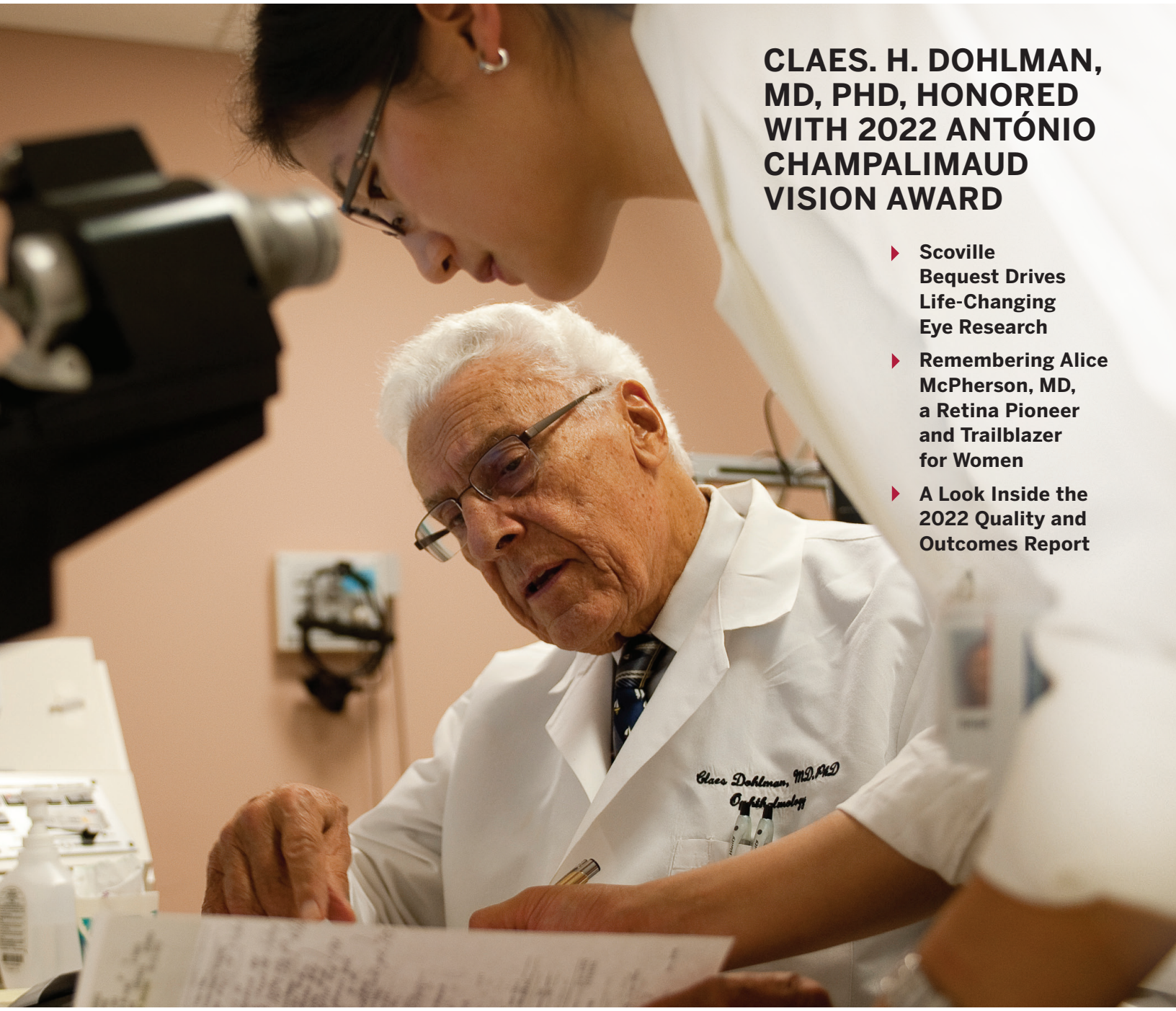
NEWS FROM HARVARD OPHTHALMOLOGY | ISSUE 43, APRIL 2023

EYE WITNESS



CLAES. H. DOHLMAN, MD, PHD, HONORED WITH 2022 ANTÓNIO CHAMPALIMAUD VISION AWARD

- Scoville Bequest Drives Life-Changing Eye Research
- Remembering Alice McPherson, MD, a Retina Pioneer and Trailblazer for Women
- A Look Inside the 2022 Quality and Outcomes Report

HARVARD MEDICAL SCHOOL | DEPARTMENT OF Ophthalmology

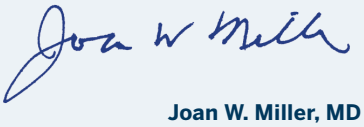
Decades of Cornea Research at Harvard Ophthalmology Recognized with Champalimaud Award

Harvard Ophthalmology has long been a powerhouse for translational research and clinical innovation. Many of the most important clinical advances in the last two decades—including optical coherence tomography, photodynamic therapy, anti-VEGF therapies, and the Boston Keratoprosthesis—have been developed in our department.

These advances continue to revolutionize patient care and be recognized by our peers. In September 2022, Claes H. Dohlman, MD, PhD, was honored with the 2022 António Champalimaud Vision Award for his pioneering contributions to the field. This award, often referred to as the "Nobel Prize of Vision," is the highest distinction bestowed in ophthalmology and vision science. Harvard Ophthalmology is the only ophthalmology department to win this prestigious award multiple times and boasts the most Champalimaud Laureates to date.

Dr. Dohlman is widely considered the founder of modern cornea science. Over the course of his seven-decade career at Schepens Eye Research Institute of Mass Eye and Ear and Harvard Ophthalmology, he has spearheaded investigations of corneal physiology that have laid the groundwork for clinical practice in dry eye disease, corneal burns, wound healing, corneal transplantation and keratoprosthesis.

As we celebrate our department's seminal contributions to the field, we also recognize that there is still much more work to be done. We continue to work together towards eliminating blindness worldwide, with a particular interest in areas of greatest unmet medical need, like retinal diseases, optic neuropathies, and corneal diseases. New initiatives in clinical data science, artificial intelligence, imaging, genetics and gene-based therapy, and regenerative medicine also hold great promise. Our knowledge, experience, passion and compassion propel our efforts to find treatments and cures for our patients, and we are excited and optimistic for the future.



Joan W. Miller, MD

David Glendenning Cogan Professor of Ophthalmology and Chair, Department of Ophthalmology, Harvard Medical School

Chair of Ophthalmology, Massachusetts Eye and Ear and Massachusetts General Hospital

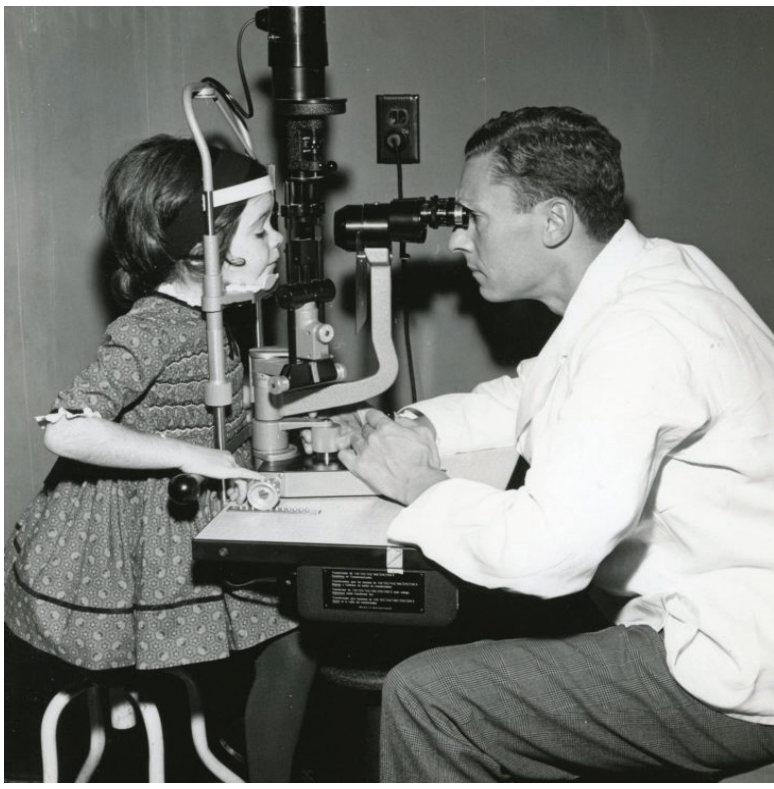
Ophthalmologist-in-Chief, Brigham and Women's Hospital

Claes H. Dohlman, MD, PhD, Honored with 2022 António Champalimaud Vision Award

Claes H. Dohlman, MD, PhD, whose pioneering research at Harvard Ophthalmology and Mass Eye and Ear has forever changed the way conditions of the cornea are understood and treated, received the 2022 António Champalimaud Vision Award for his vast contributions to vision research in September.

