InSight 2025

Community Report

UW Medicine

UNIVERSITY of WASHINGTON

DEPARTMENT OF
OPHTHALMOLOGY

UW Medicine Department of Ophthalmology faculty at their January 2026 annual retreat.

2025 IMPACT REPORT

Education

650 Applications for five residency positions

20 Residents

Research

13 Laboratories

67 Research Awards FY25

$24M Total research funding FY25

Faculty

50 Faculty Members

116 Publications 2024-25 Academic Year

Patient Care

1,500 Emergency Visits

5,000 Patient Surgeries

100,000 Patient Care Visits (all sites)

Patient Satisfaction

4,155 Patient Surveys

96% 9/10 or 10/10

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Message from the Chair, Russ Van Gelder, MD, PhD

On behalf of the Department of Ophthalmology at UW Medicine, it is my pleasure to present our 2025 Community Report.

The 2025 calendar year has been the most unusual – and in many ways challenging – in my almost 18 years as chair. As you are aware, substantial changes in Federal policy have occurred in the past year that have impacted our NIH grant funding and may impact our payments for clinical services. In anticipation, the University of Washington has implemented significant austerity measures. Despite this, our research continues at a brisk pace, and we continue to provide outstanding patient care.

The department remains resilient in its pursuit of our singular mission: to alleviate suffering from eye disease. We continue to do this through our robust research programs, outstanding patient care and educational programs to train the next generation of physicians.

In this report you will read about our real world impact in several areas; including:

• The Kren Engineering-based Medicine Initiative funded by a very generous gift from George and Martina Kren;

• The myopia-mitigating spectacles invented by Drs. Jay and Maureen Neitz now used by over one million children worldwide;

• The development of a novel blood test that can tell which parent's DNA carried the disease-causing gene mutation for retinoblastoma, a rare, hereditary eye cancer.

Our vision scientists are committed to improving diagnosis, treatment, and ultimately finding cures for diseases of the eye and visual system. Collectively, the department published more than 100 papers during the 2024-25 academic year. Our department is among the top 10 in the nation in NIH funding among ophthalmology departments, and the University of Washington as a whole is second for National Eye Institute funding.

We are providing more care to the community than ever before, and our patients remain highly satisfied with their care. The department has seven major sites of practice in the Puget Sound area. We serve as a major referral center, seeing patients from the five-state WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) region. We continue to provide many services rare in the community, including ocular oncology, uveitis, and medical and hereditary retinal disease.

We are training some of the best young ophthalmologists in the nation. We currently train 20 residents (adding an additional resident in 2026), and seven fellows, with the addition of new fellowships in ocular oncology and neuro-ophthalmology. Our residency training program remains one of the most competitive in the country.

We thrive in partnership with our generous community. Our philanthropic partners' generosity accelerates our ability to conduct cutting-edge research, provide excellent patient care, and train the next generation of ophthalmologists. Endowments and individual gifts are gratefully acknowledged in this report.

On behalf of our whole department, I hope you enjoy reading about some of our accomplishments this past year.

Russell N. Van Gelder, MD, PhD
Boyd K. Bucey Memorial Professor and Chair
Department of Ophthalmology, University of Washington
Director, Roger and Angie Karalis Johnson Retina Center
Director, UW Vision Science Center

New test detects parent-of-origin in hereditary eye cancer

UW Ophthalmology faculty and Roger and Angie Karalis Johnson Retina Center faculty who care for children with retinoblastoma, a rare, hereditary eye cancer, have developed a novel blood test that can tell which parent's DNA carried the disease-causing RB1 gene mutation.

That distinction is meaningful because male and female copies of the mutation are associated with different disease trajectories, the researchers found, and likely would influence doctors' treatment recommendations.

"Depending on which copy you have, that could reflect the cancer's severity and its likely response to chemotherapy," said Dr. Debarshi Mustafi, assistant professor of ophthalmology and Karalis Johnson Center researcher.

The new gene-sequencing technique that powers the blood test can also detect parent-of-origin even when the child carries a de novo variant, one that arises spontaneously and is not present in either parent. These de novo cases are the predominant cause of all cancers and account for 90% of all inherited cases of retinoblastoma.

The findings were published in the journal JCI Insight. The co-lead authors were Mustafi and Dr. Andrew Stacey, an associate professor of ophthalmology and director of ocular oncology. Both are also surgeons at Seattle Children's Hospital, where they treat pediatric patients with retinal diseases.

Retinoblastoma is rare, affecting about 200 to 300 children a year in the United States. The condition disrupts the normal development of the retina, the light-sensitive tissue in the back of the eye. Starting during fetal development, these cancerous cells proliferate out of control and form tumors.

Children in developed countries are diagnosed by age 2, on average, Dr. Mustafi said. Often an early hint of the disease is an pupillary discoloration seen in a photo of the child, or an eye that has trouble tracking.

Without treatment, retinoblastoma can spread through the optic nerve into the brain. Even when tumors are ablated with radiation or treated with chemotherapy, related metastases can emerge years later in distant organs.

"If we can catch the tumor early, we can save the eye — and what we found in this study is that your parent-of-origin makes a difference here: When mutations came from the maternal copy, patients' eyes were saved more often," Dr. Mustafi said. "If they got it from the paternal DNA, we are less likely able to save the eye. Our preliminary data also shows that a secondary cancer such as sarcoma is more likely with the paternal mutation."

Awareness of parental disease origin, he added, could influence doctors to recommend aggressive therapies earlier in a child's course of care, or to take more, or fewer, steps to save an affected eye.

"We could counsel a family that, instead of going for these heroic measures, they may be better off taking the eye out and preventing the spread," Dr. Mustafi said. "Our finding will not only inform how we treat a child in the beginning, but how we screen them for their entire life. We think this will have a huge impact on surveillance of cancer patients."

Creating the novel genetic test

The researchers didn't set out to create a novel genetic test for retinoblastoma. Mustafi described a 2023 conversation in which Stacey

Associate Professor Dr. Andrew Stacey, left, and Assistant Professor Dr. Debarshi Mustafi created the novel genetic test for retinoblastoma.

expressed frustration with the wait — typically one to six months — to get a commercial lab's confirmation of whether a child has the RB1 mutation.

"Our initial goal was to see if we could confirm the diagnosis faster. I told him that my lab was working on a method that could get him an answer in a day or two," Dr. Mustafi said.

His lab scientists ended up devising a gene-sequencing technique that simultaneously identifies not only the RB1 mutation, but also other DNA-based modifications.

"Two things happen with DNA: One is a mutation, in which some of your normal genetic code is switched out for other code. Your DNA is changed. But another thing that happens, called methylation, is a kind of modification signal that is switched on or off," Dr. Mustafi said.

"With RB1, we saw that Dad's copy of the modification signal is distinct from Mom's," he added. "So, when we put the mutation together with the modification signal, we were able to tell from the child's blood whether they got the mother's or the father's chromosomal copy — and without having to test either parent."

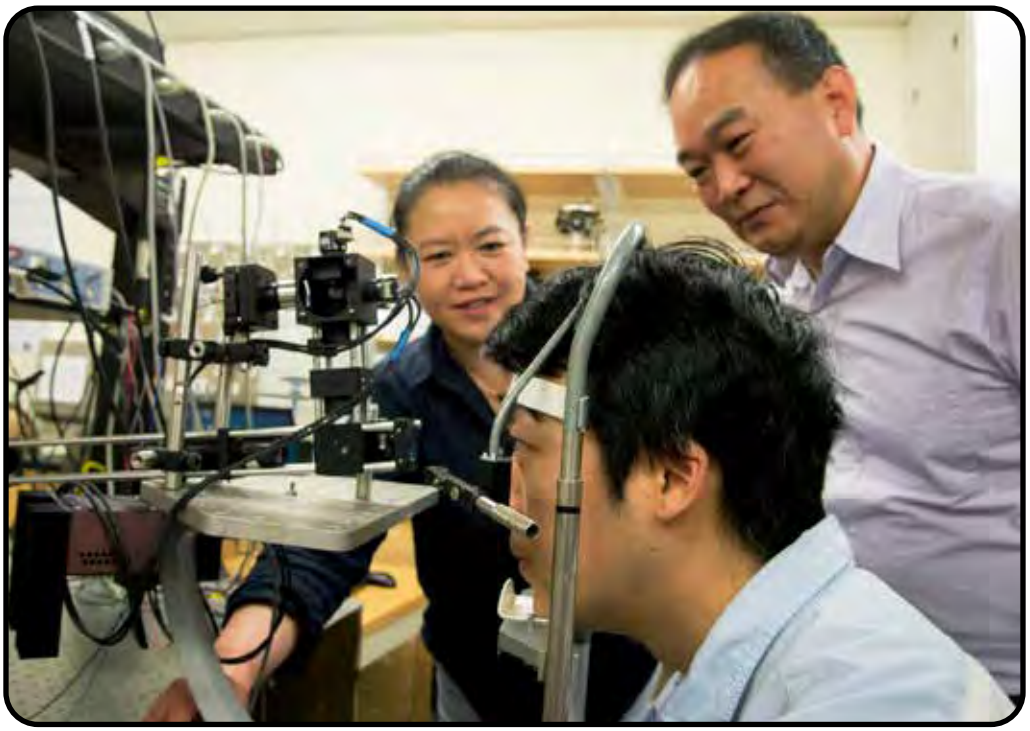
They also met their goal of a 24-hour turnaround for diagnostic results.

