Zhang, MD

Imaging Fellow **MEDICAL SCHOOL:** University of Arkansas for Medical Sciences, Little Rock, AR

#### POSTDOCTORAL STUDENTS

**David Barnett** Advisor: Freya Mowat, PhD, BVSc

Celica Bisbach Advisor: David Gamm, MD, PhD

Ruixun Cao Advisor: Sarah Gong, PhD

Qingguing Deng Advisor: Sarah Gong, PhD

Lei Gu Advisor: Sarah Gong, PhD Chayanika Gundu Advisor: Ismail Zaitoun, PhD

Kjadijeh Masumnia-Bisheh Advisor: Jeremy Rogers, PhD

Kazuya Oikawa Advisor: Gillian McLellan, BVMS, DACVO, DECVO, PHD

Zeinab Shirbaghaee Advisor: Nader Sheibani, PhD Yong-Seok Song Advisor: Nader Sheibani, PhD

Whitney Stevens-Sostre Advisor: Mrinalini Hoon, PhD

Praveen Susai Manickam Advisor: David Gamm, MD, PhD

Rousen (Alex) Xie Advisor: Sarah Gong, PhD Song Zhang

#### GRADUATE STUDENTS

Kim Edwards **PROGRAM:** Cellular and Molecular Pathology ADVISOR: David Gamm, MD, PhD

Emma Geiduschek **PROGRAM**: Neuroscience Training Program ADVISOR: Colleen McDowell, PhD

Akbar Hasanzadeh **PROGRAM**: Biomedical Engineering ADVISOR: Sarah Gong, PhD

Jacob Khoussine **PROGRAM**: Cellular and Molecular Biology; Medical Scientist Training Program ADVISOR: Mrinalini Hoon, PhD

Liu, Yijun **PROGRAM**: Neuroscience Training Program ADVISOR: Mrinalini Hoon, PhD

**Kavlev Manuel PROGRAM**: Microbiology Doctoral Training Program ADVISOR: Donna Neumann, PhD

Virginia Mathu **PROGRAM:** Comparative Biomedical Sciences ADVISOR: Gillian McLellan, BVMS,

DACVO, DECVO, PhD

Jenna Nagy PROGRAM: Cellular and Molecular Pathology ADVISOR: Raunak Sinha, PhD

**Michele Salzmann PROGRAM:** Comparative Biomedical Sciences ADVISOR: Freya Mowat, PhD, BVSc

Abhilash Sawant **PROGRAM**: Cellular and Molecular Biology ADVISOR: Mrinalini Hoon, PhD

Tanya Sharmin **PROGRAM:** Comparative Biomedical Sciences ADVISOR: Colleen McDowell, PhD

Mason Shipley **PROGRAM**: Cellular and Molecular Pathology ADVISOR: Donna Neumann, PhD

#### Yao Tong

**PROGRAM**: Biomedical Engineering ADVISOR: Sarah Gong, PhD

**Odalys Torne Escude PROGRAM:** Comparative biomedical Sciences ADVISOR: Gillian McLellan, BVMS, DACVO, DECVO, PhD

Serena Wisner **PROGRAM**: Neuroscience Training Program ADVISOR: Mrinalini Hoon, PhD

Ziyun Ye **PROGRAM:** Microbiology Doctoral **Training Program** ADVISOR: Donna Neumann, PhD

Jingcheng Zhu **PROGRAM**: Biomedical Engineering ADVISOR: Sarah Gong, PhD

Min Zhu **PROGRAM**: Chemistry ADVISOR: Sarah Gong, PhD 66 I chose UW-Madison over other programs because I feel it gave me a great opportunity to receive excellent surgical training. But it also enabled me to be with people who are interested in my future and my future wellbeing.

> ~ Emerson Kendall, DO 2024 Glaucoma Fellow Current Practice: Colorado Eye Institute, Colorado Springs, CO

#### **DEPARTMENT LEADERSHIP**

#### DEPARTMENT CHAIR AND VICE CHAIRS

Terri L. Young, MD, MBA Chair

Curtis R. Brandt, PhD, FARVO

Vice Chair of Research

Daniel W. Knoch, MD Vice Chair of Education and Faculty Development

Anna Momont, MD Vice Chair of Resident Education **Kimberly E. Stepien, MD** Co-Vice Chair of Clinical Affairs

Amy L. Walker OD, MBA, FAAO Co-Vice Chair of Clinical Affairs

Sanbrita Mondal, OD

Heather Potter, MD

Ophthalmic Pathology

John E. Temprano, MD

Evan Warner, MD

Comprehensive Ophthalmology

**Cornea and Anterior Segment** 

Vision Rehabilitation Services

#### **DEPARTMENT SERVICE CHIEFS**

**Michael Altaweel, MD** Retina

Neuro-ophthalmology

Daniel W. Knoch, MD

Veteran's Affairs Hospital

Optometry

Yanjun (Judy) Chen, MD, PhD

Karina A. Conlin, OD, FAAO

Laura Kopplin, MD, PhD Uveitis

Yao Liu, MD, MS Glaucoma

Mark Lucarelli, MD, FACS Oculoplastic & Reconstructive Surgery

Alexander R. Miranda, MD Pediatric Ophthalmology & Adult Strabismus

#### DIRECTORSHIPS

Barbara A. Blodi, MD Wisconsin Reading Center Medical Director

Yasmin Bradfield, MD Co-Director of Global **Ophthalmology Initiatives** 

Cat Burkat, MD, FACS Co-Director of Global **Ophthalmology Initiatives** 

Jonathan Chang, MD Associate Residency Program Director

Amitha Domalpally, MD, PhD Wisconsin Reading Center Research Director

**Daniel Knoch, MD** Director of Ophthalmology Medical Student Education

Mark J. Lucarelli, MD, FACS UW Health University Station Eye Clinic Medical Director