Dr. Dohlman, who was born in Uppsala, Sweden, in 1922 and trained at the University of Lund and the Karolinska Institute in Stockholm, received the award along with fellow 2022 Champalimaud Laureate, Gerrit R. J. Melles, MD, PhD, founder of the Netherlands Institute for Innovative Ocular Surgery (NIIOS) and the Melles Cornea Clinic in Rotterdam.

Both award recipients were honored on September 15, 2022, during a ceremony held at the Champalimaud Centre for the Unknown in Lisbon, Portugal. The award carries a €1,000,000 prize that is shared among the winners to be used for furthering their research.



Claes Dohlman, MD, PhD, with patient

First established in 2006, the Champalimaud Vision Award, presented by the Portugal-based Champalimaud Foundation, is the highest distinction bestowed in ophthalmology and vision science, carrying one of the largest prizes in scientific research. The award is given once a year, alternating between research contributions to the field of vision (even numbered years) and contributions to the relief of vision problems, primarily in developing countries (odd numbered years).

Harvard Ophthalmology Boasts Most Laureates to Date

Harvard Ophthalmology is the only ophthalmology department to receive the Champalimaud Award multiple times and boasts the most laureates to date.

In 2012, two former Harvard Ophthalmology faculty members and their collaborators were recognized for the invention of optical coherence tomography. This technology—one of the greatest advances in ophthalmic imaging—was developed in collaboration by colleagues at Mass Eye and Ear, Massachusetts Institute of Technology, and Massachusetts General Hospital.

In 2014, six HMS researchers were recognized for identifying vascular endothelial growth factor (VEGF) as the key driver of angiogenesis in diseases of the eye, leading to the development of revolutionary anti-VEGF therapies for diseases, including age-related macular degeneration, diabetic retinopathy, and other retinal vascular diseases.

"It is an incredible honor for our researchers to be recognized once again with the Champalimaud Vision Award. Dr. Dohlman's work in particular has not only transformed the course of cornea science over the last century, but has also directly helped countless individuals through his innovations and discoveries," said Joan W. Miller, MD, a recipient of the 2014 Champalimaud Vision Award, and Chair of Ophthalmology at Mass Eye and Ear and Massachusetts General Hospital, Ophthalmologist-in-Chief at Brigham and Women's Hospital, and Chair of Ophthalmology and the David Glendenning Cogan Professor of Ophthalmology at HMS. "The hundreds of cornea specialists who have been fortunate to be trained by Dr. Dohlman carry on his lasting legacy through working towards a mission shared with the Champalimaud Foundation."

Father of Modern Corneal Science Feted for Seminal Contributions

Dr. Dohlman, a Professor of Ophthalmology, Emeritus, and former Chair of the HMS Ophthalmology Department, is internationally recognized as the founder of modern corneal science. Over the course of his seven-decade career at Schepens Eye Research Institute of Mass Eye and Ear and Harvard Ophthalmology, Dr. Dohlman has spearheaded investigations of corneal physiology that have laid the groundwork for clinical practice in dry eye disease, corneal burns, wound healing, corneal transplantation and keratoprosthesis.

Claes Dohlman, MD, PhD, with his family in Portugal where he received the 2022 António Champalimaud Vision Award

Dr. Dohlman, who turned 100 on September 11, is the inventor of the Boston Keratoprosthesis (Boston KPro, or Boston Cornea), an artificial cornea that benefits patients who are unable to receive a standard corneal transplant. It has since become the most widely used artificial cornea, restoring the sight of more than 15,000 patients in the United States and in 52 countries worldwide.

A prolific researcher, Dr. Dohlman has published nearly 400 scientific articles, and presented more than 40 named lectures globally. His educational contributions are boundless. He was the first to create a formal structured cornea fellowship program and has trained over 200 cornea specialists – more than any ophthalmologist in the world – many of whom have gone on to become professors and ophthalmology department chairs and continue to train future generations of cornea specialists.

As part of the award, a special named lecture will be presented at the 2023 Annual Meeting of the Association for Research in Vision and Ophthalmology (ARVO), being held April 23-27 in New Orleans, La.

Founder of Mass Eye and Ear Cornea Service

In 1964, Dr. Dohlman established the Cornea Service at Mass Eye and Ear— the first cornea subspecialty clinic in the world. Under the leadership of Dr. Dohlman and his successor and former mentee Reza Dana, MD, MSc, MPH, the Claes H. Dohlman Professor of Ophthalmology at HMS, the service has grown to become one of the largest and most renowned in the world. Members of the service continue to be at the forefront of major medical and surgical advances in the field. Their translational research and clinical innovations have led to new treatments for corneal disorders, including stem cell transplantation ocular surface reconstruction, and lamellar keratoplasty.

Cornea specialist Ula Jurkunas, MD (middle), with trainees

Image credit - John Earle Photography

Cornea Center of Excellence a Hub for Research Advances and Innovation

Corneal blindness is one of the leading causes of vision loss, according to the World Health Organization. Conditions affecting the cornea are complex in their epidemiology and include an array of inflammatory, infectious and genetic eye diseases that cause scarring of the cornea, the transparent layer at the front of the eye. The cornea is the primary structure for focusing light and serves as a protective barrier from injuries and microbial pathogens.

The Harvard Ophthalmology Cornea Center of Excellence, directed by Dr. Dana and Ula Jurkunas, MD, brings together one of the world's largest group of scientists and physicians to advance the understanding of corneal biology, develop treatments for corneal conditions and improve access to sight-saving treatments.

Over the past two decades, these researchers have spearheaded several advances including: the role of oxidative stress in the pathogenesis of Fuchs' endothelial corneal dystrophy; identifying the molecular and cellular immune basis of dry eye disease, including the role of interleukin-17; developing and optimizing drug-eluting contact lenses which are entering clinical trials; developing autologous limbal epithelial cell transplantation (CALEC) and performing the first surgery of its kind to take healthy stem cells from one eye and transfer them to an eye damaged with corneal burns.

Additionally, researchers continue to refine the Boston KPro. Former faculty member James Chodosh, MD, MPH, invented and patented a newer low-cost keratoprosthesis – the "Lucia" – to address corneal blindness in low-resource countries. Researchers are also studying and testing newer versions of the Boston KPro, including a titanium modification to enhance its cosmesis, and how to prevent postoperative glaucoma.

2022 Harvard Ophthalmology Annual Meeting and Alumni Reunion

Harvard Ophthalmology hosted the 2022 Annual Meeting and Alumni Reunion in person on Friday, June 24. The CME-accredited event featured faculty and alumni lectures, award presentations, a poster contest, gala dinner, and many opportunities to network and reconnect. The event was co-chaired by Joan W. Miller, MD; Joseph B. Ciolino, MD; Gena Heidary, MD, PhD; Rachel Huckfeldt, MD, PhD; and Joseph F. Rizzo III, MD.

Elena Barraquer, MD, presented the Mariana D. Mead Lecture

Mariana Mead Lecture

Elena Barraquer, MD, a Harvard Ophthalmology alumna, Assistant Medical Director of the Barraquer Ophthalmology Centre in Barcelona, Spain, and CEO of the Elena Barraquer Foundation, presented the Mariana D. Mead lecture. Dr. Barraquer's talk focused on her work leading the Elena Barraquer Foundation, a nonprofit organization committed to preventing blindness due to cataracts in underserved, developing countries. Dr. Barraquer, an expert in the field of cataract and refractive surgery, leads a team of more than 70 clinical volunteers who embark on surgical mission trips across the globe to perform much needed cataract surgeries. In 2021, Dr. Barraquer and her team performed 1,361 cataract surgeries across five expeditions to Senegal, Mozambique, Mauritania, and El Salvador.