The experimental gene-sequencing technique's accuracy was validated with blood samples from 16 pediatric patients at Seattle Children's. Seven had familial-origin cases and nine had de novo disease.

The new test likely will have applications for other genetic diseases in which parent-of-origin influences patients' risk, Dr. Mustafi suggested. First, though, the researchers will measure its predictive accuracy in a larger group of patients.

KEMi: Accelerating Transformative Research

The Kren Engineering-based Medicine Initiative (KEMi) combines the strengths of UW Engineering and UW Medicine to develop solutions for healthcare's most urgent unmet needs. KEMi is made possible by a generous gift from Community Action Board emeritus members George and Martina Kren.



Siddall Professor Tueng Shen, left, and Kren Professor Ricky Wang.

KEMi will focus on engineering-driven projects that translate advanced technologies from laboratory research into real-world clinical tools. Collaborative projects between ophthalmology and engineering will lead the way, drawing on the strong expertise in both areas.

"Engineers, physicians, and medical researchers will work side by side to co-develop tools and technologies that are both technologically advanced and grounded in real patient needs—from early diagnostics to precision therapeutics," said Bucey Chair and Professor of Ophthalmology Russell Van Gelder, MD, PhD.

"We received an overwhelming response to our call for proposals, with 83 submissions. The committee has selected the projects that will serve as the inaugural group of KEMi investigators," said Graham and Brenda Siddall Endowed Chair Tueng Shen, MD, PhD. "In the inaugural year of the Kren Engineering-based Medicine Initiative (KEMi), we especially emphasized funding research projects in Ophthalmology."

KEMi is poised to integrate cutting-edge technologies into clinical practice, addressing the growing demand for early detection and more precise treatments. Its interdisciplinary approach ensures that innovations are technologically advanced and rooted in real-world medical needs. As the initiative progresses, its impact will extend across various medical fields, paving the way for broader applications that can reshape the future of healthcare.

The Buhr Lab

Ethan Buhr, PhD
Research Associate Professor

The Buhr Lab has identified additional unique photoreceptors which allow for the cells within the retina to synchronize to sunlight. These photoreceptors are completely distinct from visual photoreceptors, like an extra eye for the retina itself. The synchronization of circadian clocks within the retina contributes to the retina's response to photo damage and the long-term health of the tissue.

Outside of the retina, the Buhr Lab is also studying the role of non-visual photoreceptors in other areas exposed directly to light, such as the cornea and skin. Violet-light sensitive photoreceptor cells are induced in response to injury. Once active these cells activate pathways related to the synchronization of wound-healing mechanisms. An important next step is to understand the way that the signal is transmitted among the cells.

The Chao Lab

Jennifer Chao, MD, PhD
Gordon and Joan Bergy Professor
Vice Chair, Research

There are currently no effective treatments to prevent vision loss in most patients with inherited retinal degenerations (IRDs) or dry age related macular degeneration (AMD).

The Chao Lab is working to understand the mechanisms of retinal degenerative diseases and identify potential therapeutic targets for treatment. In pursuit of this goal, the Chao lab and their collaborators have taken on three synergistic approaches: (1) identify mechanisms of disease that contribute to the initiation and progression of macular degenerative diseases; (2) utilize patient-derived stem cells to develop more sophisticated and physiologically relevant models of retinal diseases; and (3) conduct imaging and interventional clinical trials of retinal degeneration patients to determine the effectiveness of novel therapeutics.

The Fortenbach Lab

Christopher Fortenbach, MD, PhD
Assistant Professor

The Fortenbach Lab is investigating the therapeutic potential for photoswitches to restore vision in degenerated retinas. These light-sensitive small molecules bind to the degenerating retina and confer new light-sensitivity to retinal cells.

Several generations of these molecules have been developing with differing cell target specificity and sensitivity. Photoswitches can be delivered via intravitreal injection, which is a procedure performed over 20 million times per year globally, rather than requiring retinal surgery. Most recently, promising phase 1 clinical trial data have been presented demonstrating restoration of vision in several human subjects.

The Manookin Lab

Michael Manookin, PhD
Associate Professor

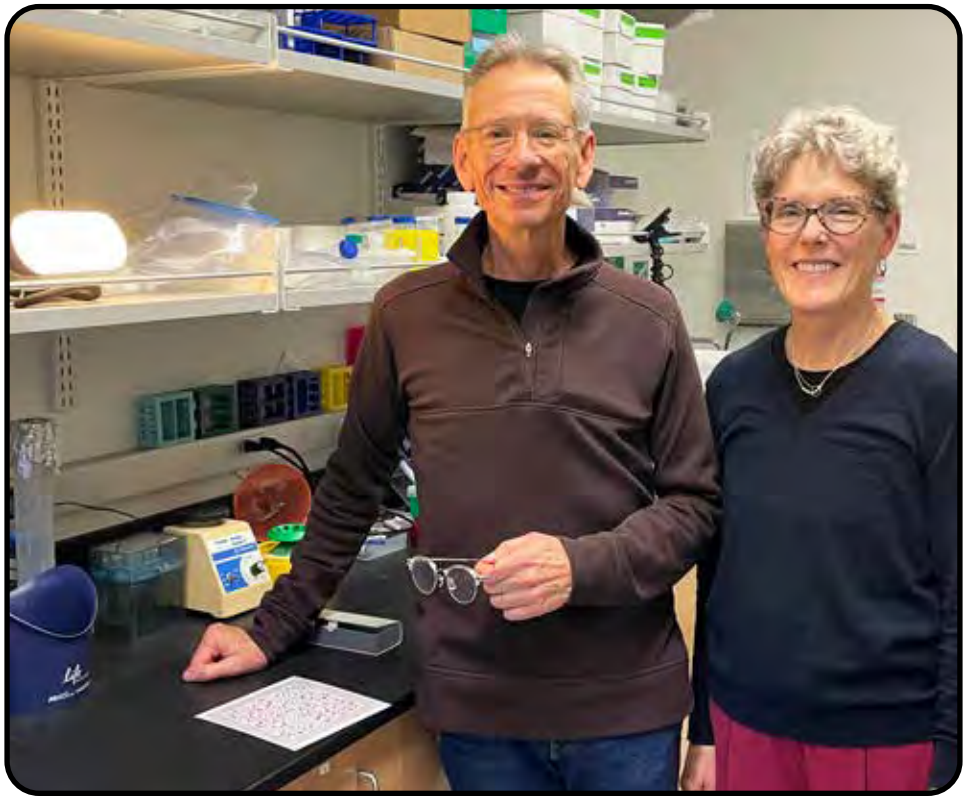
The Manookin Lab is investigating the structure and function of neural circuits within the retina and developing techniques for treating blindness.

Many blinding diseases, such as retinitis pigmentosa, cause death of the rods and cones, but spare other cell types within the retina. Thus, many techniques for restoring visual function following blindness are based on the premise that other cells within the retina remain viable and capable of performing their various roles in visual processing. The Manookin lab is investigating the function and connectivity of neural circuits in the retina using a variety of techniques including electrophysiology, calcium imaging, and electron microscopy. This knowledge is being used to develop more effective techniques for restoring visual function following blindness.

Lab Partners for Life: Jay and Maureen Neitz

More than one million children are now wearing spectacle lenses for myopia management developed by UW Ophthalmology's Bishop Professor Jay Neitz, PhD, and Ray Hill Professor Maureen Neitz, PhD.

"Reaching one million children is a powerful testament to what our clinical studies have already shown— that these lenses work and they are safe for children," Jay Neitz said.



Drs. Jay and Maureen Neitz with the "Happy Light" at left, the Neitz color vision test on the counter, and Jay holding the DOT spectacles.

The DOT (Diffusion Optics Technology) lenses first became available in 2021. The design of DOT lenses is underpinned by contrast management. The Neitzes found that high artificial contrast in the modern visual environment may be linked to accelerated eye growth, leading to the progression of myopia. DOT lenses mimic more natural contrast environments by incorporating thousands of elements that gently scatter light before it reaches the retina.

Clinical studies have shown that DOT lenses can slow the average rate of myopia progression by up to 75 percent after 12 months of wear.

"The version of the lenses that were tested by SightGlass Vision was developed by us here at UW," Maureen Neitz said. We (Jay and I) founded SightGlass Vision in 2016 along with (Acting Assistant Professor) Jim Kuchenbecker, PhD. In 2021, SightGlass Vision was bought by CooperVision based on the first-year clinical trial data."

SightGlass Vision is now run as a joint venture between CooperVision and EssilorLuxottica. The DOT lenses received the "breakthrough device" designation from the U.S. FDA in February of 2024. The designation recognizes the innovative contrast management mechanism of these lenses and allows for a prioritized review during the development process for the U.S. market. They are currently available in China, the Netherlands, Israel, Canada and Spain.

Continued on next page

Development of the glasses began with the Neitzes' discovery of a genetic mutation associated with myopia, and culminated in a clinical trial showing that children wearing the glasses had myopia progression slowed by 75 percent.

"There is a world epidemic of myopia," Jay Neitz said. "We know that all this screen reading is bad for kids and getting progressively worse. We know these glasses can help millions of children see better."