Mihai Mititelu, MD, MPH Clinical Eye Research Unit Medical Director

Anna C. Momont, MD Residency Program Director, Director of DOVS Saturday Free Clinics

Sarah Nehls, MD LASIK Center Medical Director Heather Potter, MD DOVS Wellness Director

Melanie Schmitt, MD Director of Patient Centered Care Committee

Douglas Snyder, MD DOVS Medical Director of Quality and Safety

**Travis Rumery, DO** Surgical Skills Training Facility Medical Director

Evan Warner, MD Lions Eye Bank of Wisconsin Medical Director

#### **DEPARTMENT ADMINISTRATION**

Linda Callow, CPA, MBA Chief Administrative Officer

Chris Hodges Associate Department Administrator

Tanya Lamontagne UW Health Ophthalmology Retail **Optical and Operations Manager** 

**Cecil Martin** Director of Development

**Bradley Meyers Financial Manager**  Manager

Jennie Perry-Raymond Clinical Eye Research Unit Manager

**Amy Pikalek** 

Tetyana Schneider, PhD Director of Ophthalmology **Education and Faculty Development** 

#### **ALUMNI ASSOCIATION BOARD**

**Timothy J Daley, MD** President

**Executive Director** 

**Burton Kushner, MD** 

Dalia Girgis, MD, PhD Alex Ringeisen, MD Heidi Jarecki, MD Bennett (Buz) Romanoff, MD Alon Kahana, MD, PhD Andrew Thliveris, MD, PhD Jennifer Larson, MD

Cat Burkat, MD, FACS Secretary

#### **EMERITUS FACULTY**

Daniel M. Albert, MD, MS	Richard K. Dortzbach, MD	Leonard A. Levin, MD
Richard E. Appen, MD	Ronald Engerman, PhD	Julie Mares, PhD, MSPH
Neal P. Barney, MD	Thomas D. France, MD	Frank L. Myers, MD
Suresh Chandra, MD	Gregg Heatley, MD, MMM	Arthur S. Polans, PhD
Nansi Jo Colley, PhD	Paul L. Kaufman, MD	Andrew Thliveris, MD, PhD
Karen J. Cruickshanks, PhD	Barbara E. K. Klein, MD, MPH	Ingolf Wallow, MD
Ronald P. Danis, MD	Burton J. Kushner, MD	

**Christy Murphy, COT** UW Health Ophthalmology Clinic

DOVS Communications and Marketing Director

**Christina Thomas-Virnig, PhD** Director of DOVS Translational Research

Becca Raven Uminowicz Administrative Manager

Paul Zellmer, MHA Director of UW Health Ambulatory Operations

#### PUBLICATIONS

We are proud to be a leader among our peer institutions in publication output. Our success is the result of collaborations with one another, across campus and all over the world. The following list represents peer-reviewed publications from September 1, 2023 through August 31, 2024.

Adampourezare M, Nikzad B, Amini M, Sheibani N. *Fluorimetric Detection of DNA Methylation by Cerium Oxide Nanoparticles for Early Cancer Diagnosis*. Heliyon. March 2024.

Agron E, Domalpally A, Chen Q, Lu Z, Chew EY, Keenan TDL; AREDS and AREDS2 Research Groups. *An Updated Simplified Severity Scale for Age-Related Macular Degeneration, Incorporating Reticular Pseudodrusen: Age-Related Eye Disease Study Report No. 42.* Ophthalmology. April 2024.

Agron E, Domalpally A, Cukras CA, Chew EY, Keenan TDL; AREDS2 Research Group. Critical Dependence on Area in Relationship Between ARMS2/HTRA1 Genotype and Faster Geographic Atrophy Enlargement: AREDS2 Report 33. Ophthalmology. September 2023.

Aiello LP, Blodi B, Gao X, Sun JK, Gubitosi-Klug RA, White NH, Hainsworth D, Lorenzi GM, Bebu I; DCCT/EDIC Research Group. *Ultra-Widefield and Early Treatment Diabetic Retinopathy Study 7-Field Grading of Diabetic Retinopathy*. JAMA Ophthalmology. August 2024.

Arcot Sadagopan K, Raghunandan N, Saswade NS, Kushner BJ. *Lateral Rectus Disabling and Simultaneous Modified Nishida Procedure for Exotropic Duane Retraction Syndrome* Journal of Binocular Vision and Ocular Motility. July 2024. Aref AA, Scott IU, Oden NL, Ip MS, VanVeldhuisen PC, Blodi BA; SCORE and SCORE2 Study Investigator Groups. Intraocular Pressure in Eyes With Retinal Vein Occlusion Compared With Fellow Eyes: Study of Comparative Treatments for Retinal Vein Occlusion 2 (SCORE2) Report 27. JAMA Ophthalmology. November 2023.

Arzbecker M, Kopplin LJ. *Manifestations and Management of Inflammatory Eye Disease in Patients with Inflammatory Bowel Disease*. Ocular Immunology and Inflammation. June 2024.

Au A, Ip M, Blodi BA, Scott IU, Oden NL, Van Veldhuisen PC, Sarraf D. OCT Grading System of Macular Infarction Predicts Vision in Participants with Central Retinal or Hemiretinal Vein Occlusion: A Secondary Analysis of SCORE2. American Journal of Ophthalmology. December 2023.