This lecture was established to honor the memory of Mariana D. Mead, MD, an accomplished ophthalmologist who trained and worked at Harvard Ophthalmology and Mass Eye and Ear before she passed away in 2002.

Donald J. Zack, MD, PhD, presented the 2022 Distinguished Research Achievement Award Lecture

Distinguished Achievement Award Lectures

Alumnus Donald J. Zack, MD, PhD, the Guerrieri Professor of Genetic Engineering and Molecular Ophthalmology at Johns Hopkins University and Co-Director of the Center for Stem Cells and Ocular Regenerative Medicine at Wilmer Eye Institute, presented the 2022 Distinguished

Eve Higginbotham, SM, MD, ML, presented the Distinguished Clinical Achievement Award Lecture

Research Achievement Award Lecture. A renown retina and glaucoma researcher, Dr. Zack discussed several of the mentors who positively impacted his career in ophthalmology and his research on the neuroprotective approaches for the treatment of photoreceptor and retinal ganglion cell degeneration.

Alumna Eve J. Higginbotham, SM, MD, ML, Professor of Ophthalmology and Vice Dean for Inclusion and Diversity at Perelman School of Medicine at the University of Pennsylvania, presented the 2022 Distinguished Clinical Achievement Award Lecture. A leading glaucoma specialist and expert on Inclusion, Diversity, Equity, Dr. Higginbotham discussed race as a social construct, unconscious bias in science and medicine, and how assumptions on race can lead to inequalities in care.

Congratulations to Our Poster Contest Winners

Prior to the evening reception, residents and fellows participated in a Trainee Poster Contest at The Newbury Hotel. The Poster Contest was judged by faculty members Petr Baranov, MD, PhD; Nick Butler,MD; Thomas Dohlman, MD; and Katie Luo, MD, PhD.

In the basic and translational research category, Feng Tian, PhD, a research fellow at Boston Children's Hospital, won first place for his poster "Core transcription programs controlling injury-induced neurodegeneration of retinal ganglion cells." Meenakshi Maurya, also a research fellow at Boston Children's Hospital, won second place for her poster, "REV-ERBα deficiency accelerates age-related synaptic remodeling in mouse retina."

In the clinical research category, Kristen Pitts, a Research Technologist at Schepens Eye Research Institute of Mass Eye and Ear, won first place for her poster, "APOE and Galectin-3, markers of activated microglia, are elevated in the aqueous humor of glaucoma patients." Cris Jacoba, MD, a clinical fellow at Beetham Eye Institute at Joslin Diabetes Center, won second place for his poster, "Automated machine learning models for diabetic retinopathy screening using handheld fundus cameras in a low-resource community screening program."

From left to right: Jadesola (Jade) Oremosu (former Harvard Ophthalmology Research Scholar); oculoplastic surgeon Michael Yoon, MD; Chair Joan W. Miller, MD; oculoplastic surgeon Suzanne Freitag, MD; and Yamiko Jessica Chanza and Dinasha Dahanayak (both former Harvard Ophthalmology Research Scholars)

Faculty and Alumni Honored with AAO Awards

Congratulations to our faculty and alumni who were recognized for their outstanding contributions to vision research, education, and service at the 2022 American Academy of Ophthalmology (AAO) Annual Meeting held in October.

Outstanding Humanitarian Service Award
Morris E. Hartstein, MD (alumnus)

Straatsma Award for Excellence in Resident Education
Laura K. Green, MD (alumna)

Robert N. Shaffer Lecture
Michael V. Drake, MD (alumnus)

The Charles L. Schepens MD Lecture
Philip J. Rosenfeld, MD, PhD (alumnus)

William F. Hoyt Lecture
Steven E. Feldon, MD (alumnus)

Lifetime Achievement Honor Award
Thomas M. Aaberg, MD, MSPH (alumnus)
Lloyd Paul Aiello, MD, PhD
Jeffrey S. Heier, MD

Distinguished Service Award
James Chodosh, MD, MPH (former faculty alumnus)

Senior Achievement Award
Lama A. Al-Aswad, MD, MPH (alumnus)
Dasa Gangadhar, MD (alumnus)
John Alexander Irvine, MD (alumnus)
Kathleen A. Lamping, MD (alumna)
Leonard A. Levin, MD, MPH (alumnus)

Achievement Award
Durga S. Borkar, MD (alumna)
Matthew F. Gardiner, MD
Pankaj C. Gupta, MD (alumnus)
Leo A. Kim, MD, PhD
Steven J. Lichtenstein, MD (alumnus)
Peter W. MacIntosh, MD (alumnus)

Secretariat Award
Paul Lee, MD, JD (alumnus)
David Palmer, MD (alumnus)
Rajesh C. Rao, MD (alumnus)

International Scholar Recipient
Alejandro Rodriguez-Garcia, MD (alumnus)

Save the Date

OUR NEXT ANNUAL MEETING AND ALUMNI REUNION WILL TAKE PLACE ON JUNE 9, 2023

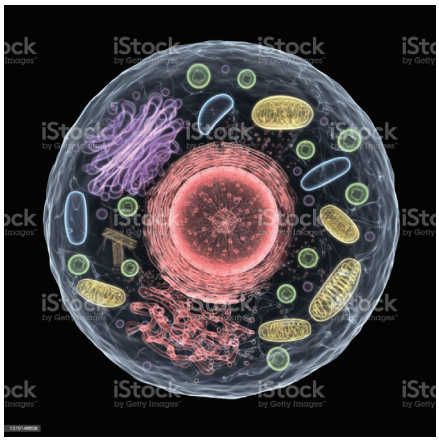
Registration opens soon at **eye.hms.harvard.edu/annualmeeting**

2023 HONOREES

Distinguished Research Award
Ilene K. Gipson, PhD
Professor of Ophthalmology, Emerita, Harvard Medical School

Distinguished Clinical Award
M. Roy Wilson, MD, MS
President, Wayne State University

Mariana Mead Lecturer
Peter S. Hersh, MD
Founder, Cornea and Laser Eye Institute
Director, Cornea and Refractive Surgery Division at Rutgers Medical School



Novel Cell Atlas Aids in Understanding of Genetic Underpinnings for Complex Diseases

In a study published in *Science*, researchers from the Broad Institute of MIT and Harvard described for the first time how their novel cross-tissue cell atlas derived from an analysis of nuclei from 25 frozen samples from 8 tissue types may increase understanding of the cellular and genetic underpinnings of complex diseases, including heart disease and cancers.

"Having a better understanding of the genes and cell types involved in complex diseases from different tissues can help us better understand what predisposes people to these diseases and may ultimately lead to the development of better, more targeted therapeutics," said co-senior and co-corresponding author Ayellet V. Segrè, PhD. Dr. Segrè is a genetic biostatistician and member of the Harvard Ophthalmology Ocular Genomics Institute at Mass Eye and Ear, an assistant professor of Ophthalmology at Harvard Medical School, and an associate member of the Broad Institute of MIT and Harvard.

Scientists Uncover Role of Alzheimer's-Linked APOE Gene in Glaucoma Protection and Identify Promising Treatment to Prevent Vision Loss

Recent research led by scientists at Mass Eye and Ear and Brigham and Women's Hospital, member hospitals of Mass General Brigham, reveals the role that a genetic variant associated with Alzheimer's disease, *APOE4*, plays in protecting against glaucoma. In the study, published in *Immunity*, the researchers also used a pharmacologic treatment to successfully prevent the destruction of neurons in the eyes of mice with glaucoma by targeting the APOE signaling pathway.

The scientists, led by Milica Margeta, MD, PhD, Assistant Professor of Ophthalmology at Harvard Medical School, demonstrated that the *APOE4* gene variant, which increases risk for Alzheimer's, but decreases risk of glaucoma in humans, blocks a disease cascade that leads to the destruction of retinal ganglion cells in glaucoma. Additionally, they showed in separate mouse models that the death of retinal ganglion cells—the cause of vision loss in glaucoma— can be prevented by using medications to inhibit a molecule called Galectin-3, which is regulated by the APOE gene. These findings taken together emphasize the critical role of APOE in glaucoma and suggest that Galectin-3 inhibitors hold promise as a glaucoma treatment, according to the authors.

