

UCLA STEIN EYE INSTITUTE

ANNUAL REPORT 2019-2020



Impacting Eye Care on a Global Scale

UCLA Stein Eye Institute

ANNUAL REPORT

July 1, 2019–June 30, 2020

DIRECTOR

Bartly J. Mondino, MD

MANAGING EDITOR

Tina-Marie Gauthier
c/o Stein Eye Institute
100 Stein Plaza, UCLA
Los Angeles, California 90095–7000
Tina@EyeCiteEditing.com

PUBLICATION COMMITTEE

Anthony C. Arnold, MD
Kevin M. Miller, MD
Alfredo A. Sadun, MD, PhD
Alapakkam P. Sampath, PhD

CONTRIBUTING EDITORS

Lauren Bayans
Teresa Closson
Susan Ito
Peter J. López
Kara Mondino
Ellen Pascual
Darlene Villegas

CONTRIBUTING WRITERS

Dan Gordon
Harlan Lebo

PHOTOGRAPHY

Reed Hutchinson
Robin Weisz

DESIGN

Robin Weisz/Graphic Design

PRINTING

Marina Graphic Center

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UCLA Department of Ophthalmology, see:
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LETTER FROM THE CHAIR



Scottish Poet Robert Burns wrote that, “The best laid schemes o’ mice an’ men / Gang aft a-gley.” And this academic year, the novel coronavirus (COVID-19) has certainly challenged our abilities to proceed in typical fashion.

The safety of our patients, always of tantamount importance, has taken on new facets. Gary N. Holland, MD, Jack H. Skirball Chair in Ocular Inflammatory Diseases, has a leadership role in fighting against the spread of COVID-19 both here in the United States and beyond. A renowned infectious disease specialist, Dr. Holland and two colleagues were asked by the American Academy of Ophthalmology (AAO) to create guidelines for ophthalmologists on preventing transmission of this highly contagious virus during eye examinations and surgery. Their authored pages on the AAO website have been viewed over 1.5 million times as of this writing.

Many of our educational events this academic year were cancelled or held remotely. During the pandemic’s height, our outpatient visits and surgical procedures were down to 25% of normal, and we were only seeing urgent or emergent cases. In the current ramp up, we are now at over 80% of pre-COVID levels for outpatient care and exceeding pre-COVID surgical cases, perhaps due to backlog.

Preserving sight and ending avoidable blindness is our mission, and UCLA Department of Ophthalmology faculty, fellows, residents, and staff are committed to this challenge. Demonstrating true collaboration and selflessness, their priority—as it has been since the UCLA Stein Eye Institute opened its doors in 1966—is focused on the health and well-being of our patients.

Private funding, especially in these uncertain times, remains critical to our ability to advance vision science and clinical care. I wish you and your family well, and I thank you for your support.

Sincerely,

A handwritten signature in blue ink that reads "Bartly J. Mondino".

Bartly J. Mondino, MD

Bradley R. Straatsma, MD, Endowed Chair in Ophthalmology
Director, Stein Eye Institute
Chairman, UCLA Department of Ophthalmology
Affiliation Chairman, Doheny Eye Institute

Impacting Eye Care on a Global Scale



The UCLA Department of Ophthalmology's renowned International Fellowship Program has trained more than 250 ophthalmologists from countries worldwide—doctors who not only become more accomplished clinicians and researchers, but also trailblazers for improving vision care around the globe.

UCLA INTERNATIONAL FELLOWSHIP PROGRAM

“I chose the Fellowship Program because of its international reputation, and also because of my customized fellowship plan that combined exposure to the clinical and research aspects of glaucoma with study of epidemiology and public health issues.”

FOTIS TOPOUZIS, MD

Chair, Department of Ophthalmology
Aristotle University
Thessaloniki, Greece

“The International Fellowship Program has contributed significantly to shaping the careers of doctors in many countries, and the Program has tirelessly contributed directly to the benefits of patients all over the world.”

RAMESH KEKUNNAYA, MD

Director, Child Sight Institute
L V Prasad Eye Institute
Hyderabad, India

The International Fellowship Program is offered to ophthalmologists throughout the world and features a one-year immersion in training under the mentorship of faculty from the UCLA Department of Ophthalmology. The training for each fellow is unique—customized to meet the interests of the individual participant in subspecialties that include cataract; corneal-external ocular disease, uveitis, and refractive surgery; glaucoma; medical retina; neuro-ophthalmology; ophthalmic pathology; orbital and ophthalmic plastic surgery; pediatric ophthalmology and strabismus; and vitreoretinal diseases.

Since the Institute began training an annual cadre of international fellows in the early 1990s, more than 250 fellows from countries worldwide have been certified. The Program is distinctly positioned to train international fellows because of the unique strengths of the UCLA medical enterprise. The broad range of services in premier UCLA-affiliated teaching hospitals and diverse patient populations across Southern California, depth of research programs, access to large-scale clinical trials, and connections to other medical and scientific programs on the UCLA campus provide an opportunity for enhanced study that is singular in ophthalmic training.

“We work to inspire a sense of responsibility for leadership and innovation that our international fellows can use to train the next generation of ophthalmologists around the world,” says **Bartly J. Mondino, MD**, chair of the Department of Ophthalmology and director of the Stein Eye Institute. “We achieve our greatest success when our fellows become the innovators in their own countries.”

International expertise: a two-way exchange

The Program promotes interaction in research and education with ophthalmology institutions throughout the world, encouraging a two-way opportunity for learning, with the international fellows and Department doctors sharing their expertise and methods for dealing with the unique challenges for vision care and research.

“The knowledge and perspective of our international fellows improves the experience and performance of our faculty, fellows, and residents here in Southern California,” says **Anne L. Coleman, MD, PhD**, The Fran and Ray Stark Foundation Chair in Ophthalmology.

“Not only are the international fellows learning from us,” says Dr. Coleman, “but we are also learning from them, gaining insight into other cultures and countries in terms of how we can all treat patients with eye diseases, learn ophthalmology, and conduct research. Their presence at UCLA adds to the vibrant, diverse, and inspiring environment that we have here.”

Advancing the fight against blindness for generations

The importance of the Department's International Fellowship Program was underscored in October 2019, when the World Health Organization (WHO) released a new report on vision and preventable blindness.