Ayubi GA, Dubra A. Robust Real-time Estimation of Non-uniform Angular Velocity and Sub-pixel Jitter in Images Captured with Resonant Scanners. Optics Express. December 2023. Blodi B, Gardner TW, Gao X, Sun JK, Lorenzi GM, de Koo LCO, Das A, White NH, Gubitosi-Klug RA, Aiello LP, Bebu I; DCCT/EDIC Research Group. Intensive Glycemic Management Is Associated With Reduced Retinal Structure Abnormalities on Ocular Coherence Tomography in the DCCT/EDIC Study . Diabetes Care. March 2024.

Brenner B, Xu F, Zhang Y, Kweon J, Fang R, Sheibani N, Zhang SX, Sun C, Zhang HF. Quantifying Nanoscopic Alterations Associated with Mitochondrial Dysfunction Using Three-dimensional Single-molecule Localization Microscopy. Biomedical Optics Express. February 2024. Brown JE, Fowler BJ, Channa R. *Retractable Urology Three-Pronged Grasping Forceps for Removal of Large, Nonmagnetic Intraocular Foreign Bodies*. Retinal Cases and Brief Reports. July 2024.

Brown JE, Thomas AS, Armbrust KR, Boyd K, Berkenstock M, Kopplin LJ. *Therapeutic Outcomes of Non-Infectious Scleritis Treated with Tumor Necrosis Factor-Alpha Inhibitors*. Ocular Immunology and Inflammation. August 2024.

Channa R, Wolf RM, Simo R, Brigell M, Fort P, Curcio C, Lynch S, Verbraak F, Abramoff MD; Diabetic Retinal Neurodegeneration and Macular Edema Working Group of the Mary Tyler Moore Vision Initiative's Diabetic Retinal Disease Staging Update Project. A New Approach to Staging Diabetic Eye Disease: Staging of Diabetic Retinal Neurodegeneration and Diabetic Macular Edema. Ophthalmology Science. October 2023.

Charters, L. Reviewed by Kopplin, L. *Multimodal Imaging: Focusing on Uveitis. Physician Discusses 5 Keys to Achieve Optimal Results for Patients.* Ophthalmology Times. October 2023.

Chen Y, Kellom ER. *A Rare, Likely Pathogenic Variant Causing Leber's Hereditary Optic Neuropathy in Threegeneration Females of an African-American Family*. American Journal of Ophthalmology Case Reports. October 2023. Coronado I, Pachade S, Dawoodally H, Salazar Marioni S, Yan J, Abdelkhaleq R, Bahrainian M, Jagolino-Cole A, Channa R, Sheth SA, Giancardo L. *Foveal Avascular Zone segmentation Using Deep Learning-driven Imagelevel Optimization and Fundus Photographs*. Proceedings IEEE International Symposium on Biomedical Imaging. September 2023.

Coronado I, Pachade S, Trucco E, Abdelkhaleq R, Yan J, Salazar-Marioni S, Jagolino-Cole A, Bahrainian M, Channa R, Sheth SA, Giancardo L. Synthetic OCT-A Blood Vessel Maps Using Fundus Images and Generative Adversarial Networks. Scientific Reports. September 2023.

Croasdale CR, Weinlander E, Boyce TG. *Mpox Keratitis: A Case Report and Review*. Cornea. July 2024.

Croft MA, Mcdonald JP, Kiland J, Mattison JA, Roth GS, Ingram D, Kaufman PL. Sex as a Risk Factor Regarding Presbyopia in the Rhesus Monkey. PLoS One. April 2024.

Dallalzadeh LO, Ting M, Topilow N, Robbins SL, Liu CY, Burkat CN, Korn BS, Kikkawa DO. *Teprotumumabrelated Cutaneous Hypersensitivity Reactions. Ophthalmic Plastic and Reconstructive Surgery*. September 2023.

Dharmarajan S, Carrillo C, Qi Z, Wilson JM, Baucum AJ 2nd, Sorenson CM, Sheibani N, Belecky-Adams TL. *Retinal Inflammation in Murine Models of Type 1 and Type 2 Diabetes with Diabetic Retinopathy*. Diabetologia. September 2023.

Doddi S, Hamoud AR, Eby HM, Zhang X, Imami AS, Shedroff E, Schiefer I, Moreno-Lopez J, Gamm D, Meller J, McCullumsmith RE. *Transcriptomic Analysis of Metastatic Uveal Melanoma and Differences in Male and Female Patients*. Cancer Genomics & Proteomics. July – August 2024. Domalpally A, Slater R, Linderman RE, Balaji R, Bogost J, Voland R, Pak J, Blodi BA, Channa R, Fong D, Chew EY. Strong Versus Weak Data Labeling for Artificial Intelligence Algorithms in the Measurement of Geographic Atrophy. Ophthalmology Science. January 2024.

Donohue LK, Buesing M, Peterson KD, Ersoz C, Russell LJ, Mowat FM. Screen *Interaction Behavior in Companion Dogs: Results from a Dog Owner Survey*. Applied Animal Behaviour Science. January 2024.

Duic C, Mukherjee S, Pfau K, Thavikulwat A, Domalpally A, Keenan TDL, Chew E, Cukras C. *Local and Global Associations of Reticular Pseudodrusen in Age-related Macular Degeneration*. Ophthalmology Retina. January 2024.

Duncan N, Barrett N, Schildroth K, Chang JS, Channa R, Rickels K, Domalpally A, Blodi B. Comparison of Standard 7-Field, Clarus, and Optos Ultrawidefield Imaging Systems for Diabetic Retinopathy (COCO Study). Ophthalmology Science. November 2023.

Elwood KF, Fleege SM, Bradfield YS, Altaweel MM. Coats' Disease in a Patient With Cornelia de Lange Syndrome: Management With Laser and Bevacizumab. Journal of Pediatric Ophthalmology & Strabismus. August 2023.