THE HAPPY LIGHT and COLOR VISION TEST

In new research, the Neitz Lab has created a novel LED light that emits alternating wavelengths of orange and blue, reflecting an effective new approach to counteract seasonal affective disorder (SAD).

A raft of health and mood problems has been attributed to out-of-sync circadian rhythms. Such asynchrony is encouraged by seasonal changes, limited exposure to natural light, graveyard-shift jobs, and flights across multiple time zones.

"Our internal clock tells us how our body's supposed to act during different times of day, but the clock has to be set, and if our brain is not synced to the time of day, then it's not going to work right," said Jay Neitz.

Circadian rhythms are trained and reset every day by the 24-hour solar cycles of light and dark, which stimulate circuits in the eyes that communicate to the brain. With that information, the brain produces melatonin, a hormone that is released in sync with the solar night.

People who spend many hours each day in artificial light often have circadian rhythms in which melatonin production lags behind those of people more exposed to natural light. Many commercial lighting products are designed to offset or counteract these lags.

Most of these products, Neitz said, emphasize the blue wavelength because it is known to affect melanopsin, a photopigment in the eyes that communicates with the brain and is most sensitive to blue light.

By contrast, "the light we developed does not involve the melanopsin photopigment," Neitz explained. "It has alternating blue and orange wavelengths that stimulate the cone photoreceptors in the retina. This circuit is much more sensitive than melanopsin, and it is what our brains use to reset our internal clocks. The circuit (between the eyes and brain) that produced the biggest shift in melatonin wants to see orange and blue," Neitz said.

The Neitz lab light is now in its third version. Through the UW, Neitz and Kuchenbecker commercialized the light technology, which is manufactured and sold by TUO, a Chicago-based company.

The Neitzes are among the world's leading experts in color vision. They developed the HRR Color Vision Test. This is the most widely used color vision test in the Western world.

"We are now in our third printing," Jay Neitz said.

LAB PARTNERS FOR LIFE

Jay and Maureen Neitz met as undergraduates at San Jose State when they were both enrolled in the same science class.

"I was standing next to her and had to pick a partner, and that's how we met," Jay recalled.

Jay Neitz went on to graduate school at UC Santa Barbara, and Maureen joined him shortly after. They were married in 1981 and have two children and a granddaughter.

With Maureen being a molecular geneticist and Jay an expert "nervous system guy," they have combined their talents for more than four decades.

"I'm working on one thing, and she is working on something else, and it just seems to come together," Jay Neitz said. "We certainly didn't have an ambition to be inventors; it's just that we discovered a bunch of things, and that in turn gave us ideas how to invent stuff."

The Pepple Lab

Kathryn Pepple, MD, PhD
Associate Professor

The Pepple Lab is investigating the role of the innate immune system in ocular inflammation and studying new anti-inflammatory treatments for patients with uveitis.

Ocular inflammation, or uveitis, is potentially blinding disease that can affect people of all ages. Using cutting edge molecular methods, including multiplex cytokine analysis, optical coherence tomography angiography, in vivo bioluminescence imaging, and multicolor flow cytometry, the Pepple Lab is studying animal models of uveitis to determine the key mediators of ocular inflammation. The lab is also testing compounds that target these key mediators to find promising new therapies for patients.

The Sabesan Lab

Ram Sabesan, PhD
George and Martina Kren Associate Professor

The Sabesan Lab investigates the functional mechanisms by which photoreceptors and their ensuing neural circuits mediate the most fundamental aspects of vision and how these visual capacities are affected by retinal diseases. To this end, the Sabesan Lab develops and uses novel cellular imaging tools which enable the visualization of the structure and function of living retinal cells at unprecedented spatial scales.

The backbone of the methods pursued by the lab is a technology called adaptive optics – the same tool used by astronomers to peer at small objects in space. Using adaptive optics, one can overcome the optical imperfections that exist in the human eye, converting the eyeball essentially into a microscope objective. By combining adaptive optics with other microscopy techniques, one obtains the ability to probe living cells in the retina of humans. This allows the probing of retinal cells in diseased human eyes at high resolution, thus serving as sensitive biomarkers for early disease diagnosis and monitoring of cellular events involved in disease progression.

The Sasamoto Lab

Yuzuru Sasamoto, MD, PhD
Assistant Professor

Yuzuru Sasamoto, MD, PhD joined the faculty in 2025. He studies corneal regeneration using techniques such as direct reprogramming, induced pluripotent stem cells (iPSCs), and limbal progenitor cells.

He is currently working on the comprehensive characterization of ocular surface epithelium from conjunctiva to cornea. Ultimately, the lab's focus is on the discovery of new therapies that could benefit those who are affected by corneal disease.

The Van Gelder Lab

Russell Van Gelder, MD, PhD
Professor and Chair
Boyd Bucey Memorial Chair

The Van Gelder Lab has three main interests: **Molecular diagnostics of ocular infectious disease.** Ocular infectious diseases, including microbial keratitis, conjunctivitis, and endophthalmitis, are significant causes of potentially blinding diseases. Most infectious organisms causing ocular disease originate in the ocular surface. Using cutting-edge molecular methods, including next generation sequencing, the Van Gelder Lab is developing new techniques for rapid diagnosis of ocular infectious disease.
Vision restoration. Degenerative blinding diseases, including age-related macular degeneration, are caused by the death of rods and cones. The Van Gelder Lab is investigating the therapeutic potential of synthetic small molecule photoswitches for restoring light sensitivity to degenerated retinas.
Non-visual photoreception. The Van Gelder lab is also working in collaboration with the Buhr laboratory to understand how light affects mammalian physiology outside the visual system.

FACULTY GRANTS FOR 2024-2025

Clinical trials and grants are translational tools between patient care and research. According to the Higher Education Research and Development (HERD) Survey, the UW is second in the nation in the federal funding it spends annually on research and development. The UW Medicine Department of Ophthalmology ranks in the top 10 in the nation in total NIH grant funding.

NATIONAL INSTITUTES OF HEALTH (NIH)

Ethan Buhr, PhD
The mechanism of extra-visual circadian photoentrainment in mammals

Photoreceptor induction in wounded corneas

Jennifer Chao, MD, PhD
Metabolism of AMD iPSC-derived RPE

Metabolic dysfunction from ECM remodeling in diseases of human RPE

NAC Attack, a phase-3, multicenter, randomized, placebo-controlled trial in patients with retinitis pigmentosa

Michael Manookin, PhD
Function, diversity, and circuitry of parallel retinal ganglion cell pathways

Debarshi Mustafi, MD, PhD
The role of non-coding variants in Usher disease

Jay Neitz, PhD
Linking retinal circuits to perception

University of North Carolina at Chapel Hill
Neural mechanisms of colored light-driven analgesia

Maureen Neitz, PhD
CORE grant for vision research

Ram Sabesan, PhD
Optoretinography: All-optical measures of functional activity in the human retina

Yuzuru Sasamoto, MD, PhD
Development of cell-free approaches to the treatment of limbal stem cell deficiency

The role of BCAM-positive cells in central cornea, limbus and conjunctiva

The role of limbal fibroblasts for the maintenance of limbal stem cells

Russell Van Gelder, MD, PhD
Determinants of the periocular microbiome

ChromoLogic,, LLC - NGS based metagenomic screening of ocular infections

Matthew Zhang, MD
Sub from NYU (NIA)
Automation of the radiographic surgical indicators for pediatric orbital abscess

RESEARCH TO PREVENT BLINDNESS

Christopher Fortenbach, MD, PhD
Career Development Award
Structure-Function Analysis of Third-Generation Photoswitches for the Treatment of Outer Retinal Degeneration

Debarshi Mustafi, MD, PhD
Physician-Scientist Award
Parent-of-Origin Determination in Retinoblastoma: A Biomarker for Risk and Therapeutic Targeting

Debarshi Mustafi, MD, PhD (for Elizabeth Rooks, BA)
Medical Student Eye Research Fellowship
Epigenetic and Clinical Consequences of Parent-of-Origin in RB1-Driven Cancer

Russell Van Gelder, MD, PhD
Unrestricted Departmental Award

FOUNDATION FIGHTING BLINDNESS, INC.