"At present more than 2.2 billion people around the world have a vision impairment, of whom at least 1 billion have a vision impairment that could have been prevented or is yet to be addressed," states the WHO's *World Report on Vision*. "The world faces considerable challenges in terms of eye care, including a shortage of trained eye care service providers."

As such, perhaps the most important results produced by the International Fellowship Program are the ophthalmologists worldwide that the Program never sees.

The Program's primary mission is to train and build the expertise of the 10 to 20 international fellows who participate each year. And key to that mission is inspiring a sense of commitment among the fellows to pass along their expertise to new generations of ophthalmologists in their own countries and beyond.

"Our international fellows elevate the practice of our specialty in their country," says **Robert Alan Goldberg, MD**, Bert O. Levy Endowed Chair in Orbital and Ophthalmic Plastic Surgery. "By teaching and practicing at the highest level, they innovate in their fields and become role models in their medical communities."

The influence of the international fellows touches medical care, research, and training throughout the world, as evidenced by the clinics, academic departments, training programs, research teams, and eye care organizations established and nurtured by the Program alumni.

"We work to inspire a sense of responsibility for leadership and innovation that our international fellows can use to train the next generation of ophthalmologists around the world. We achieve our greatest success when our fellows become the innovators in their own countries."

BARTLY J. MONDINO, MD

**Chair, UCLA Department of Ophthalmology
Director, Stein Eye Institute**

"I chose the Program for the superb faculty, the facilities of the Institute, and the reputation of the Program. The knowledge I acquired, the experience of working at a first-level Institute, and the professional relationships that came from my involvement have helped me to progress in my own career, and also to guide many colleagues in Latin America. Participating in the Fellowship Program is one of the best decisions I have ever made."

FRANCISCO J. RODRIGUEZ, MD

**Chair, Department of Ophthalmology
Universidad del Rosario School of Medicine
Bogota, Colombia**

Year in Review

JULY 1, 2019–JUNE 30, 2020



Institute News

New Grants Fund Vital Research

Research funding at UCLA from the National Institutes of Health (NIH) is increasing, and the Stein Eye Institute is a significant beneficiary of this support, which is provided through the National Eye Institute (NEI).

Seven new NIH grants were awarded in 2019 and total nearly \$10 million in funding.[†] These grants give an indication of the scope of basic research within Stein Eye on key questions affecting the eye.

Ava K. Bittner, OD, PhD

Smotrich Family Optometric
Clinician-Scientist Chair

*Development of a Behavioral
Intervention with Socially Assistive
Robots to Enhance Magnification
Device Use for Reading*

\$439,994

Jean-Pierre Hubschman, MD

Associate Professor of Ophthalmology

*Intraocular Robotic Interventional
and Surgical System for Automated
Cataract Surgery*

\$2,305,000

Anna Matynia, PhD

Associate Research Ophthalmologist

*Molecular, Cellular, Anatomical,
and Neurobiological Investigation
of Melanopsin-Expressing Corneal
Innervation, and Its Role in Pain
and Photophobia*

\$1,950,000

Kouros Nouri-Mahdavi, MD, MSc

Associate Professor of Ophthalmology

*Detection of Disease Progression in
Advanced Glaucoma*

\$1,951,500

Gabriel H. Travis, MD

Charles Kenneth Feldman Chair in
Ophthalmology

*Mechanisms for Light-Driven
Chromophore Synthesis by Müller
Cells to Regenerate Cone Opsin and
Maintain Cone Sensitivity*

\$2,271,848

Irena Tsui, MD

Assistant Professor of Ophthalmology

*Retinal and Choroidal Vasculature
Changes in Healthy and High-Risk
Pregnancies*

\$445,314

David S. Williams, PhD

Karl Kirchgessner Foundation Chair in
Vision Science

*Exploring the Relationship of Water
Flow Across the RPE and Mutant-
MYO7A/Usher 1B*

\$429,000

[†] Amounts shown are the total for all years of NIH funding.

Providing Critical COVID-19 Information to Ophthalmologists

Gary N. Holland, MD, Jack H. Skirball Chair in Ocular Inflammatory Diseases, is working with two other ocular infectious disease specialists, James Chodosh, MD, MPH, of Harvard University, and Steven Yeh, MD, of Emory University, to formulate guidelines for prevention of COVID-19 transmission during eye examinations and ophthalmic procedures in the midst of the SARS-CoV-2 pandemic and to provide American Academy of Ophthalmology (AAO) members with updated information relevant to the pandemic through its website.

In addition to reflecting changing statistics about the pandemic and to conform to Centers for Disease Control (CDC) and other guidelines as they evolve, the team is answering questions from AAO members seeking

evidence-based clinical guidance on topics including 'how can I protect my staff and patients,' 'what personal protective equipment do I need,' 'how do I disinfect my office,' and 'do antivirals work.'

David W. Parke II, MD, chief executive officer of the AAO, said of this work, "This trio of incredibly talented ophthalmologist clinician-scientists are the ultimate professional volunteers who, despite heavy clinical, teaching, and research responsibilities, gave up countless hours each week and weekend to ensure that the material on the Academy coronavirus web pages was updated at least daily and reflected careful science."

As of June 30, 2020, the authored pages at www.aao.org/headline/alert-important-coronavirus-context had been viewed over 1.5 million times.



To help reduce the spread of COVID-19, Stein Eye physicians like Dr. Tara McCannel (left) and Dr. Niranjana Manoharan (right) wear protective goggles and gloves during procedures. Rooms and equipment are cleaned and disinfected before every patient examination.

New Clinic Focused on Treating Dry Eye

Persistent and more serious forms of dry eye require focused diagnosis and treatment to maintain the health of your eye, and the new Dry Eye Clinic on the UCLA Stein Eye Institute vision-science campus was developed for this purpose.

Dry eye occurs when the glands around the eye cease to produce enough tears to keep the surface of the eye moist. Dry eye can may be associated with aging, diabetes, autoimmune diseases, certain medications, and dry climates.

“The UCLA Stein Eye Institute’s Dry Eye Clinic implements a full diagnostic workup looking at all the different parts of the ocular surface that can contribute to dry eye, and then we tailor a specialized treatment focused on each patient’s individual needs” says **Vivian Shibayama, OD**, clinical instructor in ophthalmology, who runs the clinic with **Saba Al-Hashimi, MD**, health sciences assistant clinical professor of ophthalmology.