Elwood KF, Richards PJ, Schildroth KR, Mititelu M. *Peripheral Exudative Hemorrhagic Chorioretinopathy* (*PEHCR*): *Diagnostic and Therapeutic Challenges*. Medicina (Kaunas). August 2023.

Elwood KF, Warner EJ, Chang JS, Kopplin LJ. *Aspergillus Endophthalmitis Secondary to Infectious Scleritis: Utility of Diagnostic PCR*. Retinal Cases and Brief Reports. July 2024.

Faralli JA, Filla MS, Peters DM. *Role* of *Integrins in the Development of Fibrosis in the Trabecular Meshwork*. Frontiers in Ophthalmology (Lausanne). October 2023. Faralli JA, Filla MS, Yang YF, Sun YY, Johns K, Keller KE, Peters DM. *Digital Spatial Profiling of Segmental Outflow Regions in Trabecular Meshwork Reveals a Role for ADAM15*. PLoS One. February 2024.

Francis JM, Mowat FM, Ludwig A, Hicks JM, Pumphrey SA. *Quantifying Refractive Error in Companion Dogs with and Without Nuclear Sclerosis: 229 Eyes From 118 Dogs*. Veterinary Ophthalmology. November 2023.

Geiduschek EK, McDowell CM. *The Fibro-Inflammatory Response in the Glaucomatous Optic Nerve Head*. International Journal of Molecular Sciences. August 2023.

Grimes WN, Berson DM, Sabnis A, Hoon M, Sinha R, Tian H, Diamond JS. *The Retina's Neurovascular Unit: Müller Glial Sheaths and Neuronal Contacts*. bioRxiv [Preprint]. May 2024.

Harbour JW, Correa ZM, Schefler AC, Mruthyunjaya P, Materin MA, Aaberg TA Jr, Skalet AH, Reichstein DA, Weis E, Kim IK, Fuller TS, Demirci H, Piggott KD, Williams BK, Shildkrot E, Capone A Jr, Oliver SC, Walter SD, Mason J 3rd, Char DH, Altaweel M, Wells JR, Duker JS, Hovland PG, Gombos DS, Tsai T, Javid C, Marr BP, Gao A, Decatur CL, Dollar JJ, Kurtenbach S, Zhang S. 15-Gene Expression Profile and PRAME as Integrated Prognostic Test for Uveal Melanoma: First Report of Collaborative Ocular Oncology Group Study No. 2 (COOG2.1). Journal of Clinical Oncology. July 2024.

Heier JS, Lad EM, Holz FG, Rosenfeld PJ, Guymer RH, Boyer D, Grossi F, Baumal CR, Korobelnik JF, Slakter JS, Waheed NK, Metlapally R, Pearce I, Steinle N, Francone AA, Hu A, Lally DR, Deschatelets P, Francois C, Bliss C, Staurenghi G, Monés J, Singh RP, Ribeiro R, Wykoff CC; OAKS and DERBY study investigators. *Pegcetacoplan for the Treatment of Geographic Atrophy Secondary to Age-related Macular Degeneration (OAKS and DERBY): Two Multicentre, Randomised, Double-masked, Sham-controlled, Phase 3 Trials*. Lancet. October 2023.

Hoang J, Gutowski M, Altaweel M, Liu Y. Combined Minimally Invasive Conjunctival Surgery with Lens Repositioning for Traumatic Bleb Leak with Dislocated Intraocular Lens. Trauma Case Reports. September 2023.

Huang C, Channa R, Zhang AY. Cataract Surgery Decreases Risk of Falls in Elderly Patients with Comorbid Agerelated Macular Degeneration. Clinical & Experimental Ophthalmology. August 2024.

Huang JJ, Channa R, Wolf RM, Dong Y, Liang M, Wang J, Abramoff MD, Liu TYA. Autonomous Artificial Intelligence for Diabetic Eye Disease Increases Access and Health Equity in Underserved Populations. NPJ Digital Medicine. July 2024.

Huang L, Dalzotto KF, Duffy MT, Gurwin J, van Landingham SW. Alternaria Fungal Dacryocystitis with Cutaneous Fistula: A Case Report. Orbit. November 2023.

Huang L, Kellom E, Stepien K. Male Infertility May Be Associated with IFT140-related Autosomal Recessive Retinitis Pigmentosa. Ophthalmic Genetics. December 2023.

Ip MS, Scott IU, VanVeldhuisen PC, Oden NL, Blodi BA; SCORE2 Investigator Group. Month 60 Imaging Findings and Relationship to Treatment Outcomes Following Anti-VEGF Therapy for Macular Edema Due to Central or Hemi Retinal Vein Occlusion. American Journal of Ophthalmology. December 2023.

Jain AS, Duncan NB, Potter HD, Burkat CN, Warner EJ. A Rare Case of Acantholytic Squamous Cell Carcinoma Presenting on Non-sun Exposed Palpebral Conjunctiva. American Journal of Ophthalmology Case Reports. June 2024.

Kaur S, Bradfield Y, As V, Gupta K, Gupta P, Sukhija J. Anterior Segment Optical Coherence Tomography (AS-OCT) in Strabismus Following Trauma. Journal of the American Association for Pediatric Ophthalmology and Strabismus. June 2024.

Keenan TDL, Agron E, Keane PA, Domalpally A, Chew EY; AREDS and AREDS2 Research Groups. Oral Antioxidant and Lutein/Zeaxanthin Supplements Slow Geographic Atrophy Progression to the Fovea in Age-Related Macular Degeneration. Ophthalmology. July 2024.