Debarshi Mustafi, MD, PhD
Deciphering the missing heritability in inherited retinal diseases with targeted long-read genome sequencing

RESEARCH

Kathryn Pepple, MD, PhD
Evaluating mitigation strategies for intravitreal viral vector-mediated inflammation across animal models

Ram Sabesan, PhD
Understanding the mechanisms and progression of photoreceptor dysfunction in retinitis pigmentosa using optoretinography

SINSKEY FOUNDATION

Jennifer Chao, MD, PhD
Disease Mechanisms of Age-Related Macular Degeneration

Kathryn Pepple, MD, PhD
Immunomodulation to improve success with gene therapy in the eye

Karine Duarte Bojikian, MD, PhD
Exploring the potential of phs-oct to monitor patients with glaucoma and assess efficacy of treatment

Chris Fortenbach, MD, PhD
Photochemical Restoration of Retinal Function in Outer Retinal Degeneration

Michael B. Manookin, PhD
Neural recording and stimulus design for early detection of retinal disease

Andrew W. Stacey, MD, MSc
Leveraging clinical images and artificial intelligence to improve eye cancer care

Russell Van Gelder, MD, PhD
Deep DNA Sequencing for rapid detection of ocular infections

OTHER GRANTS AND MAJOR SPONSORS

Jennifer Chao, MD, PhD (for Rayne Lim, PhD)
Brightfocus Foundation - Postdoctoral Fellowship Program
Factor H-like protein 1 insufficiency in Retinal Pigment Epithelium

Illinois No. 3 Foundation
Modeling Sorsby Fundus Dystrophy

Yewlin Chee MD (for Johnson Huang, MD)
Department of Defense (DOD)
Endophthalmitis Risk and Visual Outcome After Delayed Repair of Open Globe Injury

Andrew Chen, MD
American Glaucoma Society Foundation
Local VF Behavior on Criteria for Progression

Courtney Francis, MD
Immunovant Sciences GmbH
A Phase 3, Multi-Center, Randomized, Quadruple-Masked, Placebo-controlled Study of Batoclimab for the Treatment of Participants with Active Thyroid Eye Disease (TED)

Raghu Mudumbai, MD
Nicox Ophthalmics, Inc.
A phase 3, randomized, multi-regional, double-masked, parallel-group trial evaluating the safety and efficacy of NCX 470 0.1% vs. Latanoprost 0.005% in subjects with open-angle glaucoma or ocular hypertension (Denali)

Stoke Therapeutics, Inc.
A prospective natural history study of patients with autosomal dominant optic atrophy

Viridian Therapeutics, Inc
A multiple ascending dose (MAD) safety and preliminary efficacy study of VRDN-001, a humanized monoclonal antibody directed against the IGF-1 receptor, in normal healthy volunteers (NHVs) and subjects with thyroid eye disease (TED)

A randomized, double-masked, placebo-controlled safety, tolerability, and efficacy study of VRDN-001, a humanized monoclonal antibody directed against the IGF-1 receptor, in participants with chronic thyroid eye disease (TED)

An open-label study for participants who are non-responders at the end of treatment assessment on the VRDN-001-101 and VRDN-001-301 pivotal studies

Debarshi Mustafi, MD, PhD
Alcon Research Institute
Targeted long-read sequencing to identify phased pathogenic variants in inherited retinal diseases
Latham – Vision Research Innovation Award

Maureen Neitz, PhD
Medical College of Wisconsin (NEI)
Assessing photoreceptor structure and function in normal and diseased retinae

Lisa Olmos De Koo, MD, MBA
The Lowy Medical Research Institute Limited
Phase 2a Study of the Effect of Serine Supplementation and Fenofibrate Treatment on

Serum Deoxysphinganine Levels in Patients with Macular Telangiectasia (MacTel) Type 2 (SAFE Study)

Kathryn Pepple, MD, PhD
Institute for Arthritis Research
Efficacy of systemic administration of pentideX2-13 in the treatment of experimental uveitis

Kasra Rezaei, MD
Jaeb Center for Health Research
Diabetic retinopathy clinical research network

Ram Sabesan, PhD
DOD - sub from Berkeley
Probing, modeling & reprogramming visual perception at the level of individual photoreceptors

University of California, San Francisco (UCSF)
Next Great Ideas Program – Weill Neurohub

Visual Cues and Retinal Mechanisms Encoding Image Defocus and Implications for Human Health

Andrew Stacey, MD
The Gerber Foundation
Rapid neonatal genetic diagnosis of retinoblastoma utilizing targeted long-read sequencing technology

AURA Biosciences, Inc
A Phase 3 randomized, masked, controlled trial to evaluate efficacy and safety of belzupcap sarotalocan (AU-011) treatment compared to sham control in subjects with primary indeterminate lesions or small choroidal melanoma

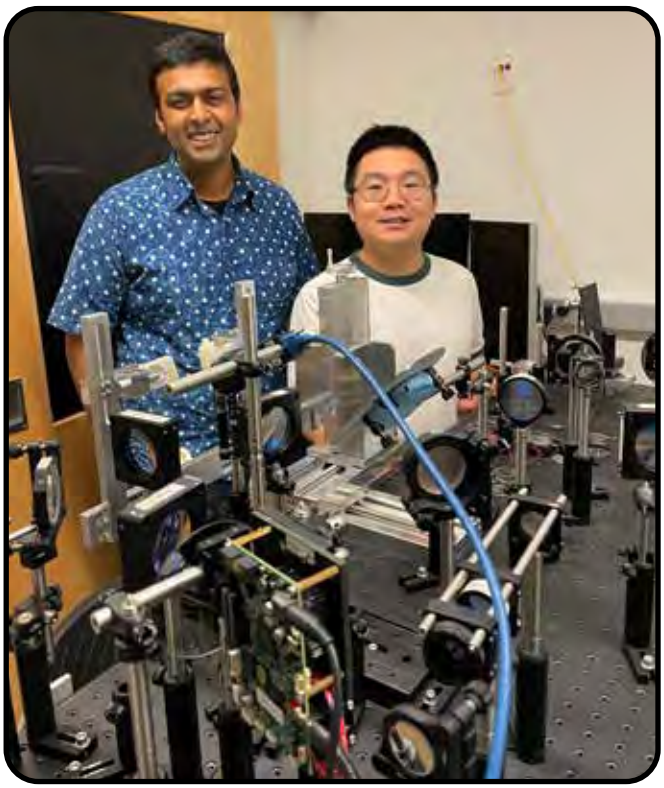
Jaeb Center for Health Research, Inc. (JCHR) (NIH)
A Randomized Clinical Trial Evaluating Intravitreal Faricimab (6.0 mg) Injections or Fluocinolone Acetonide (0.19 mg) Intravitreal Implants vs Observation for Prevention of Visual Acuity Loss due to Radiation Retinopathy (Protocol AL)

Miel Sundararajan, MD
ReGen Tree, LLC
A Phase 3, Multi-Center, Randomized, Parallel, Double Masked, Placebo-Controlled Clinical Study to Assess the Safety and Efficacy of 0.1% RGN-259 Ophthalmic Solution for the Treatment of Neurotrophic Keratopathy (SEER-2)

Yue Wu, PhD
LMRI Mactel
Application of machine learning to the MacTel project for the UK Biobank and pathogen discovery

The Lowy Medical Research Institute Limited
Application of machine learning to the MacTelproject for the UK Biobank and pathogen discovery

Matthew Zhang, MD
Lassen Therapeutics, LLC
A Phase 2, Proof-of-Concept, Randomized, Double-Masked, Placebo-Controlled Study to Determine the Efficacy and Safety of LASN01 in Patients with Thyroid Eye Disease



SPIE, the international society for optics and photonics, awarded UW Ophthalmology post-doctoral scholar Teng Liu, right, as the recipient of the 2026 SPIE-Franz Hillenkamp Postdoctoral Fellowship in Problem-Driven Biomedical Optics and Analytics. Liu's research project — conducted in conjunction with UW Ophthalmology George and Martina Kren Professor of Vision Science Ram Sabesan — will translate optoretinography from the current proof-of-concept stage toward a clinic-ready imaging paradigm.

VISION SCIENCE RESEARCH FACULTY & ASSOCIATES

OPHTHALMOLOGY PRIMARY

Ethan Buhr, PhD
Research Associate Professor

Michelle Cabrera, MD
Professor

Jennifer Chao, MD, PhD
Gordon and Joan Bergy Professor

Chris Fortenbach, MD, PhD
Assistant Professor

James Kuchenbecher, PhD
Acting Assistant Professor

Mike Manookin, PhD
Associate Professor

Debarshi Mustafi, MD, PhD
Assistant Professor

Jay F. Neitz, PhD
Bishop Foundation Professor

Maureen E. Neitz, PhD
Ray H. Hill Endowed Chair

Vimal Pandiyan, PhD
Acting Assistant Professor

Kathryn Pepple, MD, PhD
Associate Professor

Ram Sabesan, PhD
George and Martina Kren Professor

Yuzuru Sasamoto, MD, PhD
Assistant Professor

Tueng T. Shen, MD, PhD
Graham and Brenda Siddall Endowed Chair

Russell Van Gelder, MD, PhD
Boyd K. Bucey Memorial Chair

Ruikang "Ricky" Wang, PhD
George and Martina Kren Endowed Chair in Ophthalmology

Assistant Professor Chris Fortenbach, MD, PhD, was awarded a Career Development Award from Research to Prevent Blindness.