The clinic also offers in-office procedures not typically available at eye centers, such as BlephEx, LipiFlow, intense pulsed light therapy, scleral lenses, saline-filled contact lenses, amniotic membrane therapy, and autologous serum tears.

To make an appointment at the UCLA Stein Eye Institute Dry Eye Clinic, call: (310) 206-6351.



Awards and Honors

2019 AAO ANNUAL MEETING

American Academy of Ophthalmology Awards

Congratulations to UCLA Department of Ophthalmology faculty and alumni who were recognized for their leadership at the October 12–15, 2019, American Academy of Ophthalmology (AAO) annual meeting in San Francisco, California.

LIFE ACHIEVEMENT HONOR AWARD

Don O. Kikkawa, MD, alumnus

SENIOR ACHIEVEMENT AWARD

Simon K. Law, MD, PharmD, faculty
Todd P. Margolis, MD, PhD, alumnus
Alfred M. Solish, MD, alumnus

ACHIEVEMENT AWARD

Michael B. Gorin, MD, PhD, faculty
David A. Hollander, MD, alumnus
David K. Isaacs, MD, alumnus
John T. Mandeville, MD, PhD, alumnus
Scott C. Oliver, MD, alumnus
Ehsan Rahimy, MD, alumnus
Tina Rutar, MD, alumnus

SECRETARIAT AWARD

Simon K. Law, MD, faculty
Kouros Nouri-Mahdavi, MD, faculty
SriniVas R. Sadda, MD, faculty

Faculty Honors 2019 AAO Annual Meeting

Anthony J. Aldave, MD, Walton Li Chair in Cornea and Uveitis, presented the Dr. Allan Jensen and Claire Jensen Lecture in Professionalism and Ethics titled “Ethical Aspects of Global Ophthalmic Practice” on October 14, 2019.

Anne L. Coleman, MD, PhD, The Fran and Ray Stark Foundation Chair in Ophthalmology, was inducted as president-elect of the American Academy of Ophthalmology and presented the Academy President-Elect’s Address at the AAO opening ceremony on October 13, 2019.

Sophie X. Deng, MD, PhD, Joan and Jerome Snyder Chair in Cornea Diseases, served as program director for the AAO Subspecialty Day: Cornea.

JoAnn A. Giaconi, MD, health sciences associate clinical professor of ophthalmology, served as program director for the AAO Subspecialty Day: Glaucoma.

Lynn K. Gordon, MD, PhD, Vernon O. Underwood Family Chair in Ophthalmology, was recognized at the AAO opening ceremony by David W. Parke II, MD, chief executive officer of the AAO. Dr. Parke noted that Dr. Gordon was finishing her term as chair of the AAO Council in December 2019, and he thanked Dr. Gordon for her distinguished service and for her leadership and dedication to the Council.

Kevin M. Miller, MD, Kolokotronis Chair in Ophthalmology, presented the Charles D. Kelman Lecture on “Artificial Iris Implantation” on October 14, 2019.

Peter A. Quiros, MD, health sciences associate clinical professor of ophthalmology, served as program director for the AAO Subspecialty Day: Neuro-Ophthalmology.

SriniVas R. Sadda, MD, professor of ophthalmology, served as a member of the planning group for the AAO Subspecialty Day: Retina.

Edmund Tsui, MD, assistant professor, was awarded Best Original Paper (Uveitis) for “One-Year Outcomes of Uveitic Macular Edema in the First-Line Antimetabolites as Steroid-Sparing Treatment (FAST) Uveitis Trial” on October 14, 2019.

Faculty Awards and Honors

Anthony J. Aldave, MD, Walton Li Chair in Cornea and Uveitis, presented the 32nd Annual Bajandas Guest Lecture (virtual connection) in San Antonio, Texas, on April 25, 2020.

Anthony C. Arnold, MD, Mary Oakley Foundation Chair in Neurodegenerative Diseases, was the chair/convener (virtual connection) for the Neuro-Ophthalmology Program of the World Ophthalmology Congress held June 26–29, 2020.

Ava K. Bittner, OD, PhD, Smotrich Family Optometric Clinician-Scientist Chair, received the 2019 Clinical Research Award for \$100,000 from the American Academy of Optometry and a sub-award from the National Institute on Disability, Independent Living, and Rehabilitation Research to conduct the “Community Access through Remote Eyesight (CARE) Study” of Aira services for people who are blind or have low vision.

In addition, Dr. Bittner served as the co-chair for the NIH/NEI strategic plan panel, 2020 Vision for the Future: Individual Quality of Life, in April 2020.

Joseph Caprioli, MD, David May II Chair in Ophthalmology, gave the Frontiers in Vision Science Lecture, “Compartmental Retinal Ganglion Cell Damage and Recovery in Glaucoma,” at the Bascom Palmer Eye Institute in Miami, Florida, on January 23, 2020.

Anne L. Coleman, MD, PhD, The Fran and Ray Stark Foundation Chair in Ophthalmology, and member of the Association for Research in Vision and Ophthalmology (ARVO) Gold Fellow Class of 2019, was honored with the designation of FARVO at the 2019 ARVO Meeting on April 28, 2019, in Vancouver, Canada.

In addition, Dr. Coleman received the Bonnie Strickland Champion for Children's Vision Award from the National Center for Children's Vision and Eye Health (NCCVEH) at Prevent Blindness at the NCCVEH Annual Meeting on September 14, 2019, in Baltimore, Maryland.

Dr. Coleman also presented The Joseph Smiddy Memorial Lecture, "Looking Beyond Established Risk Factors: Lifestyle and Nutrition in Glaucoma," at the Wilmer Eye Institute at Johns Hopkins University on December 5, 2019, in Baltimore, Maryland.

Sophie X. Deng, MD, PhD, Joan and Jerome Snyder Chair in Cornea Diseases, received a four-year \$10.3 million award from the California Institute for Regenerative Medicine, which will fund a clinical trial for limbal stem cell deficiency.