Kolb AW, Chau VQ, Miller DL, Yannuzzi NA, Brandt CR. *Phylogenetic and* **Recombination Analysis of Clinical** Vitreous Humor-Derived Adenovirus Isolates Reveals Discordance Between Serotype and Phylogeny. Investigative Ophthalmology & Visual Science. February 2024.

Kuranz CV, Larson J. Cranial Nerve VI Palsy Secondary to Herpes Zoster Ophthalmicus: A Case Report and Literature Review. WMJ. July 2024.

Larson J, Arzbecker M. Anisocoria Following Uncomplicated Cataract Surgery. WMJ. July 2024.

Larsen MC, Rondelli CM, Almeldin A, Song YS, N'Jai A, Alexander DL, Forsberg EC, Sheibani N, Jefcoate CR. AhR and CYP1B1 Control Oxygen Effects on Bone Marrow Progenitor Cells: The Enrichment of Multiple **Olfactory Receptors as Potential** Microbiome Sensors. International Journal of Molecular Sciences. November 2023.

Latifi-Navid H, Barzegar Behrooz A, Jamehdor S, Davari M, Latifinavid M, Zolfaghari N, Piroozmand S, Taghizadeh S, Bourbour M, Shemshaki G, Latifi-Navid S, Arab SS, Soheili ZS, Ahmadieh H, Sheibani N. Construction of an Exudative Age-Related Macular Degeneration Diagnostic and Therapeutic Molecular Network Using Multi-Layer Network Analysis, a Fuzzy Logic Model, and Deep Learning Techniques: Are Retinal and Brain Neurodegenerative Disorders Related? Pharmaceuticals (Basel). November 2023.

Lawler T, Mares JA, Liu Z, Thuruthumaly C, Etheridge T, Vajaranant TS, Domalpally A, Hammond BR, Wallace RB, Tinker LF, Nalbandyan M, Klein BEK, Liu Y; Carotenoids in Age-Related Eye Disease Study Investigators; Second Carotenoids in Age-Related Eye Disease Study Research Group. Association of Macular Pigment Optical Density with Retinal Layer Thicknesses in Eyes With and Without Manifest Primary Open-angle Glaucoma . BMJ Open Ophthalmology. October 2023.

Lee DJ, Seto S, Banghart M, Boyd K, Thuruthumaly C, Suhler EB, Kopplin LJ. Risk Factors Associated with **Unexpected Refractive Outcomes** in Uveitic Cataract Surgery. Ocular Immunology and Inflammation. July 2024.

Liu B, Yang H, Song YS, Sorenson CM, Sheibani N. Thrombospondin-1 in Vascular Development, Vascular Function, and Vascular Disease. Seminars in Cell & Developmental Biology. March 2024.

Liu C, Lin J, Yang H, Li N, Tang L, Neumann D, Ding X, Zhu L. NFAT5 **Restricts Bovine Herpesvirus 1** Productive Infection in MDBK Cell Cultures. Microbiology Spectrum. August 2023.

Liu CJ, Smith JT, Wang Y, Ouellette JN, Rogers JD, Oliner JD, Szulczewski M, Wait E, Brown W, Wax A, Eliceiri KW, Rafter J. Assessing Cell Viability with Dynamic Optical Coherence Microscopy. Biomedical Optics Express. February 2024.

Liu Y, Lawler T, Liu Z, Thuruthumaly C, Vajaranant T, Wallace R, Tinker L, Nalbandyan M, Mares J. Low Macular Pigment Optical Density Is Associated with Manifest Primary Open-Angle Glaucoma in Older Women. Current Developments in Nutrition. May 2024.

Liu Y, Yu M, LaMantia JN, Mason Lobo J, Boutilier JJ, Liu Y, Brennan MB. Associations Between Specialty Care and Improved Outcomes Among Patients with Diabetic Foot Ulcers. PLoS One. December 2023.

Liu C, Yuan W, Yang H, Ni J, Tang L, Zhao H, Neumann D, Ding X, Zhu L. Associating Bovine Herpesvirus 1 Envelope Glycoprotein qD with Activated Phospho-PLCgamma1(S1248). Microbiology Spectrum. September 2023.

Liu TYA, Huang J, Channa R, Wolf R, Dong Y, Liang M, Wang J, Abramoff M. Autonomous Artificial Intelligence Increases Access and Health Equity in Underserved Populations with Diabetes. Research Square. March 2024.

Liu TYA, Shpigel J, Khan F, Smith K, Prichett L, Channa R, Kanbour S, Jones M, Abusamaan MS, Sidhaye A, Mathioudakis N, Wolf RM. Use of Diabetes Technologies and Retinopathy in Adults With Type 1 Diabetes. JAMA Network Open. March 2024.

MacLaren RE, Lam BL, Fischer MD, Holz FG, Pennesi ME, Birch DG, Sankila EM, Meunier IA, Stepien KE, Sallum JMF, Li J, Yoon D, Panda S, Gow JA; NIGHT Study Group. A Prospective, Observational, Non-Interventional Clinical Study of Participants With Choroideremia: The NIGHT Study. American Journal of Ophthalmology. February 2024.

Maddox JW, Ordemann GJ, Vázquez JR, Huang A, Gault C, Wisner SR, Randall K, Futagi D, DeVries SH, Hoon M, Lee A. A Non-conducting Role of the Cav1.4 Ca2+Channel Drives Homeostatic Plasticity at the Cone Photoreceptor Synapse. bioRxiv [Preprint]. December 2023.

Maes ME, Donahue RJ, Schlamp CL, Marola OJ, Libby RT, Nickells RW. **BAX** Activation in Mouse Retinal Ganglion Cells Occurs in Two Temporally and Mechanistically Distinct Steps. Molecular Neurodegeneration. September 2023.