Ophthalmic Telemedicine Can Exacerbate Healthcare Inequalities

A retrospective study, led by Grayson Armstrong, MD, MPH, Director of the Ophthalmology Emergency Service at Mass Eye and Ear, confirmed that within the field of ophthalmology what had been found true in other medical fields: there were demographic disparities among patients who used telemedicine for care in 2020. Decreased receipt of ophthalmic telemedicine was associated with increased age, a primary language other than English, Black race, educational level of high school or less, and male patients. These findings show that ophthalmologists should prioritize health equity in future telemedicine programs.

Clinical Trainees (Joined in July 2022)

PGY-1 HARVARD OPHTHALMOLOGY RESIDENTS

- Dennis Y. Akrobetu, MD – Duke School of Medicine
- Darren Chen, MD – Weill Cornell Medical College
- Ned Lu, MD – Harvard Medical School
- Sameen Meshkin, MD – Harvard Medical School
- Rachel Tandias, MD – Harvard Medical School
- Hursuong Vongsachang, MD – Johns Hopkins University School of Medicine
- Seyedeh Maryam Zekavat, MD, PhD – Yale School of Medicine
- Henry W. Zhou, MD, MS, – Columbia University College of Physicians and Surgeons

PGY-2 HARVARD OPHTHALMOLOGY RESIDENTS

- Amee Azad, MD – Stanford University School of Medicine
- Enchi K. Chang, MD – Harvard Medical School
- Yilin (Eileen) Feng, MD – University of Michigan Medical School
- James Harris, MD, PhD – Harvard Medical School
- Lindsay Klofas Kozek, MD, PhD – Vanderbilt University School of Medicine
- Da Meng, MD, PhD – Columbia University College of Physicians and Surgeons
- Tatiana Rosenblatt, MD – Stanford University School of Medicine
- Melissa Yuan, MD – Weill Cornell Medical College

CHIEF OPHTHALMOLOGY RESIDENT AY 2022-2023

In July 2022, Neal Patel, MD, stepped into the role of Chief Resident and Director of the Eye Trauma Service at Mass Eye and Ear. He oversees and coordinates trauma coverage at Mass Eye and Ear, Mass General Hospital, and Brigham and Women's Hospital. As Chief Resident and Instructor of Ophthalmology, Dr. Patel is the primary teacher and a vital mentor and peer resource for Harvard Ophthalmology residents.

INCOMING OPTOMETRIC RESIDENTS IN OCULAR DISEASE AND CORNEA/CONTACT LENS

- Syndey Krisa, OD – Illinois College of Optometry
- Julie Lin, OD – SUNY College of Optometry

AY 2022-2023 CLINICAL FELLOWS

Anterior Segment, Mass Eye and Ear

Fellowship Director: Kathryn Hatch, MD
Jonathan M. Lam, MD, MBA

Cornea and Refractive Surgery, Mass Eye and Ear

Fellowship Director: Jia Yin, MD, PhD, MPH
Associate Fellowship Director: Austin Meeker, MD
Sila Bal, MD, MPH
Aaron R. Kaufman, MD
Leonid M. Zukin, MD

Glaucoma, Mass Eye and Ear

Fellowship Director: Lucy Shen, MD
Associate Fellowship Director: Daniel Vu, MD
Karam A. Alawa, MD
Aimee C. Chang, MD
Christina Lieu, MD

Inherited Retinal Degenerations

Fellowship Director: Rachel Huckfeldt, MD, PhD
Priya R. Gupta, MD

Medical Retina, Beetham Eye Institute at Joslin Diabetes Center

Fellowship Director: Lloyd Paul Aiello, MD, PhD
Samet Gulkas, MD

Medical Retina, Mass Eye and Ear

Fellowship Director: Deeba Husain, MD
Natalie T. Huang, MD

Neuro-Ophthalmology, Mass Eye and Ear

Fellowship Director: Dean Cestari, MD
Emilie Bergeron, MD
Tais Estrela, MD
Aishwarya Sriram, MD

Ocular Immunology and Uveitis, Mass Eye and Ear

Fellowship Directors: George Papaliodis, MD; and Lucia Sobrin, MD, MPH
Marez Megalla, MD

Ophthalmic Genetics/Pediatric Medial Retina, Boston Children's Hospital

Fellowship Director: Anne Fulton, MD
Jad Ayash, MD

Ophthalmic Plastic and Reconstructive Surgery (ASOPRS), Mass Eye and Ear
Fellowship Director: Suzanne Freitag, MD
Caroline A. Chiou, MD (under the direction of Suzanne Freitag)

Pediatric Ophthalmology and Strabismus, Boston Children's Hospital/Mass Eye and Ear
Fellowship Director: Gena Heidary, MD, PhD
Tiffany A. Chen, MD
Leyla Yavuz Saricay, MD
Marguerite Weinert, MD

Vitreoretinal Surgery, Mass Eye and Ear
Fellowship Director: Dean Eliott, MD
Associate Fellowship Directors: John B. Miller, MD and
Nimesh (Nemo) Patel, MD
Ahmad Al-Moujahed, MD, PhD, MPH
David J. Doobin, MD, PhD
Ines Lains, MD, PhD

TRAINEES RECEIVE HEED FELLOWSHIPS

Four Harvard Ophthalmology trainees were awarded Heed Fellowships for AY2022-23. This postgraduate fellowship is one of the most prestigious honors for trainees who are pursuing academic careers in ophthalmic patient care, education, and research. Congratulations to:

- Jacob Cox, MD, MPhil, Harvard Ophthalmology residency alumnus who is now a vitreoretinal surgery fellow at Cleveland Clinic
- Jose Davila, MD, current vitreoretinal surgery fellow at Mass Eye and Ear
- Aaron Kaufman, MD, current cornea, external disease, and refractive surgery fellow at Mass Eye and Ear fellow
- Karen Wai, MD, Harvard Ophthalmology residency alumnus, who is now a vitreoretinal surgery fellow at Stanford University/Byers Eye Institute

Faculty Updates

LOTFI MERABET, OD, PHD, NAMED INAUGURAL FREDERICK AND THADDEUS JAKOBIEC CHAIR IN OPHTHALMOLOGY

Lotfi Merabet, OD, PhD, has been named the inaugural Frederick and Thaddeus Jakobiec Chair in Ophthalmology at Mass Eye and Ear. The late Dr. Jakobiec was an international leader in eye pathology and the former Chair of Harvard Ophthalmology and Chief of the Mass Eye and Ear Department of Ophthalmology. He established this chair to support translational vision research.

Dr. Merabet joined the Harvard Ophthalmology faculty in 2010 as a clinician scientist and member of Mass Eye and Ear's Vision Rehabilitation Service. In 2022, he was named Co-Director of the Harvard Ophthalmology Mobility Enhancement and Vision Rehabilitation Center of Excellence—a multidisciplinary research collaboration that is focused on developing and applying real-world and virtual environments for research, clinical assessment, and rehabilitation training.

He is a world-renowned expert in neuroplasticity associated with ocular and brain-based visual impairment. Cerebral visual impairment (CVI) is the leading cause of pediatric visual impairment and blindness in the United States and developed countries. In response to this unmet public health concern, he has forged a large-scale collaborative project with the Perkins School for the Blind that incorporates advanced multi-modal brain imaging methodologies and novel virtual reality-based assessment tools.

Dr. Merabet's work has helped us understand how individuals with ocular blindness use regions of the brain normally associated with analyzing visual information for the purpose of processing non-visual sensory information, and how individuals with CVI process visual information after early brain damage. We now know that these neuroplastic changes are crucial to the development of adaptive behaviors.