Yue Wu, PhD
Acting Assistant Professor

ADJUNCT FACULTY

Susan E. Brockerhoff, PhD
Biochemistry

Jonathan Chen, MD
Radiation Oncology

Timothy Cherry, Ph.D.
Pediatrics

John I. Clark, PhD
Neurobiology and Biophysics

Ione Fine, PhD
Psychology

Jim Hurley, PhD
Biochemistry

Aria Jafari, MD
Otolarngology/Head and Neck Surgery

Dirk Keene, MD, PhD
Laboratory Medicine and Pathology

Thomas A. Reh, PhD
Neurobiology and Biophysics

Ranesh Rengan, MD, PhD
Radiation Oncology

Frederick M. Rieke, PhD
Physiology and Biophysics

Kathryn Scherpelz, MD, PhD
Laboratory Medicine and Pathology

AFFILIATE FACULTY

John Kelly, Ph.D.
Affiliate Assistant Professor

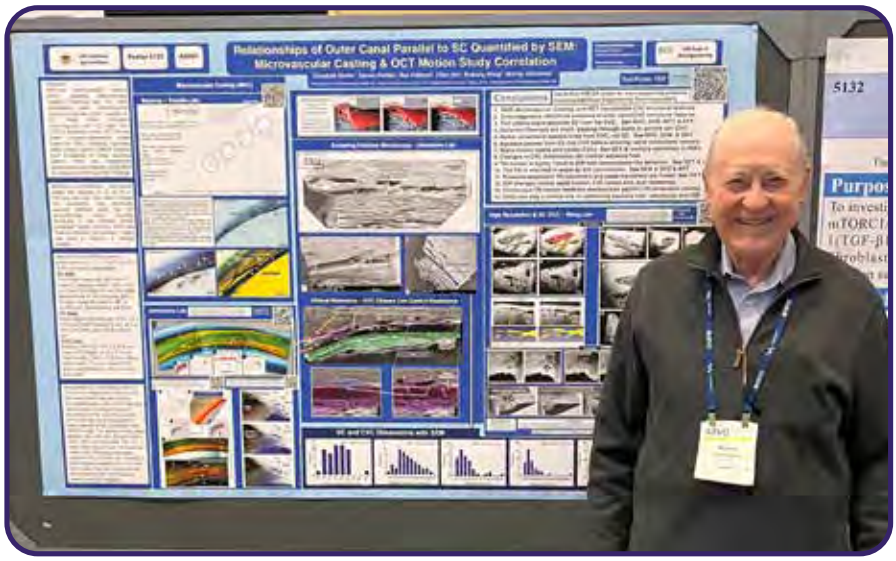
Aaron Lee, MD
Affiliate Professor

Cecilia Lee, MD
Affiliate Professor

Remembering Murray Johnstone, MD

Murray Johnstone, MD, Clinical Professor of Ophthalmology for the past 15 years, passed away on April 11, 2025 at age 86.

"Murray was a true gentleman and beloved by generations of patients. As a colleague, he was an endless source of good humor coupled with a phenomenal drive to understand complex science completely," said Bucey Memorial Chair and Professor Russ Van Gelder, MD, PhD. "He was an outstanding mentor to a number of our faculty. His dedication to our profession and vision science was truly exemplary, and we will greatly miss his collegiality."



Clinical Professor Murray Johnstone, PhD, displays his research at the ARVO meeting in Seattle in May 2024.

Dr. Johnstone was a native of the Pacific Northwest and attended college at the University of Puget Sound, followed by medical school at Washington University in St. Louis. After completing internship at Harborview, Murray completed his ophthalmology residency and glaucoma fellowship at Mass Eye and Ear Infirmary/Harvard Medical School.

During fellowship, Dr. Johnstone did research in the Howe lab under the tutelage of glaucoma pioneer Morton Grant, MD, which stimulated a lifelong passion for understanding ocular fluid dynamics. He returned to Seattle in 1973 and subsequently founded Glaucoma Consultants Northwest, a pre-eminent glaucoma practice in the Seattle area.

Dr. Johnstone's passion for research remained bright, and he secured NEI funding for his ultrastructural studies of the trabecular meshwork even while running a busy private practice. Murray retired from clinical practice in 2009 and joined the UW Ophthalmology faculty as a Clinical Professor in 2010, where he continued his research on the mechanisms of trabecular outflow.

His scientific accomplishments are numerous. He established a dynamic model for trabecular mesh outflow, widely viewed as foundational for understanding aqueous outflow from the eye.

Dr. Johnstone made the seminal observation that prostanoid glaucoma drops induce growth of the eyelashes. He patented this finding (US Patent 6,262,105), which was central to developing the glaucoma medication Latisse. He continued his cutting-edge research on trabecular outflow, developing a phase-OCT method for visualizing trabecular outflow with colleague Professor and Kren Chair Dr. Ricky Wang.

Dr. Johnstone was a charter member of the American Glaucoma Society and was honored awith the AGS Innovator Award in 2022.

Dr. Johnstone and his wife Jeannie have been generous donors to the Department of Ophthalmology. They have supported travel grants for residents to attend scientific meetings.

Cornea patient finds vision significantly improved by surgery at UW Eye Institute

When Chris Carr decided to seek help with his vision, he knew as a UW employee that the UW Medicine Eye Institute would be the right place.

Chris was born in Korea, adopted by an American family and raised in Columbus, Ohio. He was born with cataracts in both eyes. They were removed when he was a baby.

"His right eye had an intraocular lens placement when he was 13 years old, but he was told that if the left eye were to have the same procedure, he would not be able to see because of amblyopia (lazy eye), or he would have double vision," said Assistant Professor Minh Nguyen, MD, a cornea specialist.

Now 35, Carr wanted to find out if, with new technology, a lens could be placed in his other eye.

"I wanted to get surgery on the left eye so both eyes could work together and hopefully improve my vision," he said.

Dr. Nguyen first saw Carr in October 2024 and told him that he indeed could have surgery on his other eye.

"He had the surgery with me in August 2025, and is seeing 20/25 without correction, and 20/20 with mild correction since then," said Dr. Nguyen. "It's inspiring to help patients like Chris, who have had vision issues literally all his life, have improved quality of life."

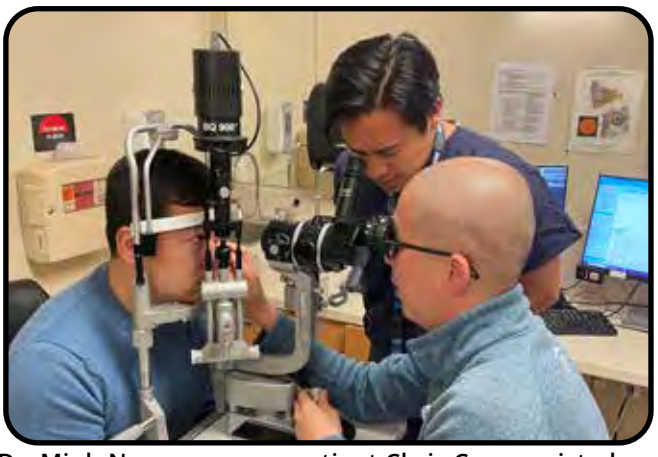
For Chris, who moved to Seattle in part for the outdoor activities, the positive change in his vision has been remarkable as he enjoys biking and kayaking.

"I am able to see much better than before and it makes a real difference," he said.

An administrative assistant in American Ethnic Studies on the UW Seattle campus, Chris joined a local non-profit Asian adoptee organization called Asian Adult Adoptees of Washington. He is heavily involved by serving on its board of directors as president and treasurer as well as a mentor as part of the organization's Adoptee Mentorship Program.

Dr. Minh Nguyen with cornea patient Chris Carr.

In addition, he serves on the executive board as secretary for the International Korean Adoptee Association, which serves as a network for adoptee organizations across the globe. His passion includes meeting, supporting, and empowering adoptees to connect and share their stories and perspectives with other adoptees.



Dr. Minh Nguyen exams patient Chris Carr, assisted by resident Dr. Jonathan Le.

Oculoplastics team treating increasing numbers of periorbital necrotizing fasciitis cases

Crystal Hendry knew something was very wrong when her eye swelled in June 2025.

She went to the local hospital in Monroe, where she lives, and they wasted no time in sending her to the emergency room at Harborview Medical Center.

UW ophthalmologists quickly diagnosed her with early signs of necrotizing fasciitis. She was hospitalized and put on high-dose antibiotics.

The Oculoplastics team of Alexa Van Brummen, MD, Chris Chambers, MD, and Matthew Zhang, MD.

The public may be more familiar with the disease resulting from injury, but in Hendry and others' cases, it can be caused by a strep infection.

There are relatively few studies on periorbital necrotizing fasciitis, but UW Ophthalmology has quickly become a recognized center on the subject and treated Hendry.

Acting Assistant Professor Alexa Van Brummen, MD joined the faculty this year after completing her residency in Ophthalmology and fellowship in Oculoplastic and Reconstructive Surgery at UW.

"In Ms. Hendry's case, she needed one debridement surgery," Dr. Van Brummen said. "She said she had a sore throat a few weeks prior, and that can be how the infection starts."

Harborview has observed a rise in cases of periorbital necrotizing fasciitis in recent years, typically a few cases per month. Research has suggested that the growth occurred after the COVID-19 lockdowns of 2020, and that strep infections increased as people began congregating in groups again.

With so few cases, ophthalmologists have had to learn to treat it with limited exposure to the disease in training, Dr. Van Brummen said. She took it upon herself to learn more.

"I wanted to make sure these patients were well taken care of, and so I delved into it," Dr. Van Brummen said. "We still aren't sure why it is occurring more, but we have had excellent results with the type of care we are providing."

They now limit debridement to remove the infection and use a combination of antibiotics and hypochlorous acid to treat the patients. She has presented her case studies to her colleagues at an oculoplastics specialist national meeting and the Van Gelder Lab is researching the bacteria to see if it has changed resulting in increased cases.

Dr. Van Brummen praised the work of the Harborview wound care team for teaching her how to best care for these patients.

Hendry spent 12 days at Harborview before being released and her wound is well healed.

"I am so grateful to Dr. Van Brummen and her team for their care of me," Hendry said. "They were amazing. I feel so fortunate that my eye has healed and I don't have any loss of vision."