Brian A. Francis, MD, MS, Rupert and Gertrude I. Stieger Vision Research Chair, delivered the Surgery Day Lecture, "How to Evolve with Glaucoma," at the American Glaucoma Society annual meeting in Washington, DC, on February 27, 2020.

JoAnn A. Giaconi, MD, health sciences clinical professor of ophthalmology, was the recipient of the AUPO/AAO Excellence in Medical Student Education Award at the Association of University Professors of Ophthalmology annual meeting in Rancho Mirage, California, on January 30, 2020.

Lynn K. Gordon, MD, PhD, Vernon O. Underwood Family Chair in Ophthalmology, and Women in Ophthalmology Champion for Change awardee, received the 2019 Distinguished Service Award from the California Academy of Eye Physicians and Surgeons.

Jean-Pierre Hubschman, MD, associate professor of ophthalmology, and his colleagues were announced as winners of the UCLA Innovation Fund for their Intraocular Robotic Interventional Surgical System (IRISS) for Cataract in February 2020. Kairos Ventures also awarded the team a \$100,000 gift to support the IRISS research, in recognition that the technology has the potential to improve the quality of people's lives. The team also received two R01 grants from the National Institutes of Health to support this research.

Roxana A. Radu, MD, assistant professor of ophthalmology, was awarded a \$125,000 Rose Hills Foundation (RHF) Research award from the Broad Stem Cell Research Center for her project "The Role of ABCA4 in iPSC-derived RPE Cells from Patients with Macular Degeneration." The RHF award supports innovative science conducted by UCLA's junior faculty that will advance the understanding and utility of stem cells.



Dr. JoAnn Giaconi (right), shown with AUPO President Dr. Paul Sternberg, Jr., is recognized for her teaching excellence.

Steven D. Schwartz, MD, The Ahmanson Chair in Ophthalmology, and scientists at the UCLA Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research, have been awarded a \$5.1 million grant from the California Institute for Regenerative Medicine to advance the development of a novel therapy for blinding retinal conditions.

Gabriel H. Travis, MD, Charles Kenneth Feldman Chair in Ophthalmology, presented the Annual Futterman Memorial Lecture, "Light Driven Regeneration of Cone Visual Pigments," at the University of Washington School of Medicine in Seattle, Washington, on January 16, 2020.

Edmund Tsui, MD, assistant professor of ophthalmology, received a \$70,000 Career Starter Grant from the Knights Templar Eye Foundation on April 7, 2020, to study quantitative imaging biomarkers in pediatric anterior uveitis.

Barry A. Weissman, OD, PhD, professor of ophthalmology emeritus, was presented with the 2019 Dr. Richard Hemenger Faculty Research Award at the Marshall B. Ketchum University (MBKU) Southern California College of Optometry Fall Awards ceremony on November 12, 2019, in Fullerton, California.

Milestones

Faculty Appointments

The 2019–2020 Academic Year welcomed new faculty to the UCLA Department of Ophthalmology. For detailed information about each faculty member, please refer to the Faculty and Colleagues section of this Annual Report.

Laura Bonelli, MD

Health Sciences Assistant
Clinical Professor

Kaustabh Ghosh, PhD

Associate Professor

Monica R. Khitri

MD, Health Sciences Assistant
Clinical Professor

Shawn R. Lin, MD

Health Sciences Assistant
Clinical Professor

Yirong Peng, PhD

Assistant Professor of Ophthalmology

Edmund Tsui, MD

Assistant Professor

The Doheny Eye Institute vision-science campus in Pasadena, anticipated opening 2021.

Stein Eye and Doheny Eye Institutes Celebrate Five Years of Partnership

Alumni from the Stein and Doheny Eye Institutes gathered for a reception on October 13, 2019, in San Francisco, California, and marked a five-year milestone.

In 2014, the Doheny Eye Institute began its historic partnership with the UCLA Department of Ophthalmology. With that action, UCLA became the only university in the United States with two eye institutes: the Stein Eye Institute and the Doheny Eye Institute.

In his speech to attendees, **Bartly J. Mondino, MD**, chair of the UCLA Department of Ophthalmology and affiliation chair for the Doheny Eye Institute, reflected on the brave leap of faith required by the USC faculty who were coming to a new home: “I told the USC faculty they would be on the ground floor in establishing something great—this unprecedented and perhaps unique affiliation in ophthalmology.”

Trust in that promised outcome was justified. Doheny’s partnership with UCLA has proven to be a bona fide success. Over 20 faculty have been recruited as a result of the affiliation, and between the two Institutes, there are 35 endowed chairs and more than 30 fellows. Doheny Eye Centers UCLA in Arcadia, Orange County, and Pasadena are operational, with strong upward trajectories in new visits, return visits, and surgeries. Just as importantly, the three Centers have returned a profit, which is noteworthy for medical centers with senior faculty, broad research, federal grants, and educational activities.

Looking forward, the Doheny Eye Institute has purchased a state-of-the-art facility in Pasadena, with generous grounds for parking and future expansion. The building will include research labs, as well as educational and patient care facilities. The Doheny Eye Institute in “Eastwood” will be home to the UCLA Department of Ophthalmology’s second vision-science campus, complementing the Stein Eye Institute’s vision-science campus in Westwood, which was completed in 2017, with the construction of the Edie & Lew Wasserman Building and renovation and seismic upgrade of the Jules Stein Building.

“Aside from the historic and remarkable affiliation,” said **Alfredo A. Sadun, MD, PhD**, vice chair of ophthalmology at the Doheny Eye Center UCLA, “I personally feel extremely gratified that the large core of former faculty, who, by voting with their feet demonstrated great courage in leaving USC, can now look back, five years after, knowing that their faith in UCLA, in our leadership, and in each other, was fully justified.”



Education

Resident and Fellow Graduation and Award Ceremony

Residents, fellows, and faculty were honored for excellence at the UCLA Department of Ophthalmology graduation on June 17, 2020. Due to COVID-19, the ceremony was held virtually to ensure the safety of all attendees.