HMS APPOINTMENTS/PROMOTIONS (MAY 2022- OCTOBER 2022)

To Assistant Professor of Ophthalmology

- Jae-Hyun Jung, PhD, Schepens Eye Research Institute of Mass Eye and Ear
- Nimesh Patel, MD, Mass Eye and Ear
- Daniel Vu, MD, Mass Eye and Ear

To Instructor of Ophthalmology

- Inas Aboobakar, MD, Mass Eye and Ear
- Levi Kanu, MD, Mass Eye and Ear
- Leyla Karim, MD, Boston Children's Hospital
- Wendy Linderman, MD, Mass Eye and Ear
- Neal Patel, MD, Mass Eye and Ear
- Frances Wu, MD, Mass Eye and Ear
- Alexander Young, MD, Boston Children's Hospital

LEADERSHIP APPOINTMENTS

HARVARD OPHTHALMOLOGY EDUCATION AND RESEARCH LEADERSHIP

Alice Lorch, MD, MPH
Associate Chief for Ophthalmic Education, Mass Eye and Ear
Vice Chair of Education, Harvard Ophthalmology

Austin Meeker, MD
Associate *Fellowship* Director, Cornea, External Disease, and Refractive Surgery Fellowship, Mass Eye and Ear

Lotfi Merabet, OD, PhD, MPH
Frederick and Thaddeus Jakobiec Chair in Ophthalmology at Mass Eye and Ear
Co-Director of the Mobility Enhancement and Vision Rehabilitation Center of Excellence

Ankoor Shah, MD
Director of Inclusion, Diversity, and Equity, Harvard Ophthalmology
Department Champion, American Academy of Ophthalmology and Association of University Professors of Ophthalmology Minority Ophthalmology Mentoring (MOM) Program

Nimesh (Nemo) Patel, MD
Associate *Fellowship* Director, Vitreoretinal Fellowship, Mass Eye and Ear

Daniel Vu, MD
Associate *Fellowship* Director, Glaucoma Fellowship, Mass Eye and Ear

Jia Yin, MD, PhD, MPH
Program *Fellowship*, Cornea, External Disease, and Refractive Surgery Fellowship, Mass Eye and Ear

Michael Yoon, MD
Fellowship Programs Leader, Mass Eye and Ear

BOSTON KPRO LEADERSHIP

Reza Dana, MD, MSc, MPH (Mass Eye and Ear) will provide research and business strategy support to the program, and act as a mentor to new leaders Thomas Dohlman and Eleftherios Paschalis.

Thomas Dohlman, MD
Medical Director, Boston Keratoprosthesis Program, Mass Eye and Ear

Eleftherios Paschalis, PhD
Director, Boston Keratoprosthesis Research, Development, and Regulatory Affairs, Mass Eye and Ear

MASS EYE AND EAR CLINICAL LEADERSHIP

Thomas Dohlman, MD
Michael Boland, MD
Site Director, Mass Eye and Ear, Lexington

Nicholas J. Butler, MD
Chief of Ophthalmology, VA Boston

Dean Eliott, MD
Director, Emeritus, Retina Service, Mass Eye and Ear

Ula V. Jurkunas, MD
Associate Director, Cornea Service, Mass Eye and Ear

Michael Lin, MD
Associate Director, Glaucoma Service, Mass Eye and Ear

Milica Margeta, MD, PhD
Mass Eye and Ear Ophthalmology Scholar

Lucia Sobrin, MD, MPH
Associate Director, Retina Service, Mass Eye and Ear

Christian Song, MD
Associate Director, Comprehensive Ophthalmology Service

Demetrios Vavvas, MD, PhD
Director, Retina Service, Mass Eye and Ear

INCOMING FACULTY

Inas F. Aboobakar, MD
Dr. Aboobakar joined the Ophthalmology Emergency, Consult, and Hospitalist Service at Mass Eye and Ear as a part-time hospitalist in November 2022. She earned her medical degree from Duke University School of Medicine and completed her residency training at Wilmer Eye Institute at Johns Hopkins University. She then joined Mass Eye and Ear for a year-long Glaucoma Fellowship. In October 2022, she completed a glaucoma research fellowship in Dr. Janey Wiggs' Laboratory. Dr. Aboobakar will continue her glaucoma research while working as a hospitalist.

Levi Kanu, MD
Dr. Kanu joined the Cornea Service at Mass Eye and Ear as a K12 Scholar. He earned his MD from the Perelman School of Medicine at the University of Pennsylvania and completed his residency training at Illinois Eye and Ear Infirmary at the University of Illinois, Chicago. In July 2022, he completed a two-year Cornea and External Disease Fellowship at Mass Eye and Ear.

Leyla Karim, OD
Dr. Karim joined the Boston Children's Hospital as a pediatric optometrist. She earned her optometry degree from the State University of New York College of Optometry, where she stayed on to complete her pediatric ophthalmology residency training.

Wendy Linderman, MD
Dr. Linderman joined the Comprehensive Ophthalmology Service at Mass Eye and Ear. She earned her medical degree at Yale University School of Medicine, where she also recently completed her ophthalmology residency training.

Neal Patel, MD
Dr. Patel joined the faculty for AY 2022-23 as Chief Resident and Director of the Mass Eye and Ear Trauma Service. He earned his MD at Sidney Kimmel Medical College at Thomas Jefferson University, where he was President of the Alpha Omega Alpha Honor Society, and then came to Harvard Ophthalmology for his residency training.

Frances Wu, MD
Dr. Wu joined the Mass Eye and Ear Retina and Ocular Oncology Services. She earned her MD from the University of California, San Diego, and completed her residency training at the University of California, San Francisco, Medical Center. In July 2022, she completed a two-year Vitreoretinal Surgery Fellowship at Mass Eye and Ear.

Alexander Young, MD
Dr. Young joined Boston Children's Hospital as a part-time comprehensive pediatric ophthalmologist. He also works part-time at Massachusetts Eye Associates in Chelmsford, Massachusetts. Dr. Young earned his medical degree and completed his ophthalmology residency training at Baylor College of Medicine. He then completed a glaucoma fellowship at Boston University School of Medicine and a Pediatric Ophthalmology and Strabismus Fellowship at Boston Children's Hospital.

DEPARTURES

Mary Elizabeth Aronow, MD
Dr. Aronow, an Assistant Professor of Ophthalmology and member of the Retina Service at Mass Eye and Ear, left the department in March 2023 to take a new role in retina research at Genentech. An accomplished clinician scientist focused on ocular oncology, she has presented her research at numerous national and international meetings. Mary Dr. Aronow joined the department in 2017 from Wilmer Eye Institute/Johns Hopkins University.

Kevin Houston, OD, MSc
Dr. Houston, a former member of the Vision Rehabilitation Service at Mass Eye and Ear, has joined the UMass Department of Neurology as an Associate Professor, where he will continue his visual neuro-rehabilitation research. He will, however, continue to have a presence at Mass Eye and Ear as he finishes up his ptosis research project through next summer. Dr. Houston joined the faculty in 2011 as part of the K12 Harvard Vision Clinical Scientist Development Program. He is a clinical expert in hemianopia and hemispatial neglect, both common and debilitating visual consequences of traumatic brain injury and stroke. In addition to seeing patient at Mass Eye an Ear's Vision Rehabilitation Service, he also built a practice at Spaulding Rehabilitation and was a member of the Harvard Ophthalmology Vision Rehabilitation and Mobility Center of Excellence. His contributions to the field of low vision rehabilitation include the engineering of new devices and technologies for neurological visual impairments as evidenced by his inventorship on three separate patent applications, including a magnetic spectacle device—the Magnetic Levator Prosthesis. He was recognized for this work and for bringing other new technologies to the clinic by ARVO with the 2020 Carl Camras Translational Research Award.

Lynette Johns, OD
Dr. Johns left the department to become Director of Clinical and Scientific Affairs at a contact lens company. She joined Mass Eye and Ear as a research associate in 2018, studying CALEC with Dr. Ula Jurkunas. With expertise in specialty contact lenses, she also saw patients at Mass Eye and Ear, Waltham. In 2018, she received the European Federation of the Contact Lens Industry Award for her contributions to the contact lens industry, and in 2020, she was awarded the Scleral Lens Society practitioner of the year. She is a national and international educator and lecturer on scleral lenses, irregular corneas, and severe ocular surface disease and has given multiple invited talks, papers, and poster presentations at local, national, and international meetings.