UW MEDICINE OPHTHALMOLOGY PATIENT CARE FACULTY

COMPREHENSIVE OPHTHALMOLOGY

Anthony Chung, MD
Assistant Professor

EDUCATION
BS, University of Iowa
MD, University of Iowa
Residency: University of Iowa Hospitals and Clinics

Anne Ko, MD
Clinical Assistant Professor

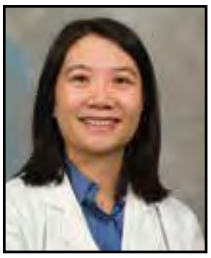
EDUCATION
BS, Brown University
MD, Brown University
Residency: New York Eye and Ear Infirmary
Fellowship: Cornea and External Disease, USC/ Doheny Eye Institute

Whitney Lomazow, MD
Assistant Professor of Clinical Practice

EDUCATION
BS, Emory University
MD, Rutgers
Residency: Pediatrics, Children's Hospital of New York Presbyterian
Residency: Ophthalmology, Washington University
Fellowship: Cornea and External Disease, Univ. California, Irvine

Eric R.H. Duerr, MD
Assistant Professor

EDUCATION
BA, Case Western Reserve University
MD, University of Pittsburgh
Residency: Bascom Palmer Eye Institute, University of Miami
Fellowship: Glaucoma- Bascom Palmer Eye Institute, University of Miami



Deborah L. Lam, MD
Associate Professor
Chief of Eye Care Services, VA Puget Sound Health Care System

EDUCATION
BA, Northwestern University
MD, Northwestern University
Residency: University of Washington

Parisa Taravati, MD
Robert E. Kalina MD Associate Professor
Vice Chair, Education
Director, Residency Program
Chief of Service, UW Medical Center

EDUCATION
BS, University of Iowa
MD, University of Iowa
Residency: University of Iowa

Shu Feng, MD
Associate Professor
Director, Medical Student Clerkship Program

EDUCATION
BS, University of Washington
MD, Oregon Health & Science University
Residency: University of Washington

Thellea Leveque, MD, MPH
Professor of Clinical Practice; Division Director, Comprehensive Ophthalmology

EDUCATION
BA, Amherst College
MD, Duke University
MPH, Clinical Leadership, University of North Carolina
Residency: University of Michigan
Fellowship: Uveitis, University of Washington

Jennifer T. Yu, MD, PhD
Professor of Clinical Practice; Director, 4W Ophthalmology Clinic at Harborview; Director of Trauma and Consult Services at Harborview

EDUCATION
BS, University of Michigan
MD, Washington University
PhD, Molecular Oncology, Washington University
Residency: Washington University

CORNEA AND EXTERNAL DISEASE

Minh Nguyen, MD
Assistant Professor

EDUCATION
BS, UCLA
MD, Univ. of Wisconsin
Residency: University of Washington
Fellowship: Cornea, External Disease & Refractive Surgery, UCSF

Tueng T. Shen, MD, PhD
Professor; Graham and Brenda Siddall Chair In Cornea Research In Ophthalmology; Associate Dean for Medical Technology Innovation, UW School of Medicine

EDUCATION
BA, Wellesley College
PhD, Massachusetts Institute of Technology
MD, Harvard University
Residency: Massachusetts Eye & Ear Infirmary
Fellowship in Cornea, Refractive, and External Disease, Moran Eye Center, University of Utah

Miel Sundararajan, MD
Assistant Professor; Division Director, Cornea and External Disease

EDUCATION
BS, Rice University
MD, Baylor College of Medicine
Residency: New York Eye & Ear Infirmary
Fellowship: Uveitis, UCSF; Cornea & External Disease, UCSF

GLAUCOMA

Andrew Chen, MD
Assistant Professor
Director, Glaucoma Fellowship

EDUCATION
BS, UCLA
MD, UCLA
Residency: University of Rochester
Fellowship: Glaucoma, Stein Eye Institute at UCLA

Philip P. Chen, MD
Professor
Grace E. Hill Endowed Chair
Vice Chair for Clinical Services

EDUCATION
BS, Stanford University
MD, Yale University School of Medicine
Residency: University of Southern California
Fellowship: Glaucoma, Bascom Palmer Eye Institute, University of Miami

Karine Duarte Bojikian, MD, PhD
Assistant Professor

EDUCATION
MD, Federal University of Sao Paulo
Ph.D., Federal University of Sao Paulo
Residency: University of Washington
Fellowship: Glaucoma, Casey Eye Institute & Devers Eye Institute, Portland, OR

Eric R.H. Duerr, MD
Assistant Professor

EDUCATION
BA, Case Western Reserve University
MD, University of Pittsburgh
Residency: Bascom Palmer Eye Institute at the University of Miami
Fellowship: Glaucoma- Bascom Palmer Eye Institute, University of Miami

Raghu Mudumbai, MD
Associate Professor; Division DIrector, Glaucoma

EDUCATION
BA, City University of New York
MD, City University of New York/State University of New York
Residency: State University of New York
Fellowship: Glaucoma, New York Eye and Ear Infirmary
Neuro Ophthalmology, Orbit, Oculoplastics, University of Minnesota

PATIENT CARE

MEDICAL AND SURGICAL RETINA

Nathan Agi, MD
Acting Assistant Professor

EDUCATION
BS, Yeshiva University
MD, SUNY Stony Brook
Residency, Rutgers University
Fellowship: Vitreoretinal Surgery, University of Washington

Jennifer Chao, MD, PhD
Gordon and Joan Bergy Professor
Vice Chair, Research

EDUCATION
BS. Stanford University
MD,, Yale University
PhD, Yale University
Residency: USC/Doheny Eye Institute
Fellowship, Vitreoretinal Surgery - USC/ Doheny Eye Institute

Yewlin Chee, MD
Associate Professor; Director, Retina Fellowship

EDUCATION
AB, Princeton University
MD, University of Pennsylvania
Residency, Harvard University
Fellowship, Vitreoretinal Surgery, Harvard University

Christopher Fortenbach, MD, PhD
Assistant Professor

EDUCATION
BS, UC Davis
MD, UC Davis
PhD, Biochemistry, Molecular, Cellular, and Developmental Biology, UC Davis
Residency, University of Iowa Hospitals and Clinics
Fellowship, Vitreoretinal Surgery, University of Iowa Hospitals and Clinics

Debarshi Mustafi, MD, PhD
Assistant Professor

EDUCATION
BS, University of Chicago
MD, Case Western Reserve University
Ph.D., Case Western Reserve University
Residency: University of Southern California
Fellowship: Vitreoretinal Surgery, University of Washington

Lisa Olmos de Koo, MD, MBA
Professor
Division Director, Retina
Director, Fellowship Programs

EDUCATION
AB, Harvard University
MD, Baylor College of Medicine
MBA, Rice University
Residency, Bascom Palmer Eye Institute, University of Miami
Fellowship, Vitreoretinal Surgery, Bascom Palmer Eye Institute, University of Miami

Kasra Rezaei, MD
Associate Professor; Medical Director, Harborview Medical Center Surgical Services

EDUCATION
MD, Azad University, Tehran, Iran
Residency, Vanderbilt Eye Institute, Vanderbilt University
Fellowship, Vitreoretinal Surgery, Associated Retina Consultants

NEURO-OPHTHALMOLOGY

Brian Chou, MD, MA
Assistant Professor

EDUCATION
BS, Northwestern University
MD, Northwestern University
MA, Northwestern University
Residency, University of Washington
Fellowship, Neuro-Ophthalmology, Stein/Doheny Eye Institute at UCLA

Courtney Francis, MD
Professor; Division Director, Neuro-Ophthalmology; Medical Director, UW Medicine Eye Institute

EDUCATION
ScB, Brown University
MD, University of Rochester
Residency: University of Alabama, Birmingham
Fellowship: Neuro-Ophthalmology, Doheny Eye Institute/USC

NEURO-OPHTHALMOLOGY

Eugene May, MD
Professor of Clinical Practice

EDUCATION
BS, Tulane University
MD, University of Chicago
Residency: Walter Reed Army Medical Center
Fellowship: Neuro-Ophthalmology, Walter Reed Army Medical Center

Raghu Mudumbai, MD
Associate Professor; Division DIrector, Glaucoma

EDUCATION
BA, City University of New York
MD, City University of New York/State University of New York
Residency: State University of New York
Fellowship: Glaucoma, New York Eye and Ear Infirmary
Neuro-Ophthalmology, Orbit, Oculoplastics, University of Minnesota

OCULAR ONCOLOGY

Andrew W. Stacey, MD, MSc
Associate Professor; Division Director, Ocular Oncology; Associate Director of Medical Student Education for Research

EDUCATION
BS, Brigham Young University
MD, Ohio State University
MS, Statistics, Brigham Young University
Residency: University of Michigan
Fellowship: Ocular Oncology, Moorfields Eye Hospital and St. Bartholomew Hospital

OCULOPLASTIC AND RECONSTRUCTIVE SURGERY

Christopher Chambers, MD
Professor; Division Director, Oculoplastic and Reconstructive Surgery

EDUCATION
BS, University of Notre Dame
MD, Ohio State University
Residency, Kresge Eye Institute
Fellowship, Opthalmic Plastic and Reconstructive Surgery, University of Pennsylvania

Shu-Hong (Holly) Chang,MD
Clinical Associate Professor

EDUCATION
BA, Duke University
MD, Johns Hopkins University
Residency: Washington University
Fellowship: Ophthalmic pathology, Washington University; Orbital and Oculofacial plastic and Reconstructive surgery, UCLA

Alexandra Van Brummen, MD
Acting Assistant Professor

EDUCATION
BS, BA, University of Texas, Austin
MD, University of Texas Health Science Center at Houston
Residency: University of Washington
Fellowships: Pediatric Ophthalmology, University of Washington; Oculoplastic and Reconstructive Surgery, University of Washington

Matthew Zhang, MD
Associate Professor

EDUCATION
BS, University of Washington
MD, University of Pittsburgh
Residency: Vanderbilt Eye Institute
Fellowship: Oculoplastic and Orbital Surgery, Wills Eye Hospital and Lankenau Medical Center

Ocular oncologist Andrew Stacey, MD, performs surgery at Harborview Medical Center in Seattle.