Resident and Fellow Awards

Resident Research Award

Tamara Lenis

Clinical Fellow Research Award

Victoria Tseng, MD, PhD

Research Fellow Research Award

Vahid Mohammadzadeh, MD

Postdoctoral Fellow Research Award

Wenlin Zhang, MD, PhD

Predocutorial Fellow Research Award

Adrian Au, MD

Teaching Awards

Faculty Teaching Award

Hamid Hosseini

Fellowship Faculty Teaching Award

Jean-Pierre Hubschman, MD

Fellow Teaching Award

Niranjan Manoharan, MD

Resident Teaching Award

William “Wade” Stoddard

Resident Award for Medical Student Teaching

Nick Iafe, MD

Resident Weekly Quiz Award

Lynn Shi, MD

25th Vision-Science Conference

The annual Vision-Science Conference, jointly sponsored by the UCLA Stein Eye Institute and the National Eye Institute Vision Science Training Grant, celebrated its twenty-fifth year October 11–13, 2019, at the UCLA Lake Arrowhead Conference Center.

Eighty participants—including basic scientists, clinical researchers, pre- and post-doctoral fellows, and invited guests—participated in discussions and educational activities. Greg Field, PhD, assistant professor of neurobiology, Duke University School of Medicine, presented the keynote address “New insights into parallel processing and synchronous activity in the mammalian retina.”

Awards were presented for best oral presentations and best posters.

Best Oral Presentations

Norianne Ingram, PhD

Joseph Park

Michel Sun, MD, PhD

Best Poster Presentations

Nan Hultgren, PhD

Benjamin Smith, PhD

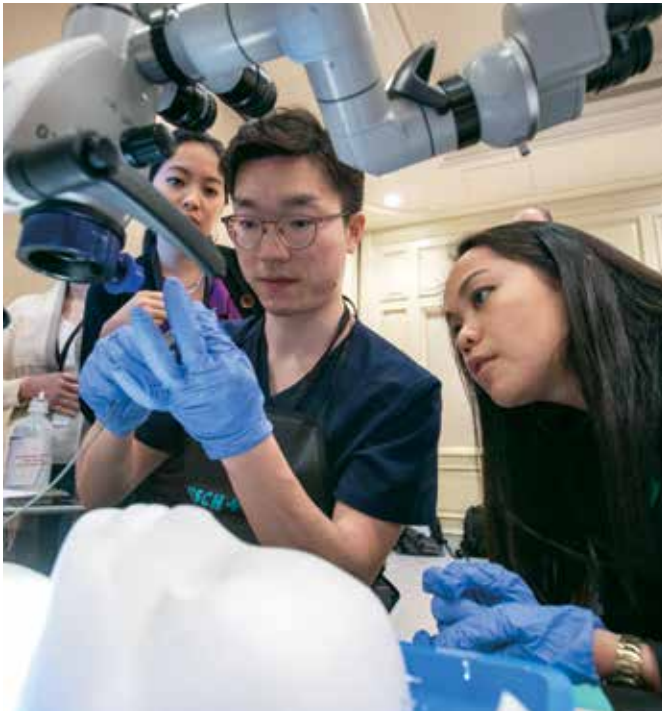
Jeonghyun Johnny Ji



Training in Cataract Surgery

To help meet the demand for surgery to treat cataracts, the Basic Cataract Surgery Course—a module of the UCLA Department of Ophthalmology's Comprehensive Cataract Surgery Program—was held November 2019 in Irvine, California. Sponsored by Bausch & Lomb, the course includes all the steps of cataract surgery from incision construction through postoperative instructions. Skills-transfer laboratories provided attendees with hands-on experience in phacoemulsification, phacodynamics, ocular biometry, corneal topography, intraocular lens power calculation, capsulorrhexis, ophthalmic viscosurgical devices, lens loading, toric lens implantation, and laser capsulotomy. The April 4, 2020, Advanced Cataract Surgery Course—sponsored by Alcon Laboratories—was cancelled due to COVID-19.

For information about upcoming cataract surgery courses, contact **Kevin M. Miller, MD**, Kolokotronis Chair in Ophthalmology and chief of the Cataract and Refractive Surgery Division, at kmiller@ucla.edu.



Attendees at the 2019 Basic Cataract Surgery Course gain hands-on surgical experience.



Dr. Daniel Rootman instructs attendees at the Orbital Surgery Master's Symposium and Dissection Workshop.

Orbital Surgery Master's Symposium and Dissection Workshop

Surgical specialists and practicing ophthalmologists from four continents participated in the UCLA Orbital Surgery Master's Symposium and Dissection Workshop on March 3–4, 2020, at the Stein Eye Institute vision-science campus in Westwood.

The event focuses on practical techniques and conceptual pearls that participants can immediately apply to their own practice. Educational lectures included presentation of the Jack Rootman Lectureship in Orbital Disease by Gerald Harris, MD, chief of the Orbital and Oculoplastic Surgery Eye Institute at the Medical College of Wisconsin.

The biennial program was chaired by **Robert Alan Goldberg, MD**, Bert O. Levy Endowed Chair in Orbital and Ophthalmic Plastic Surgery and chief of the Orbital and Ophthalmic Plastic Surgery Division, and **Daniel B. Rootman, MD, MS**, Karen and Frank Dabby Endowed Chair in Ophthalmology.

Annual Comprehensive Ophthalmology Review Course

The UCLA Stein Eye Institute and the Doheny Eye Institute presented the Annual Comprehensive Ophthalmology Review Course on February 20–23, 2020, at the Stein Eye Institute vision-science campus in Westwood.

The intensive four-day course reviewed the clinical essentials of each subspecialty in ophthalmology, and prepared the attendees for upcoming ophthalmology examinations and required continuing medical education recertification. Instruction concentrated on the epidemiology, clinical presentation, diagnosis, and management of ophthalmologic disease.

Directed by **John A. Irvine, MD**, and **Mitra Nejad, MD**, the 2020 course included contributions from guest faculty.

Community Outreach

From July 1, 2019 to June 30, 2020, the UCLA Mobile Eye Clinic (UMEC) collaborated with influential organizations, including the Los Angeles Dodgers, with whom they attended eight events and served over 170 patients. Based on these successful interactions, UMEC will be returning to Los Angeles Dodgers events in spring and summer 2021 to continue performing eye health screenings for underserved and undertreated Angelenos.