Michelle Sandler, OD
Dr. Sandler, a member of the Optometry and Contact Lens Service at Mass Eye and Ear, left the department in August to go to private practice. She joined us in November 2020 as part of our optometry team at Patriot Place in Foxborough, where she provided routine eye care and specialty contact lens fittings for patients with corneal disease, post-surgery, aphakia, and post-trauma.

Jane Schweitzer, MD
Dr. Schweitzer, a member of the Ophthalmology Emergency, Consult, and Hospitalist Services at Mass Eye and Ear and an Instructor in Ophthalmology at Harvard Medical School, left the department in September to relocate to California to be closer to her family. She joined the faculty in 2017 after previously working in private practice for 12 years.

Awards and Grants

FACULTY AWARDS AND HONORS

2021 Harvard Ophthalmology Excellence in Mentoring Award
Matthew Gardiner, MD

Elected to Academia Ophthalmologica Internationalis
David S. Friedman, MD, PhD, MPH

American Academy of Optometry 2022 William Feinbloom Award
Jerry Cavallerano, OD, PhD

Inducted into the Academy of Athens
Evangelos S. Gragoudas, MD

2022- 2023 Anne Klibanski Visiting Scholars Award
Nazlee Zebardast, MD, MSc

2022 Alcon Research Institute Young Investigators Award
Milica Margeta, MD, PhD

2022 Antonio Champalimaud Vision Award
Claes H. Dohlman, MD, PhD

2022 Harvard Medical School Community Service Award
Lotfi Merabet, OD, PhD, MPH

2022 Massachusetts Infectious Disease Society's Kenneth Kaplan Infectious Diseases Clinician Award
Marlene Durand, MD

2022 Norman Knight Leadership Award
Silas Wang, MD

Psychonomic Society's 2022 Clifford T. Morgan Distinguished Leadership Award
Jeremy Wolfe, PhD

STAT 2022 Wunderkind
Elizabeth J. Rossin, MD, PhD

TRAINEE AWARDS

Best Clinical Trainee Research Award in Cornea and Refractive Surgery, Harvard Ophthalmology Center of Excellence
Yanna Bian, MD, PGY-4 Ophthalmology Resident

First Place, New England Ophthalmological Society Annual Hecht Poster Contest
Cris Jacoba, MD

Second Place, New England Ophthalmological Society Annual Hecht Poster Contest
Konstantina Sampani, MD

GRANTS (MAY 2022- NOVEMBER 2022)

$50,000 over one year
Paulo Bispo, PhD, Mass Eye and Ear
Harvard Catalyst Grant
"Real-time unbiased pathogen detection in infection uveitis"

$541,750 over two years
Dong Feng Chen, PhD, Schepens Eye Research Institute of Mass Eye and Ear
National Eye Institute R21 Grant
"Histone and DNA methyltransferases in optic nerve regeneration"

$2,898,400 over five years
Joseph Ciolino, MD, Mass Eye and Ear
National Eye Institute R01 Grant
"Corneal epithelial-stormal interactions during drug regeneration and fibrosis"

$1,475,676 over three years
Reza Dana, MD, MSc, MPH, Mass Eye and Ear
US Army Medical Research Grant
"Concomitant topical treatment of pain and inflammation in ocular injuries"

GRANTS (MAY 2022- NOVEMBER 2022) CONTINUED

$70,000 over one year
Marcela Garita, PharmD, PhD, Mass Eye and Ear
Knights Templar Eye Foundation
"Modeling NMNAT1-associated early-onset retinal degeneration using hiPSC-derived retinal organoids"

$65,000 over one year
Rachel Huckfeldt, MD, PhD, Mass Eye and Ear
Foundation Fighting Blindness
"Determination of genetic causality in elusive unsolved IRD cases"

$74,046 over one year
Ula Jurkunas, MD, Mass Eye and Ear
National Eye Institute R01 Grant (Diversity Supplement)
"Role of oxidative stress in pathogenesis of Fuchs Endothelial Corneal Dystrophy"

$100,000 over one year
Leo Kim, MD, PhD, Mass Eye and Ear
Iraty Award for Research in Retinal Diseases
"Netarsudil and topotecan for the treatment of proliferative vitreoretinopathy"

$150,415 over one year
Gabriel Kreiman, PhD, MSc, Boston Children's Hospital
John E. Fetzer Institute at Chapman University
"Consciousness and Free Will: A joint neuroscientific-philosophical investigation"

$3,482,750 over five years
Qin Liu, PhD, Mass Eye and Ear
"CRISPR/Cas9-based gene editing approaches for the treatment of USH2A-associated diseases"

$75,000 over one year
Milica Margeta, MD, PhD, Mass Eye and Ear
Alcon Research Institute Young Investigator
"Mechanisms of microglial cytotoxicity in glaucoma"

$600,000 over three years
Milica Margeta, MD, PhD, Mass Eye and Ear
Glaucoma Research Foundation Catalyst for a Cure
"Novel neuroprotective strategies in glaucoma"

$35,000 over one year
Shintaro Shirahama, MD, PhD, Schepens Eye Research Institute of Mass Eye and Ear
International Retinal Research Foundation Grant
"Development of a novel transplant-independent therapy for retinal pigment epithelium (RPE) dysfunction using epigenetic reprograming of RPE stem cells"

$70,000 over one year
Tianxi Wang, PhD, Boston Children's Hospital
Knights Templar Eye Foundation Career Starter Research Grant
"Inflammatory signals from photoreceptors regulate retinopathy of prematurity via SOCS3"

$707,945 over five years
Emily Wiecek, OD, PhD, Boston Children's Hospital
National Eye Institute K23 Grant
"Spatial frequency dependent deficits in anisometropic amblyopia"

$1,895,114 over four years
Janey Wiggs, MD, PhD, Mass Eye and Ear
National Eye Institute R01 Grant
"Genetic and environmental risk factors for exfoliation syndrome and glaucoma"

$512,199 over two years
Jia Yin, MD, PhD, Mass Eye and Ear
US Army Medical Research Grant
"Advancing supersaturated oxygen emulsion as a topical treatment for ocular chemical injury in rabbits"

$54,000 over one year
Jia Yin, MD, PhD, Mass Eye and Ear
National Eye Institute K08 Grant
"Mechanisms of neuroregulation of corneal angiogenesis"

$118,875 over one year
Jie Zheng, MSc, PhD, Boston Children's Hospital
National Eye Institute K99 Grant
"Circuit dynamic of structuring episodic memories in humans"

GRANTS (MAY 2022- NOVEMBER 2022) CONTINUED

THE MASSACHUSETTS LIONS EYE RESEARCH FUND

$400,000 to support research projects led by the following faculty:

Beetham Eye Institute at Joslin Diabetes Center

- Mohamed Elmasry, MD: "Combined ultrawide field and optical coherence tomography imaging in the management of advanced diabetic retinopathy"
- Paolo S. Silva, MD: "AI for diabetic retinopathy image classification from ultrawide field retinal images"
- Jennifer K. Sun, MD,MPH: "Elucidating abnormalities in neurovascular coupling in the diabetic retina"

Boston Children's Hospital

- Zhongjie Fu, PhD: "Folic acid supplementation inhibits retinal neovascularization and nerve cell damage"
- Isdin Oke, MD and Deborah VanderVeen, MD: "Ocular growth in children with a history of cataract surgery"
- Lois Smith, MD: "Essential lipids prevent ROP"

Mass Eye and Ear

- Paulo Bispo, PhD: "Illuminating etiologies and pathogenesis mechanisms in infectious uveitis by RNA sequencing"
- Milica Margeta, MD, PhD: "How does inflammation harm neurons in glaucoma?"
- Lucy Shen, MD: "Genetic, systemic, and ophthalmic basis of vascular pathology in primary open angle glaucoma"

Schepens Eye Research Institute of Mass Eye and Ear

- Yihe Chen, MD: "Hypoxia-inducible factor-1 mediated regulation of memory T cells in chronic uveitis"
- Yihe Chen, MD and Jia Yin, MD, PhD: "Restoration of cellular normoxia in preventing epithelial-mesenchymal transformation of retinal pigment epithelial cells and development of proliferative vitreoretinopathy"