Faculty honored as 'Top Docs' by Seattle and Seattle Met magazines

UW Medicine Ophthalmology faculty members have been honored as being among Top Doctors 2025 by Seattle Met and Seattle's Top Docs for 2025 by Seattle Magazine. All were nominated by their peers.

Faculty honored as Top Doctors by Seattle Met Magazine are:

Courtney Francis, MD (neuro-ophthalmology); Professor; Division Director, Neuro-Ophthalmology; Medical Director, UW Medicine Eye Institute

Erin Herlihy, MD (pediatrics); Associate Professor; Director, Pediatric Ophthalmology Fellowship

Thellea Leveque, MD, MPH (comprehensive/uveitis); Professor of Clinical Practice; Division Director, Comprehensive Ophthalmology

Jennifer Yu, MD, PhD (comprehensive); Professor of Clinical Practice; Director, 4W Ophthalmology Clinic at Harborview; Director of Trauma and Consult Services at Harborview

Faculty honored as Top Docs by Seattle Magazine are:

Michelle Cabrera, MD (pediatrics); Professor; Division Director, Pediatric Ophthalmology

Christopher Chambers, MD (oculoplastics); Professor; Division Director, Oculoplastic and Reconstructive Surgery

Philip Chen, MD (glaucoma); Professor; Grace E. Hill Endowed Chair; Vice Chair for Clinical Services, Chief of Ophthalmology, Harborview Medical Center

Eric Duerr, MD (comprehensive and glaucoma); Assistant Professor

Shu Feng, MD (comprehensive), Associate Professor; Director of Medical Student Education

Courtney Francis, MD (neuro-ophthalmology); Professor; Division Director, Neuro-Ophthalmology; Medical Director, UW Medicine Eye Institute

Eugene May, MD (neuro-ophthalmology); Professor of Clinical Practice

Raghu Mudumbai, MD (glaucoma and neuro-ophthalmology); Associate Professor; Division Director, Glaucoma

Miel Sundararajan, MD (cornea and external disease and uveitis), Assistant Professor, Division Director, Cornea and External Disease

Russell Van Gelder, MD, PhD (uveitis); Boyd K. Bucey Memorial Professor and Chair, UW Medicine Department of Ophthalmology; Director, Roger and Angie Karalis Johnson Retina Center; Director, UW Vision Science Center

Jennifer Yu, MD, PhD (comprehensive); Professor of Clinical Practice; Director, 4W Ophthalmology Clinic at Harborview; Director of Trauma and Consult Services at Harborview

OPTOMETRY

Hoi Yee (Zoe) Leung, OD
Teaching Associate

EDUCATION
BS, University of Washington
OD, College of Optometry, State Univ. of New York
Post-graduate training: Thomas E. Creek VA Medical Center

Vivian Manh, OD, MS
Clinical instructor

EDUCATION
BSC, University of Waterloo School of Optometry
OD, University of Waterloo School of Optometry
MS, Indiana University School of Optometry
Post-graduate training: Southern California College of Optometry

Jennifer Truong, OD
Teaching Associate

EDUCATION
BS, Kinesiology -Sports Medicine, California Poly
BS, Vision Science, Salus University College of Optometry
OD, Salus University
Post-graduate training: Department of Veterans Affairs, Memphis, TN

PEDIATRIC OPHTHALMOLOGY

Francine M. Baran, MD
Associate Professor of Clinical Practice

EDUCATION
BS, Washington University
MD, Drexel University College of Medicine
Residency: State University of New York Downstate
Fellowship: Pediatric Ophthalmology and Strabismus, Children's National Medical Center

Michelle Cabrera, MD
Professor, Chief, Division of Ophthalmology, Seattle Children's

EDUCATION
BS, Stanford University
MD, UCSF
Residency: UCSF
Fellowship. Pediatric Ophthalmology and Strabismus, Duke Eye Center

Erin Herlihy, MD
Associate Professor
Director, Pediatric Ophthalmology Fellowship

EDUCATION
BS, University of Notre Dame
MD: Loyola University
Residency: University of Washington
Fellowship: Pediatric Ophthalmology and Strabismus, University of Michigan

Laura C. Huang, MD
Assistant Professor

EDUCATION
BA, UCLA
MD, University of Miami
Residency: Stanford University
Fellowship: Pediatric Ophthalmology and Strabismus, University of Washington; Uveitis and Intraocular Inflammation, University of Washington

Kristina Tarczy-Hornoch, MD, DPhil
Professor

EDUCATION
BA, University of Oxford, UK
MD, University of California at San Francisco
D. Phil., Neurophysiology, University of Oxford, UK
MS, Clinical and Biomedical Investigation, University of Southern California
Residency: University of Southern California
Fellowship: Pediatric Ophthalmology and Strabismus, Johns Hopkins Hospital

PATIENT CARE

UVEITIS AND OCULAR INFLAMMATION

Laura C. Huang, MD

Assistant Professor

EDUCATION

BA, UCLA
MD, University of Miami
Residency: Stanford University
Fellowship: Pediatric Ophthalmology and Strabismus, University of Washington; Uveitis and Intraocular Inflammation, University of Washington

Miel Sundararajan, MD

Assistant Professor; Division Director, Cornea and External Disease

EDUCATION

BS, Rice University
MD, Baylor College of Medicine
Residency: New York Eye & Ear Infirmary
Fellowship: Uveitis, UCSF; Cornea & External Disease , UCSF

Thellea Leveque, MD, MPH

Professor of Clinical Practice; Division Director, Comprehensive Ophthalmology

EDUCATION

BA, Amherst College
MD, Duke University
MPH, Clinical Leadership, University of North Carolina
Residency: University of Michigan
Fellowship: Uveitis, University of Washington

Russell N. Van Gelder, MD, PhD

Professor, Boyd K. Bucey Memorial Chair, UW Medicine Department of Ophthalmology, Director, Karalis Johnson Retina Center
Director, UW Vision Science Center

EDUCATION

BS, Stanford University
MD, Stanford University
PhD, Stanford University Hospital and Veterans Administration Hospital
Residency, Barnes-Jewish Hospital and Washington University
Fellowships, Uveitis and Medical Retina, Barnes Retina Institute

Kathryn L. Pepple, MD, PhD

Associate Professor; Division Director, Uveitis; Director, Uveitis Fellowship; Director, Clinical Research

EDUCATION

BS, University of Oklahoma
MD, Baylor College of Medicine
PhD, Baylor College of Medicine
Residency, Duke University
Fellowships, Medical Retina, Duke University; Uveitis, University of Washington

2024-25 GRADUATING FELLOWS

Uveitis fellow Gunay Kirimli, MD, right, with Associate Professor Kathryn Pepple, MD, PhD.

Oculoplastics fellow Alexa Van Brummen, right, with Bucey Chair Russ Van Gelder, MD, PhD.

Pediatrics fellow Mennatullah Elfwwal, MD, right, with Associate Professor Erin Herlihy, MD.

Training the next generation of physicians and vision scientists

The University of Washington Department of Ophthalmology has trained more than 200 eye physicians and surgeons since 1966. Our current trainees include 20 residents and five fellows. The department will be adding a sixth resident and two more fellowships, in neuro-ophthalmology and ocular oncology, for 2026-27.

2024-25 Residents: Back row, Micah Buckmiller, Emma Stenz. Third row, Deborah Im, Johnson Huang, Jonathan Le, Marcus Turner. Second row, Dany Hage, Marc Toral, Amanda Hoyer, Grant Howell, Cameron Ward. Front row: Ryan Yanagihara, Gayathri Tummala, Zesee Mekonnen, Nicole Mattson.

RESIDENCY PROGRAM

The Ophthalmology residency program is designed to develop clinicians well trained in medical and surgical ophthalmology and prepared to excel as community practitioners, or to follow a career track that will lead them to academic medicine or biomedical research. With our outstanding faculty and state of the art facilities, our residents are exposed to a wide variety of pathology from the greater WWAMI region.

FELLOWSHIP PROGRAMS

Hargiss Ophthalmic Plastic & Reconstructive Surgery Fellowship

Kinyoun Medical Retina and Vitreoretinal Surgery Fellowship

Pediatric Ophthalmology Fellowship

Gensheimer Fellowship in Ocular Inflammatory Diseases

Glaucoma Fellowship (new for 2025-26)

Neuro-Ophthalmology Fellowship (new for 2026-27)

Ocular Oncology Fellowship (new for 2026-27)

Class of 2025: fellows and residents

Five residents and four fellows were honored at the annual graduation dinner, which was held on June 14 at the Women's University Club in Seattle.