Continuing to find ways to increase accessibility to vision care, UMEC partnered in November 2019 with Care Harbor, a mega-clinic that focuses on grassroots health care solutions and has served over 26,000 patients in the last 10 years. At Care Harbor, UMEC's team addressed the needs of patients who had pre-existing eye health conditions, including diabetes and high blood pressure, to provide them with further examinations and referrals to specialists as needed. At the three-day event, UMEC's diverse staff of multilingual ophthalmologists, ophthalmic technicians, volunteers, and interns provided care for 262 patients with 105 referrals for follow-up care.

During the holiday season, doctors, technicians, and staff from the Stein Eye and Doheny Eye Institutes—along with volunteers—provided eye health screenings at the Westside Thanksgiving Dinner and Celebration, an event that provides free medical, dental, and vision services. UMEC also participated in the Comprehensive Community Health Centers Holiday Health Fair in December, which helps individuals learn about health resources available to them. Ophthalmologists, staff, medical students, and volunteers also provided eye health screenings and reading glasses. In January 2020, UMEC participated in the 6th Annual Skid Row Carnival of Love where approximately 800 individuals experiencing homelessness received a health screening and referral for follow-up from one of the many medical providers at the event. Eye health screenings and reading glasses were provided.



UCLA HEALTH IS DODGER BLUE!

As part of the partnership between UCLA Health and the Los Angeles Dodgers, the UCLA Mobile Eye Clinic provides vision care at home games. (L to R): UCLA leadership, Dr. John Mazziotta, Dr. Robert Cherry, and Johnese Spisso (far right) with Dodgers' Manager, Dave Roberts.

UMEC also continued its preschool vision program during the 2019–2020 school year: 5,897 preschoolers were screened, 433 received eye exams, and 407 eyeglasses were provided to underserved preschool children in low-income communities in Los Angeles. UMEC referred 134 preschoolers to partner specialists for further specialized medical or surgical treatments.

Since fall 2019, UMEC has had eight medical students from UCLA and other national and international universities assist with research projects. The medical students also assisted with providing free vision care and shadowed the ophthalmologists on the UMEC. The UMEC also had 39 UCLA undergraduate interns and volunteers that assisted UMEC with several aspects of the organization, including fundraising. Eleven of the undergraduate interns and volunteers applied for medical school or other professional programs after graduation.

Because of the COVID-19 pandemic, the Stein Eye Institute suspended all community outreach operations in March 2020. Following approval from the UCLA COVID-19 Command Center, UMEC

resumed community outreach on August 17, 2020. Personal protective equipment and cleaning supplies were secured to keep patients, faculty, and staff safe.

Find out more about the UCLA Mobile Eye Clinic at: www.uclahealth.org/umec.

Alumni News

Paul S. Bernstein, MD, PhD

(Residency class of '93, Fellowship class of '93, and 2004 Bradley R. Straatsma Lecturer) was given the Association for Research in Vision and Ophthalmology 2020 Mildred Weisenfeld Award for Excellence in Ophthalmology.

Jerrold C. Bocci, MD, FACS

(Residency class of '66) passed away from complications of glioblastoma on January 9, 2020.

John So-Min Chang, MD

(Residency class of '90) received the International Society of Refractive Surgery (ISRS) Founders' Award on October 11, 2019, in San Francisco, California.

David B. Glasser, MD

(Residency class of '83 and 2009 Thomas H. Pettit Lecturer), American Academy of Ophthalmology Secretary for Federal Affairs, participated in a congressional roundtable hosted by the Congressional Vision Caucus, the Global Coalition on Aging, and Prevent Blindness.

Barry M. Kerman, MD

(Residency class of '74 and Fellowship class of '75) was voted the 2019 "Teacher of the Year" for the California Pacific Medical Center—San Francisco campus.

Gregg T. Kokame, MD

(Residency class of '87 and 2013 Thomas H. Pettit Lecturer) was appointed chief of the Division of Ophthalmology at the University of Hawaii School of Medicine starting January 1, 2020.

UCLA Stein Eye Institute Alumni Association Support Group

New officers were appointed to the UCLA Stein Eye Institute Alumni Association in 2019—faculty alumna Dr. J. Bronwyn Bateman, President (Residency class of '78, Fellowship class of '79); Dr. Troy Elander, Vice President, assistant clinical professor in the UCLA Department of Ophthalmology, who has been part of the volunteer teaching faculty for nearly 30 years; and Associate Professor of Ophthalmology and Residency Program Director Dr. Stacy Pineles, Secretary/Treasurer (Residency class of '08, Fellowship class of '09).

The Alumni Association also became an officially recognized UCLA Support Group, with the primary objectives to promote the social and professional relations of its members and alumni as well as advance the interests of Stein Eye and the Department of Ophthalmology. Stein Eye is the common bond, and as such, membership is open to all graduates, residents, fellows, faculty, and volunteer clinical faculty. Annual membership dues are nominal and help underwrite the Resident Research Grant Awards, the Stein Eye Institute Excellence in Research Graduation Awards for Residents and Fellows, and the annual receptions at the American Academy of Ophthalmology and Association for Research in Vision and Ophthalmology.

To become a member of the UCLA Stein Eye Institute Alumni Association, go to: giving.ucla.edu/SEIAlumniDues.



J. Bronwyn Bateman, MD, PhD
President



Stacy L. Pineles, MD
Secretary/Treasurer



Troy Elander, MD
Vice President

2019 Stein and Doheny Alumni Reception

Alumni from the Stein and Doheny Eye Institutes attended a reception in San Francisco, California, on October 13, 2019.

The joint reception—held annually during the American Academy of Ophthalmology meeting—was hosted by the UCLA Stein Eye Institute Alumni Association and the Doheny Eye Institute Professional Alumni Association.



Drs. John Chang and J. Bronwyn Bateman share a commitment to advancing their field and serve as leaders in ophthalmology societies.



Dr. Barty Mondino (center), chair of the UCLA Department of Ophthalmology and director of the Stein Eye Institute, with Department faculty members Dr. Anne Coleman (left), president-elect of the American Academy of Ophthalmology, and Dr. Lynn Gordon, immediate past chair of the AAO Council.



L to r: Isabela Lin, Dr. Tara McCannel, Dr. Shawn Lin, and Dr. Mitra Nejad enjoy the evening festivities.



UCLA Department of Ophthalmology faculty members (l to r): Drs. Simon Law, James Tan, and Kouros Nouri-Mahdavi.