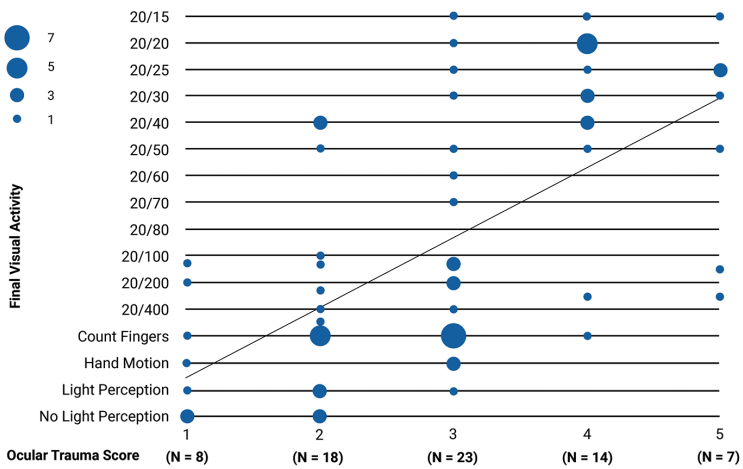
2022 Quality and Outcomes Report

Massachusetts Eye and Ear leads the nation in developing and implementing ophthalmology outcomes measures in every subspecialty area—setting the standard for transparency, accountability, and continued quality improvement in the field. The report has moved from paper to an online format- making these outcomes public facing for both health care professionals and patients. “By studying outcomes, we can improve the patient experience, improve the health of populations and potentially reduce the cost of healthcare,” says Alice C. Lorch, MD, MPH, Associate Chief for Quality for the Department of Ophthalmology at Mass Eye and Ear.

A Look Inside the Report—Exceptional Eye Trauma and Urgent Care

Mass Eye and Ear is one of only a few 24/7 Ophthalmic Emergency Departments in the country and is dedicated to treating urgent and emergent eye conditions. The Emergency Room receives referrals for ocular trauma from throughout the New England area and beyond. Ocular Trauma Score is used pre-operatively to predict visual outcomes for patients with open globe injuries. In this chart, we compare final visual acuity at a minimum of one week to Ocular Trauma Score for 70 patients out of the 101 operated on by our Trauma service in 2021. This review ensures that we are providing the highest level of trauma care and opportunity for vision to our patients.

Distribution of Final Visual Acuity in 2021



VIEW THE REPORT ONLINE

MassEyeAndEar.org/ophthalmology-outcomes.

Alumni Corner

Philanthropy

ALUMNI GIVING SOCIETY OF HARVARD OPHTHALMOLOGY AT MASS EYE AND EAR

We extend our grateful thanks to the 2022 fiscal year members:

Champion (Gifts of $25,000 and more)
Francois C. Delori, PhD
Janey L. Wiggs, MD, PhD and Robert J. D'Amato, MD, PhD

Visionary (Gifts of $10,000 - $24,999)
Mark B. Abelson, MD
Jack V. Greiner, OD, DO, PhD
David G. Hunter, MD, PhD
Eugene B. Wolchok, MD

Innovator (Gifts of $5,000 - $9,999)
Dimitri Azar, MD and Nathalie Azar, MD
Ann M. Bajart, MD, FACS
Mark W. Balles, MD
Edward J. Galbavy, MD, PhD
Leo A. Kim, MD, PhD and Nahyoung Grace Lee, MD
John H. Niffenegger, MD and Arysol S. Niffenegger, MD
George N. Papaliodis, MD
Michael P. Rubin, MD
Frans Van de Velde, MD, PhD

Pioneer (Gifts of $2,500 - $4,999)
Reza Dana, MD, MPH, MSc
Matthew F. Gardiner, MD
Rosa Y. Kim, MD
Cynthia L. Grosskreutz, MD, PhD
Melanie A. Kazlas, MD
Robert A. Lytle, MD
Michael F. Marmor, MD
Joan W. Miller, MD
Shizuo Mukai, MD
Eric A. Sieck, MD
Demetrios Vavvas, MD, PhD

Friend (Gifts of $1,000 - $2,499)
Christopher M. Andreoli, MD
James V. Aquavella, MD
Charles K. Beyer-Machule, MD
William P. Boger III, MD
Sheila Borboli-Gerogiannis, MD
Kenneth K. Chang, M.D.
James Chodosh, MD, MPH and Jaya Rajaiya, PhD
Thomas G. Chu, MD, PhD
Thomas A. Ciulla, MD
Darlene A. Dartt, PhD
Marc J. Dinkin, MD
Suzanne K. Freitag, MD
Lucy H. Young, MD, PhD, FACS
Michael W. Gaynon, MD and Susan Ryu, MD
Michael S. Gilmore, PhD
Evangelos S. Gragoudas, MD
Paul S. Greenfield, MD
Scott H. Greenstein, MD
Steven R. Hamilton, MD
Eve J. Higginbotham, MD
David M. Hinkle, MD
Cameron G. Javid, MD
Ernest W. Kornmehl, MD
Peter R. Laibson, MD
Charles D. Leahy, OD
Daniel R. Lefebvre, MD
Michael M. Lin, MD
John I. Loewenstein, MD
Zhonghui Katie Luo, MD, PhD
Ronald E. McFarland, MD
Sandra R. Montezuma, MD
Anthony B. Nesburn, MD
Nurhan Torun, MD
Donald W. Putnoi, MD
Dorothy J. Horns, MD
Richard M. Robb, M.D.
Miin Roh, MD, PhD, MSc
Steven J. Rose, MD
Deborah S. Jacobs, MD
Jose Alain Sahel, MD
Danielle M. Ledoux, MD
Kazuo Tsubota, MD
Raymond Wee, MD
Nancy Canter Weiner, MD and Mark J. Weiner, MD
Shelby R. Wilkes, MD, MBA and Jettie M. Burnett, MD
Natalie Wolkow, MD, PhD
Michael K. Yoon, MD

Scoville Bequest Drives Life-Changing Eye Research

When planning their estate, Jim and Kay Scoville wanted to give others what Jim had wished for his whole life: the gift of sight. It is this wish that motivated Jim and Kay to gift $2 million towards research at the Harvard Ophthalmology Ocular Genomics Institute at Mass Eye and Ear.

The William James Scoville and Katherine Spirou Scoville Genomics Center has been proudly named within the Ocular Genomics Institute in honor of Jim and Kay. The Scoville Center applies the latest gene-sequencing technologies to uncover newly discovered genetic causes of blindness, which will undoubtedly lead to better vision for many children and adults. Currently, mutations in over 270 genes are known to cause inherited eye disorders. Identifying these mutations is critical in providing patients with a prognosis and treatment options.

One of five siblings, William James "Jim" Scoville was born prematurely on September 6, 1929 in Hartford, CT, along with his twin brother and lifelong best friend, Homer. Jim was diagnosed with retinopathy of prematurity, a condition that causes abnormal blood vessel growth in the light-sensitive part of the eyes in premature infants. As a result, Jim was legally blind as a young man.

Jim's family hoped to find a cure. His sister routinely took him to eye specialists in New York to seek answers, without success. Jim attended school and worked in warehouses, but he fell victim to bullying from coworkers and eventually stopped working.