The graduation event honored fellows Nathan Agi, MD (Retina), Gunay Kirimli, MD (Uveitis), Alexandra Van Brummen, MD (Oculoplastics), and Mennatullah Elfwwal, MD (Pediatrics). Drs. Agi and Van Brummen have joined the faculty.

The graduating residents are Sam Kushner-Lenhoff, MD (retina fellowship, UC Davis), Nicole Mattson, MD (glaucoma fellowship, Univ. of Iowa), Zesemayat Mekonnen, MD (private practice, California), Gayathri Tummala, MD (private practice, California), and Ryan Yanagihara, MD (medical retina fellowship in Texas) . Dr. Tummala received the Resident Research Award.

Miel Sundararajan, MD, was honored as the faculty teacher of the year. Michael Brush, MD, was honored as the volunteer of the year. Allein Siwa of the Eye Institute was honored as the staff person of the year. Second-year resident Johnson Huang, MD, received the Academic Excellence Award, and Najma Adan, MD, received the Medical Student of the Year award.

Najma Adan. MD, right, was honored as Medical Student of the Year at the graduation dinner with Associate Professor Shu Feng, MD.

New Glaucoma Fellowship gives Dr. Nguyen a chance to come home to Seattle

The creation of a fellowship in glaucoma with UW Ophthalmology could not have come at a better time for Dr. Brian Nguyen, DO.

He was completing residency in Michigan when he saw a listing for a new fellowship in Seattle.

"I was always looking for an opportunity to come home," said Dr. Nguyen, who was raised in Edmonds and is a graduate of Seattle University. "When I got that interview and was matched here, it was amazing for my whole family."

A fellowship is advanced sub-specialty training in ophthalmology, said Assistant Professor Andrew Chen, MD, director of the glaucoma fellowship.

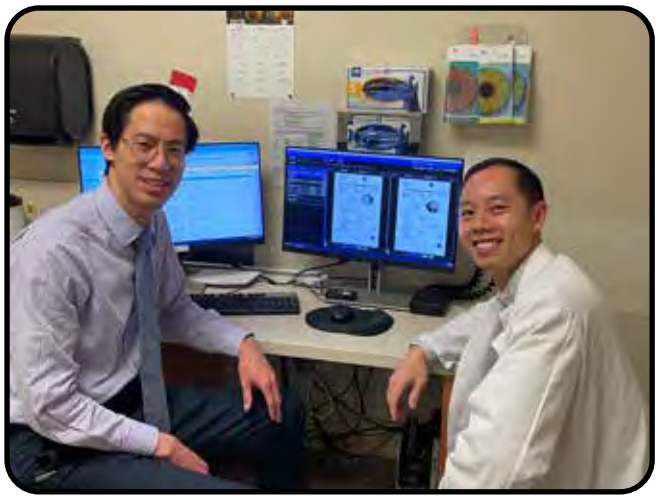
"The glaucoma fellowship is a one-year program in which the fellow refines their skills and a gains a deeper level of understanding of glaucoma both in the clinic and in the operating room," Dr. Chen said.

There are five glaucoma specialists on the UW Ophthalmology faculty, and Dr. Nguyen works and trains with all of them, while also doing research and being a mentor to residents.

Dr. Nguyen's father and sister are both physicians. Brian graduated summa cum laude from Seattle University in biology. He played varsity tennis at Meadowdale High School in Edmonds and was a four-year varsity player at Seattle U after walking on the team.

After graduating from Seattle U, he was accepted to an osteopathic medical school in Pomona, Calif. Osteopaths are holistic in their approach to medicine, he explained.

"The training is similar to that of an allopathic medical school, with the addition of training in osteopathic manipulation. The core of the osteopathic approach is looking at the person as a whole and not just a disease process," Dr. Nguyen said. "It's important for an ophthalmologist to see their patients like that, to have that approach. I'm not just treating their glaucoma or taking out their cataracts; this is an integral part of their life."



Glaucoma Fellow Dr. Brian Nguyen, right, with Assistant Professor Andrew Chen, MD.

He had shadowed an ophthalmologist before medical school and took an ophthalmology elective during medical school, which cemented his residency choice.

"When I saw cataract surgery, I wondered how it was possible to perform surgery that quickly and the impact it had on patients. You could change a person's life in 15 minutes," Nguyen said. Twice during residency, he traveled to Mexico to partner with a surgeon to perform cataract surgeries, sponsored by Lions Clubs International, a service organization dedicated to preventing blindness.

"What I value in glaucoma is being able to preserve someone's sight when you manage their disease," he said. "There is this sense of satisfaction when I can prevent someone from going blind. It's not always easy, but I really think I can contribute to the field of glaucoma."

WAEPS Grand Rounds Lectures brings speciality speakers from nationwide

The Department of Ophthalmology teams with the Washington Association of Eye Physicians and Surgeons to present the WAEPS Grand Rounds lecture series during the academic year. The lectures bring specialists from nationwide to UW to give talks to our faculty and residents.

Gained in Translation: Collaboration between UW, UBC and OHSU

The annual Gained in Translation symposium brings together clinicians and vision scientists from UW, the University of British Columbia, and Oregon Health Sciences University. The 16th Annual symposium was Nov. 15, 2025 at UBC in Vancouver. This event is an effort among the Cascadia academic ophthalmology departments to foster meaningful discussion and collaboration. The event featured a clinician addressing an unmet medical need, followed by a presentation from a basic or translational scientist exploring how recent scientific advances may offer solutions to that need.

Seattle-King County Clinic provides care to underserved communities

UW Ophthalmology residents and Assistant Professor Dr. Miel Sundararajan participated in the four-day volunteer-driven Seattle/King County Clinic, which provides free dental, vision, and medical care to anyone in the region who struggles to access or afford healthcare. The clinic provided more than $2.6 million in comprehensive healthcare to over 2,900 people.

High school students become 'Doctor for a Day'

Department of Ophthalmology faculty and residents participated in “Doctor for a Day,” an outreach program for youth from all backgrounds in the greater Seattle area. The aim is to inspire and encourage middle and high school students to consider medicine or other healthcare careers. Ophthalmology faculty and residents offered several tables for the students to explore vision testing, color vision, stereopsis, suturing practice, viewing the retina with indirect ophthalmoscopes, viewing their retina with a camera, and other fun items like a cataract and AMD simulator.

PUBLICATIONS

ACADEMIC YEAR 2025 (JULY, 2024 THROUGH JUNE, 2025)

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Don Minckler, MD presents Honored Alumni Lecture at Resident Alumni Day

Don Minckler, MD, UW Ophthalmology residency class of 1973, gave the Honored Alumni Lecture at the 51st annual Resident Alumni Day on the South Lake Union campus.

Dr. Minckler has had a distinguished career in ophthalmic pathology. He is Clinical Professor of Laboratory Medicine and Director of Ophthalmic Pathology at the UC Irvine School of Medicine. He was previously Chief of Glaucoma at USC for 25 years.

His distinguished career achievements include:

• Serving as Editor-in-Chief of the journal Ophthalmology for seven years
• American Academy of Ophthalmology Lifetime Achievement Award, June 2007
• Secretariat Award, (AAO Annual Meeting) 2008
• Charter member, American Glaucoma Society
• More than 200 peer reviewed publications and dozens of invited lectures

The keynote speaker was Felipe Medeiros, MD, PhD from the University of Miami Bascom Palmer Eye Institute.

2025 Honored Alumni speaker Dr. Don Minckler, right, with Professor Emeritus Robert Kalina, MD.

Felipe Medeiros, MD, of the Bascom Palmer Eye Institute, left, was the keynote speaker at Resident Alumni Day, here with Bucey Chair Russ Van Gelder, MD, PhD.

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We extend appreciation to our philanthropic partners, whose generosity accelerates our ability to conduct cutting-edge research, provide excellent patient care, and train the next generation of ophthalmologists. To learn more about giving opportunities, please contact Michelle La Pierre, director for philanthropy at 206.616.7713 or mlb18@uw.edu. You can learn how UW Medicine is improving the health of our communities and beyond by visiting give.uwmedicine.org.

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The Community Action Board is a group of committed volunteers who advance the Eye Institute's mission by serving as ambassadors in our community, advising faculty on matters of strategic importance, and generously supporting our mission. Philanthropic gifts help to accelerate innovation in the form of seed grants for our faculty research. We are honored and privileged to work with such a fine group of individuals as we pursue our mission of alleviating suffering from eye disease.

The CAB was formed after the Eye Institute opened in 2009, and more than 50 people have served.

The Community Action Board has provided support in many areas, including:

- Art for the Institute
- Community outreach for talks and support
- Educational materials for our students and residents
- Equipment for the institute
- Outreach videos for the Eye Institute
- Support for students and trainees in our laboratories and clinics
- Latham Vision Research Innovation Awards
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From left, Bucey Chair Dr. Russ Van Gelder, Community Action Board Chair James Hedden and CAB members Jack Jolley and Juliana Gensheimer at the annual Board Dinner in October 2025.

Since opening in 2009, the Eye Institute has seen more than 500,000 patient visits and 70,000 individual patients. Eye Institute faculty have performed over 40,000 surgeries and provided millions of dollars of charity care. The department's endowment has grown to nearly $50 million, and the department now ranks in the top 10 in the nation for research funding from the NIH.

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