L to r: Dr. Alfredo Sadun, vice chair of ophthalmology, Doheny Eye Center UCLA, with Dr. Srinivas Sadda, president and chief scientific officer, Doheny Eye Institute.



Dr. J Bronwyn Bateman (left) and Dr. Bartly Mondino with Ms. Marissa Goldberg (right), executive director and chief financial officer of the Doheny Eye Institute.



Dr. Joseph Demer (left) joins his colleague and research collaborator Dr. Azam Qureshi.



L to r: Drs. Lydia Sauer, Paul Bernstein, Bradley Straatsma, and Andrew Chang savor the chance to reconnect at the alumni event.



Drs. George Rajacich (left) and Troy Elander enjoy an opportunity to visit with one another.

The End of an Era



Dr. Bartly Mondino (left) is shown with Dr. Dean Bok, whose renowned work has advanced our knowledge of the eye and has contributed to the prevention of blindness.

Celebrating the Work of Dr. Dean Bok

Colleagues, friends, and family honored **Dean Bok, PhD**, the Dolly Green Chair of Ophthalmology, professor of ophthalmology emeritus, and distinguished research professor of neurobiology, at a retirement reception on March 11, 2020, at the UCLA Stein Eye Institute vision-science campus.

Speaking to the gathered attendees, **Bartly J. Mondino, MD**, chair of the UCLA Department of Ophthalmology and director of the Stein Eye Institute, said, “Dr. Bok is revered in vision science. He has been an extremely productive scientist and teacher, stalwart Departmental citizen, and formidable resource for mentoring in the Vision Science Division at UCLA. His scientific standing is matched by his personal characteristics of integrity, fairness, and loyalty.”

The primary focus of Dr. Bok’s research has been the study of the interaction of photoreceptor cells with the retinal pigment epithelium in health and disease. His renowned scientific work has advanced our knowledge of the eye and has contributed to the prevention of blindness.

After thanking Dr. Mondino for his leadership of the Institute, Dr. Bok reflected on his 51 years as a member of Stein Eye and noted other Department colleagues who greatly influenced his career. “My mentor in the Department of Anatomy (now Neurobiology) was **Dr. Richard Young**, whose seminal work on retinal photoreceptor cell biology had an impact that reverberates within the field of vision science to this day. Notable also was the presence of founding members of the Institute on my doctoral committee, **Drs. Michael Hall, Thomas Pettit, and Bradley Straatsma**. From that time forward, Dr. Straatsma, founding chair of the Department and founding director of the Institute, has been one of my strongest supporters.” Dr. Bok also recognized three members of his technical staff—**Marcia Lloyd, Jane Hu, and Alberto Ruiz**—who he said, “made my experience in the laboratory gratifying and productive.”

In addition to his research, Dr. Bok has served on scientific advisory boards of prestigious companies, foundations, and medical institutions. He is on the Board of Directors of the Macular Vision Research Foundation, and he has received substantial funding from the National Eye Institute (NEI) and numerous foundations for the entire

tenure of his career and was instrumental in the NEI program planning for “Vision Research—A National Plan: 1998–2003.” Dr. Bok has authored approximately 150 publications and 25 book chapters.

His decades of awards and honors include the Paul Kayser International Award in Retina Research from the Retina Research Foundation, the Llura Liggett Gund Lifetime Achievement Award from the Foundation Fighting Blindness, and the Helen Keller Prize for Vision Research from the Helen Keller Foundation.

One of Dr. Bok’s greatest contributions to scientific discovery has been his mentorship of young investigators. Dr. Bok’s ability to inspire future researchers has been recognized with teaching awards throughout his career, including Professor of the Year, Professor Most Deserving of Commendation, Best Lecturer, Best Academic Course, and Distinguished Teaching Awards from the UCLA School of Dentistry and the UCLA Alumni Association.

Capturing the emotion felt by all who were gathered, Dr. Mondino summed up the impact of Dr. Bok’s retirement: “It is the end of an era here at Stein Eye.”



Philanthropy

New Chair Appointments

Congratulations to UCLA Department of Ophthalmology faculty on being honored with prestigious chair appointments.

Suraj P. Bhat, PhD, professor of ophthalmology, has been appointed Oppenheimer Brothers Chair. The chair, established in 2002, supports the research and education activities of an outstanding scientist to advance basic research in vision at the UCLA Stein Eye Institute.

Sophie X. Deng, MD, PhD, professor of ophthalmology, has been selected as the Joan and Jerome Snyder Chair in Cornea Diseases. The chair was established in 2013 by Mr. and Mrs. Snyder and supports the activities of a distinguished faculty member in the area of corneal diseases and research.

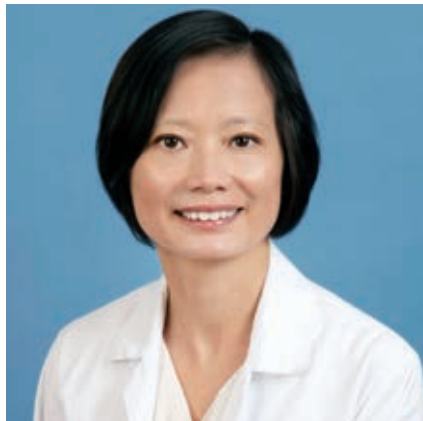
Daniel B. Rootman, MD, assistant professor of ophthalmology, has been chosen as the Karen and Frank Dabby Endowed Chair in Ophthalmology. The chair, established in 2007, supports the activities of a distinguished faculty member in the area of orbital disease.

David S. Williams, PhD, professor of ophthalmology and neurobiology, has been appointed Karl Kirchgessner Foundation Chair in Vision Science. This chair was established in 2001 to support pioneering vision research at the UCLA Stein Eye Institute.

Chairs pay tribute to both the faculty member who holds the chair appointment and the chair's donor. "We are indebted and gratified by our supporters' tremendous commitment to and belief in the Stein Eye Institute and the work we do," says **Bartly J. Mondino, MD**, director of the Stein Eye Institute, chair of the UCLA Department of Ophthalmology, and affiliation chair of the Doheny Eye Institute.