At age 40, life took a turn when he married Katherine "Kay" Spirou, a high school French teacher. They spent the next 40 years happily together, always staying close to their families. Jim was an expert water skier and adored his dogs, Jet and Frosty. Fiercely independent and self-sufficient, Jim amazingly lived alone for 10 years after Kay's death. In his later years, family members and

The Scovilles' Support of the Ocular Genomics Research Institute helps drive research to investigate genetic therapies for the treatment of inherited retinal diseases by funding:

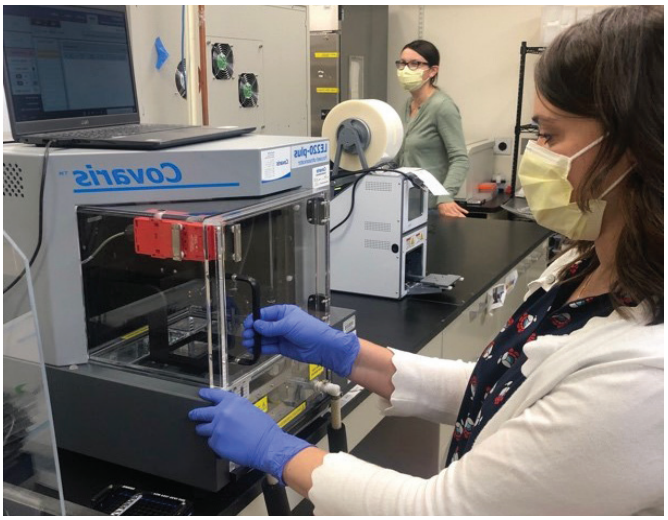
- Groundbreaking clinical trials in gene editing and gene therapy
- The latest gene sequencing technologies
- Development of therapeutics to treat IRDs

James Scoville and Katherine Spirou Scoville

neighbors visited often, and Jim loved sharing lunch and a beer while sitting on the beach.

Early on, Jim purchased a small amount of McDonald's stock and later Kay purchased Apple stock. Their simple lifestyle, successful investments, and desire to help others evolved into an extraordinary gift to Mass Eye and Ear that will help to give the gift of sight to others as they had hoped.

"The Scovilles' generosity is a game-changer for our gene therapy research. We are on the threshold of discoveries that will improve the diagnosis and treatment of inherited forms of blindness and their generous gift will get us there faster," Eric Pierce, MD, PhD, Director, Ocular Genomics Institute.



Researchers at Ocular Genomics Institute

Kazuo Tsubota, MD, PhD, Gift Honors Two Harvard Ophthalmology Alumni

In October 2022, Dr. Kazuo Tsubota, former cornea fellow at Mass Eye and Ear and research fellow at Schepens Eye Research Institute of Mass Eye and Ear, donated $100,000 to Mass Eye and Ear in honor of the research and life work of two cornea faculty who served as his mentors, Claes Dohlman, MD, PhD and Kenneth Kenyon, MD.

Dr. Dohlman, a Professor of Ophthalmology, Emeritus, and former Chair of Ophthalmology for Harvard Medical School, has transformed clinical care through his groundbreaking research in cornea over the last four decades. His work has paved the way for many methods used today for the treatment of dry disease, corneal burns, would healing, and keratoprosthesis and has culminated in him winning the 2022 António Champalimaud Vision Award from the Champalimaud Foundation (see page 3).

Dr. Kenyon specializes in cornea, cataract, and refractive surgery. He has authored over 400 scientific publications and is known worldwide for his expertise in corneal transplantation, cataract, trauma, and refractive surgery, performing thousands of corneal transplants. Dr. Tsubota is grateful for Dr. Kenyon's mentorship and guidance during his fellowship at Mass Eye and Ear.

Dr. Tsubota is CEO of Tsubota Laboratory, a startup from Keio University School of Medicine, his alma mater, where he served as professor and department chair from 2004 to 2021. Dr. Tsubota's company is developing innovative solutions for myopia, dry eye, and presbyopia.

Dr. Tsubota's gift will advance the research and teaching of the Cornea Service at Mass Eye and Ear.

Kazuo Tsubota, MD, PhD, with Kenneth Kenyon, MD

Kazuo Tsubota, MD, PhD, with Claes Dohlman, MD, PhD

Alice McPherson, Retina Pioneer and Trailblazer for Women

Alumna Alice McPherson, MD, passed away peacefully at the age of 97 on January 16, 2023.

A Professor of Ophthalmology at Baylor College of Medicine, Dr. McPherson was the first full-time woman vitreoretinal surgeon in the world and a towering figure in the field of retina.

By every measure, she achieved a remarkable career, and she will be remembered as an extraordinary physician, teacher, scholar, leader, and philanthropist.

Dr. McPherson played an instrumental role in not only advancing the field of retina, but also serving as an advocate and inspiration for women in ophthalmology. Born in Canada, she earned her medical degree and completed her ophthalmology residency at the University of Wisconsin. She then became the first woman to complete a retina fellowship and did so under the mentorship of Charles L. Schepens, MD— the "Father of Modern Retinal Surgery"—at Mass Eye and Ear. Upon completing her fellowship in 1959, Dr. McPherson founded the first retina service in Texas at Baylor College of Medicine in Houston and became the first full-time female retina specialist in the world.

Dr. McPherson made innumerable contributions to the study and treatment of retinal disease, particularly retinal detachment. She pioneered several procedures that are now accepted as standard treatment for retinal disease, including scleral buckling procedures, cryotherapy, xenon arc, and laser photocoagulation; and she was a thought leader in the treatment of diabetic retinopathy and retinopathy of prematurity.

WORLD AUTHORITY IN RETINA

As a testament to Dr. McPherson's excellence in patient care and research, she was honored with many awards. In the 1960s, she was the first American woman to be accepted into the European Club Jules Gonin, and in 2014, she reached another pinnacle in her career when she became the first woman to receive the Jules Gonin Medal—one of the most prestigious medals in ophthalmology. In 2018, she received the Lifetime Achievement Award from the Houston Ophthalmology Society, and in 2019, she received the inaugural Retina Hall of Fame Award for her extraordinary contributions to the retina field.

Dr. McPherson applied her knowledge and leadership acumen to many professional organizations, including as the first female president of the Retina Society, the first female chair of the Pan-American Association of Ophthalmology Foundation, and the second Vice President of the American Academy of Ophthalmology.

VISIONARY LEADER AND PHILANTHROPIST

Dr. McPherson was an outstanding leader and generous philanthropist. She founded several institutions that have helped advance retina research, including the Retina Research Foundation, the McPherson Eye Research Institute, and the Schepens International Society.

Under her leadership, the Retina Research Foundation awarded over $40 million to retina research, established Research Chairs and Professorships, sponsored international fellowships and travel grants, and made it possible for junior scientists to advance their careers. The Foundation has also established several major ophthalmology awards, including the Charles L. Schepens MD/American Academy of Ophthalmology Award, the Award of Merit Lecture (presented by the Retina Society), the Mills and Margaret Cox Award of the Macula Society, the Paul Kayser International Award

Alice McPherson, MD, with patient

Alice McPherson, MD, with her mentor Charles Schepens, MD

in Retina Research (presented by the International Society for Eye Research), the Gonin Lecture (presented by Club Jules Gonin), the Gonin Medalist (presented by the International Council of Ophthalmology at the World Ophthalmology Congress), and the Gertrude D. Pyron Award (presented by the American Society of Retina Specialists).

Dr. McPherson firmly believed in the power of education, innovation, and giving back. It was these qualities in her own mentor, Dr. Schepens, that were instrumental in shaping her career. More than a mentor, Dr. Schepens was her trusted colleague and dear friend for more than five decades, and as the first woman retina fellow, she was forever grateful for his willingness to teach her. In 2012, to honor his incredible life and legacy, Dr. McPherson generously funded the Charles L. Schepens Chair at Harvard Medical School, which is currently held by Dr. Patricia D'Amore.

Like her mentor, Dr. McPherson has established an enduring legacy that will be a driving force for progress in the field of retina for years to come. She will live on in the hearts and minds of all whom she touched.

***Eye Witness* | Issue 43, April 2023**

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HARVARD MEDICAL SCHOOL
DEPARTMENT OF Ophthalmology

EYE WITNESS

NEWS FROM HARVARD OPHTHALMOLOGY

243 Charles Street, Boston, MA 02114

EVENTS UPDATE...

Save the Date for the Annual Meeting and Alumni Reunion

June 9, 2023

To learn more and to register visit
eye.hms.harvard.edu/annualmeeting

AFFILIATES: Massachusetts Eye and Ear | Massachusetts General Hospital | Joslin Diabetes Center/Beetham Eye Institute | Beth Israel Deaconess Medical Center | Boston Children's Hospital | Brigham and Women's Hospital | VA Boston Healthcare System | VA Maine Healthcare System | Cambridge Health Alliance PARTNERS: Aravind Eye Hospital (India) | L V Prasad Eye Institute (India) | Shanghai Eye and ENT Hospital, Fudan University (China)