Maganti N, Crabtree GS, Chang JS, Schildroth KR. A Case of Rhegmatogenous Retinal Detachment in Chronic Myeloid Leukemia. Retinal Cases and Brief Reports. March 2024.

January 2024.

July 2024.

Micheletti JM, McCauley MB, Duncan N, Hall B. Biometric Indicators for Maximizing Intermediate Vision with a Monofocal IOL. Clinical Ophthalmology. December 2023.

Maganti N, Huang L, Banghart M, Channa R, Chang JS, van Landingham, SW. Ocular Emergencies During the Coronavirus Disease 'Safer at Home Order' in Wisconsin. Wisconsin Medical Journal. December 2023.

Maganti N, Whittier SA, Warner EJ. Peripheral Ulcerative Keratitis Associated with Tralokinumab Therapy: A Case Report and Review of IL-13 Inhibitor-associated Ocular Surface Disease. Journal of Ophthalmic Inflammation and Infection. April 2024.

Malih S, Song YS, Sorenson CM, Sheibani N. Choroidal Mast Cells and Pathophysiology of Age-Related Macular Degeneration. Cells. December 2023.

Mehta CH, Tumin D, Regan KA, Honaker MD. Should the Adenoma Detection Rate Quality Metric Vary By Age? Journal of Gastrointestinal Surgery.

Merten N, Pinto AA, Paulsen AJ, Chen Y, Engelman CD, Hancock LM, Johnson SC, Schubert CR. Associations of Midlife Lifestyle and Health Factors with Long-Term Changes in Blood-Based Biomarkers of Alzheimer's Disease and Neurodegeneration. Journal of Alzheimer's Disease. November 2023.

Merten N, Fischer ME, Pinto AA, Chappell RJ, Schubert CR. Lifestyle and Factors of Vascular and Metabolic Health and Inflammation are Associated with Sensorineuralneurocognitive Aging in Older Adults. Frontiers in Epidemiology.

Multicenter Uveitis Steroid Treatment Trial (MUST) Research Group, Writing Committee; Acharya NR, Vitale AT, Sugar EA, Holbrook JT, Burke AE, Thorne JE, Altaweel MM, Kempen JH, Jabs DA. Intravitreal Therapy for Uveitic Macular Edema-Ranibizumab versus Methotrexate versus the Dexamethasone Implant: The MERIT Trial Results. Ophthalmology. September 2023.

Mowat FM, Iwabe S, Aquirre GD, Petersen-Jones SM. Consensus Guidelines for Nomenclature of **Companion Animal Inherited Retinal** Disorders. Veterinary Ophthalmology. February 2024.

Nemati SS, Sadeghi L, Dehghan G, Sheibani N. Lateralization of the Hippocampus: A Review of Molecular, Functional, and Physiological Properties in Health and Disease. Behavioural Brain Research. September 2023.

Ofri R, Millichamp NJ, Keller C, McLellan GJ, Komáromy AM, Morton D, Matas M, Michau TM, Coall S, Sansom J, Leonard BC. Concerns About a Dog Model of Dry Eye Disease. Translational Vision Science & Technology. March 2024.

Omatsu M, Nakanishi Y, Iwane K, Aoyama N, Duran A, Muta Y, Martinez-Ordonez A, Han Q, Agatsuma N, Mizukoshi K, Kawai M, Yamakawa G, Namikawa M, Hamada K, Fukunaga Y, Utsumi T, Sono M, Masuda T, Hata A, Araki O, Nagao M, Yoshikawa T, Ogawa S, Hiramatsu Y, Tsuda M, Maruno T, Kogame T, Kasashima H, Kakiuchi N, Nakagawa MM, Kawada K, Yashiro M, Maeda K, Saito Y, Matozaki T, Fukuda A, Kabashima K, Obama K, Ogawa S, Sheibani N, Diaz-Meco MT, Moscat J, Seno H. THBS1-producing Tumorinfiltrating Monocyte-like Cells Contribute to Immunosuppression and Metastasis in Colorectal Cancer. Nature Communications. September 2023.

Ong SS, Peavey JJ, Hiatt KD, Whitlow CT, Sappington RM, Thompson AC, Lockhart SN, Chen H, Craft S, Rapp SR, Fitzpatrick AL, Heckbert SR, Luchsinger JA, Klein BEK, Meuer SM, Cotch MF, Wong TY, Hughes TM. Association of Fractal Dimension and Other Retinal Vascular Network Parameters with Cognitive Performance and Neuroimaging Biomarkers: The Multi-Ethnic Study of Atherosclerosis (MESA). Alzheimer's & Dementia. October 2023.

Paulsen AJ, Pinto AA, Schubert CR, Chappell RJ, Chen Y, Engelman CD, Ferrucci L, Hancock LM, Johnson SC, Merten N. *Midlife Sensory and Motor Functions Improve Prediction of Blood-based Measures of Neurodegeneration and Alzheimer's Disease in Late Middle-age*. Alzheimer's & Dementia (Amsterdam, Netherlands). March 2024.

Pelayo C, Hoang J, Mora Pinzón M, Lock LJ, Fowlkes C, Stevens CL, Jacobson NA, Channa R, Liu Y. Perspectives of Latinx Patients with Diabetes on Teleophthalmology, Artificial Intelligence-Based Image Interpretation, and Virtual Care: A Qualitative Study. Telemedicine Reports. October 2023.

Pelayo C, Mora Pinzón M, Lock LJ, Fowlkes C, Stevens CL, Hoang J, Garcia JL, Jacobson NA, Channa R, Liu Y. *Factors Influencing Eye Screening Adherence Among Latinx Patients With Diabetes: A Qualitative Study*. Translational Vision Science & Technology. December 2023.

Rana K, Juniat V, Patel S, Avey G, Lucarelli MJ, Selva D. Orbital Artifacts on MRI. Ophthalmic Plastic & Reconstructive Surgery. August 2023. Richards PJ, Kulkarni AD, Nork TM, Leys M, Hinkle D, Conlin KA, Chang S, Chang JS. *Nonsurgical Resolution of Full-thickness Macular Holes without Vitreomacular Traction*. Retinal Cases and Brief Report. September 2023. Rogers CM, Salzman MM, Li Z, Merten N, Russell LJ, Lillesand HK, Mowat FM. *Subjective Vision Assessment in Companion Dogs Using DogVLQ Demonstrates Age-associated Visual Dysfunction*. Frontiers in Veterinary Science. August 2023.

Safai A, Froines C, Slater R, Linderman RE, Bogost J, Pacheco C, Voland R, Pak J, Tiwari P, Channa R, Domalpally A. *Quantifying Geographic Atrophy in Age-Related Macular Degeneration: A Comparative Analysis Across 12 Deep Learning Models*. Investigative Ophthalmology & Visual Science. July 2024.

Saha A, Zuniga J, Mian K, Zhai H, Derr PJ, Hoon M, Sinha R. *Regional Variation in the Organization and Connectivity of the First Synapse in the Primate Night Vision Pathway*. iScience. October 2023.

Salzman MM, Takimoto T, Foster ML, Mowat FM. *Differential Gene Expression Between Central and Peripheral Retinal Regions in Dogs and Comparison with Humans*. Experimental Eye Research. June 2024.

Sauter MM, Noel H, Brandt CR. *The RLR Intrinsic Antiviral System is Expressed in Neural Retina and Restricts Lentiviral Transduction of Human Mueller Cells*. Experimental Eye Research. September 2023.

Schildroth KR, Wingelaar MJ, Boeke PS, Ip MS, Chang JS, Gottlieb JL, Nork TM, Peterson K, Altaweel MM. *The Wisconsin Silicone Oil Study (Report #1): Anatomical and Functional Outcomes of Repair of Retinal Detachment With Proliferative Vitreoretinopathy*. Eye (London). May 2024.

Schubert CR, Paulsen AJ, Pinto AA, Chappell RJ, Chen Y, Ferrucci L, Hancock LM, Cruickshanks KJ, Merten N. *Effect of Neurotoxin Exposure on Blood Biomarkers of Neurodegeneration and Alzheimer Disease*. Alzheimer Disease & Associated Disorders. September 2023. Schubert CR, Pinto AA, Paulsen AJ, Chappell RJ, Chen Y, Engelman CD, Ferrucci L, Hancock LM, Johnson SC, Merten N. *Midlife Sensory and Motor Functions Improve Long-term Predictions of Cognitive Decline and Incidence of Cognitive Impairment*. Alzheimers & Dement (Amsterdam). January 2024.

Scott-McKean JJ, Matsuyama M, Guo CW, Ni L, Sassouni B, Kurup S, Nickells R, Matsuyama S. Cytoprotective Small Compound M109S Attenuated Retinal Ganglion Cell Degeneration Induced by Optic Nerve Crush in Mice. Cells. May 2024.

Scott IU, Oden NL, Ip MS, VanVeldhuisen PC, Blodi BA; SCORE2 Study Investigator Group. Association of Retinal Thickness at Month 1 Post-Treatment with Later Thickness and Visual Acuity in Central Vein Occlusion. American Journal of Ophthalmology. May 2024.

Sheibani N, Song YS, Farnoodian M, Inampudi S, Wang S, Darjatmoko SR, Sorenson CM. *Artesunate Mitigates Choroidal Neovascularization and Scar Formation*. Experimental Eye Research. October 2023.

Shirasu T, Yodsanit N, Li J, Huang Y, Xie X, Tang R, Wang Q, Zhang M, Urabe G, Webb A, Wang Y, Wang X, Xie R, Wang B, Kent KC, Gong S, Guo LW. *Neointima Abating and Endothelium Preserving - An Adventitia-localized Nanoformulation to Inhibit the Epigenetic Writer DOT1L*. Biomaterials. October 2023.

Shou BL, Venkatesh K, Chen C, Ghidey R, Lee JH, Wang J, Channa R, Wolf RM, Abramoff MD, Liu TYA. *Risk Factors for Nondiagnostic Imaging in a Real-World Deployment of Artificial Intelligence Diabetic Retinal Examinations in an Integrated Health Care System: Maximizing Workflow Efficiency Through Predictive Dilation.* Journal of Diabetes and Science Technology. October 2023. Singh RB, Dohlman TH, Ivanov A, Hall N, Ross C, Elze T, Miller JW, Lorch A, Yuksel E, Yin J, Dana R; IRIS Registry Data Analytic Center Consortium. *Corneal Opacity in the United States: An American Academy of Ophthalmology IRIS® Registry (Intelligent Research in Sight) Study*. Ophthalmology. July 2024.

Sorenson CM, Belecky-Adams TL, Sheibani N. *Editorial: Ocular Fibrosis: Molecular and Cellular MOechanisms and Treatment Modalities*. Frontiers in Ophthalmology (Lausanne). January 2024.

Sorenson CM, Gurel Z, Song YS, Peterson KD, Blodi BA, Sheibani N. *Thrombospondin-1, BIM and CFH Polymorphisms and Response to Anti-VEGF Treatment in Neovascular Age-related Macular Degeneration Patients*. PLoS One. February 2024.

Sterner RC, Downie EM, Duncan NB, Wang Q, Vander Zee B, Potter HA, Lucarelli MJ. *A Case of Malignant Transformation of an Orbital Epidermoid Cyst to Cystic Squamous Cell Carcinoma*. Ophthalmic Plastic & Reconstructive Surgery. August 2024.

Tan TE, Jampol LM, Ferris FL, Tadayoni R, Sadda SR, Chong V, Domalpally A, Blodi BL, Duh EJ, Curcio CA, Antonetti DA, Dutta S, Levine SR, Sun JK, Gardner TW, Wong TY. *Imaging Modalities for Assessing the Vascular Component of Diabetic Retinal Disease: Review and Consensus for an Updated Staging System*. Ophthalmology Science. December 2023.

Trotier DC, Huang L, van Landingham SW, Burr AR, Ma VT. *Review of Recent Advances in Managing Periocular Skin Malignancies*. Frontiers in Oncology. March 2024.

Udeh A, Huh D, Young T, Knight O, Woreta F. *Disparities in Promotion and Retention Rates Among Underrepresented in Medicine Faculty in U.S. Ophthalmology Departments.* American Journal of Ophthalmology. September 2023. November 2023. Wisner SR, Saha A, Grimes WN, Mizerska K, Kolarik HJ, Wallin J, Diamond JS, Sinha R, Hoon M. Sensory Deprivation Arrests Cellular and Synaptic Development of the Night-vision Circuitry in the Retina. Current Biology. September 2023.

Wolf RM, Channa R, Liu TYA, Zehra A, Bromberger L, Patel D, Ananthakrishnan A, Brown EA, Prichett L, Lehmann HP, Abramoff MD. *Autonomous Artificial Intelligence Increases Screening and Follow-up for Diabetic Retinopathy in Youth: the ACCESS Randomized Control Trial*. Nature Communications. January 2024.

Wurl JA, Mac Nair CE, Dietz JA, Shestopalov VI, Nickells RW. Contralateral Astrocyte Response to Acute Optic Nerve Damage Is Mitigated by PANX1 Channel Activity. International Journal of Molecular Sciences. October 2023.

Ulloa-Padilla JP, Burkat CN, Morgenstern KE. *Topical Application of Perchlorate: A Toxicity Study in Rats*. Ophthalmic Plastic & Reconstructive Surgery. March 2024.

Wang C, Cui H, Zhang Q, Calle P, Yan Y, Yan F, Fung KM, Patel SG, Yu Z, Duguay S, Vanlandingham W, Jain A, Pan C, Tang Q. *Automatic Renal Carcinoma Biopsy Guidance Using Forward-viewing Endoscopic Optical Coherence Tomography and Deep Learning*. Communications Engineering. August 2024.

Warner EJ. *Laser in Situ Keratomileusis Flap Free-Floating on Interface Edema in Acute Corneal Hydrops*. JAMA Ophthalmology. March 2024.

Warner EJ, Bradfield YS, Shatten J. Cystic Focal Ectasia Due to Moraxella Keratitis Identified in Formalin-Fixed Tissue. Ophthalmology. September 2023.

Williams BN, Draper A, Lang PF, Lewis TR, Smith AL, Mayerl SJ, Rougie M, Simon JM, Arshavsky VY, Greenwald SH, Gamm DM, Pinilla I, Philpot BD. *Heterogeneity in the Progression of Retinal Pathologies in Mice Harboring Patient Mimicking Impg2 Mutations*. Human Molecular Genetics. November 2023. Wygnanski-Jaffe T, Kushner BJ, Moshkovitz A, Belkin M, Yehezkel O; CureSight Pivotal Trial Group. *Highadherence Dichoptic Treatment Versus Patching in Anisometropic and Small Angle Strabismus Amblyopia: A Randomized Controlled Trial.* American Journal of Ophthalmology. August 2024.

Wygnanski-Jaffe T, Moshkovitz A, Kushner BJ, Belkin M, Yehezkel O; CureSight Pivotal Trial Group. *Binocular Home Treatment for Amblyopia: Gains Stable for One Year*. American Journal of Ophthalmology. February 2024.

Xie Z, Zhang T, Kim S, Lu J, Zhang W, Lin CH, Wu MR, Davis A, Channa R, Giancardo L, Chen H, Wang S, Chen R, Zhi D. *iGWAS: Image-based Genomewide Association of Self-supervised Deep Phenotyping of Retina Fundus Images*. PLoS Genetics. May 2024.

Yang H, Gu W, Ni J, Ma Y, Li S, Neumann D, Ding X, Zhu L. *Carnitine Palmitoyltransferase 1A is Potentially Involved in Bovine Herpesvirus 1 Productive Infection*. Veterinary Microbiology. November 2023.

Yang S, Morton Z, Sautter M, Young G, Petrisor D, Chandra SR, Wax MK. Long-Term Plate Complications in Patient-Specific Plates Utilizing Computer-Aided Design. Laryngoscope. July 2024.

Young TL. Using Adjustable-Focus Spectacles in Young Children to Meet Increasing Eyecare Needs. JAMA Ophthalmology. August 2023.

Zhu A, Aftab OM, Mahajan J, Burkat CN. Ocular Adverse Effects of Overthe-Counter Cosmetics and Personal Care Products Reported to the Food and Drug Administration. Ophthalmic Plastic & Reconstructive Surgery. August 2024.

Zhu J, Xie R, Gao R, Zhao Y, Yodsanit N, Zhu M, Burger JC, Ye M, Tong Y, Gong S. *Multimodal Nanoimmunotherapy Engages Neutrophils to Eliminate Staphylococcus Aureus Infections*. Nature Nanotechnology. April 2024.



2828 MARSHALL CT SUITE 200 MADISON, WI 53705



# EXAMPORTANT WORK