Suraj P. Bhat, PhD
Oppenheimer Brothers Chair



Sophie X. Deng, MD, PhD
Joan and Jerome Snyder Chair
in Cornea Diseases



Daniel B. Rootman, MD
Karen and Frank Dabby Endowed Chair
in Ophthalmology



David S. Williams, PhD
Karl Kirchgessner Foundation Chair
in Vision Science

With Thanks

For more than half a century, countless loyal friends and donors have generously contributed to uphold the mission of the UCLA Stein Eye Institute in the noble effort to preserve sight and restore vision. This dedication has had an invaluable impact on ophthalmology and related disciplines locally, nationally, and abroad. We embrace the future strides we—and the next generation of eye specialists and vital supporters—will make to advance this meaningful and influential medical and scientific field.

Donations July 1, 2019–June 30, 2020

Major Gifts \$25,000 and Above:

Anonymous
Anthony Eanelli Estate
Aramont Foundation
Bert O. Levy
Bradley R. Straatsma, MD, JD
Bruce Ford and Anne Smith Bundy Foundation
Choroideremia Research Foundation
Elaine Sarkaria, EdD
Estate of Jean Stein
Estate of Katharine L. Gardner
Estate of Miles H. Mallory
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Hilel Lewis, MD
Hongbin Peng
J. Bronwyn Bateman, MD
Joan A. Payden and William R. Payden
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Richard B. Shapiro
Robert Morell Carmichael
Scripps Clinic & Research Foundation
The Foundation Fighting Blindness
The Nicholas Endowment
The Simms/Mann Family Foundation
The Vision of Children Foundation, Sam and Vivian Hardage
The William & Margaret Fern Holmes Family Foundation
United Mitochondrial Disease Foundation
VHL Family Alliance
Woodmere Foundation

Individuals Recognized with a Tribute Gift

IN HONOR OF:

Abby North
Andrew Chen, MD
Anthony J. Aldave, MD
Bartly J. Mondino, MD
Bradley R. Straatsma, MD, JD
Ellen Shipley
Gail Summers
Gary N. Holland, MD
Howard R. Krauss, MD
Jeffrey Wong, PhD, and Family
John D. Bartlett, MD
Joseph Caprioli, MD
Joseph L. Demer, MD, PhD
Kathryn M. Gardner, MD

Kevin M. Miller, MD
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Patricia Tussing
Robert E. Engstrom, Jr., MD
Robert S. Hepler, MD
Steven D. Schwartz, MD
Tara A. McCannel, MD, PhD

IN MEMORY OF:

Daljit S. Sarkaria
David J. Gray
Donald M. Fetherolf
Duane Carter
Genevene Vogel
Harold Shapiro
Herbert J. Grossman, MD
Jerome H. Snyder
Jerrold C. Bocci, MD
Judy Page
Katherine L. Gray
Mr. and Mrs. M. Gorman
Robert Cottle
Robert Darfield Terrell
Ruth Straatsma
Stephen Seiff, MD
Victoria Szufilita

Stein Eye Institute Endowed Chairs Supporting Department of Ophthalmology Faculty

Arthur L. Rosenbaum, MD, Chair in Pediatric Ophthalmology

Established in 2007 by Mr. and Mrs. Gottlieb as an administrative chair for the Division of Pediatric Ophthalmology and Strabismus in honor of the late Dr. Arthur L. Rosenbaum. The chair was originally named the Brindell and Milton Gottlieb Chair in Pediatric Ophthalmology.

Arthur L. Rosenbaum, MD
2008–June 2010

Joseph L. Demer, MD, PhD
2015–Present

Bert O. Levy Endowed Chair in Orbital and Ophthalmic Plastic Surgery

Established in 2019 as a permanent-appointment chair by Mr. Bert Levy to support the teaching and research activities of an outstanding, academic orbital and ophthalmic plastic surgeon.

Robert A. Goldberg, MD
2019–Present

Bradley R. Straatsma, MD, Endowed Chair in Ophthalmology

Established in 1994 to honor founding director of the Stein Eye Institute, Bradley R. Straatsma, MD, JD.

Bartly J. Mondino, MD
2000–Present

Charles Kenneth Feldman Chair in Ophthalmology

Established in 1982 by various donors in memory of Charles Kenneth Feldman, an entertainment industry executive.

Robert D. Yee, MD
Professor 1984–1987

Hilel Lewis, MD
Scholar 1989–1993

Gabriel H. Travis, MD
2001–Present

David May II Chair in Ophthalmology

Established in 1998 as a term-appointment chair by the family of Mr. David May II, a founding member of the Institute's Board of Trustees, to perpetuate, in memoriam, Mr. May's association with the Stein Eye Institute; after an additional pledge from the Wilbur May Foundation, it was converted to a permanent-appointment chair in 2009.

Gary N. Holland, MD
1999–2004

Joseph Caprioli, MD
2004–Present

Dolly Green Chair of Ophthalmology

Established in 1980 by Ms. Dorothy (Dolly) Green.

Dean Bok, PhD
1984–2013

Ernest G. Herman Chair in Ophthalmology

Established in 2008 by Mr. Ernest G. Herman to support a vision scientist or a clinician-investigator.

Xian-Jie Yang, PhD
2012–Present

Grace and Walter Lantz Endowed Chair in Ophthalmology

Established in 1991 as a term-appointment chair by Mr. and Mrs. Lantz and, with an additional pledge, it was converted to a permanent-appointment chair in 2010.

J. Bronwyn Bateman, MD
Grace and Walter Lantz Scholar
1993–1995

Sherwin J. Isenberg, MD
Grace and Walter Lantz Scholar
1993–1995
Professor 1996–2004

Joseph L. Demer, MD, PhD
Professor 2004–2005

Harold and Pauline Price Chair in Ophthalmology

Established in 2000 by the Louis and Harold Price Foundation and, with an additional pledge, it was converted to a permanent-appointment chair in 2006.

Michael B. Gorin, MD, PhD
2006–Present

Hilel Lewis Family Chair in Ophthalmology

Established at UCLA in 2020 in collaboration with Dr. Hilel Lewis via Columbia University to support an outstanding clinician-investigator in retina.

Jack H. Skirball Chair in Ocular Inflammatory Diseases

Initiated in 2008 by The Skirball Foundation in honor of Mr. Jack H. Skirball's long-standing friendship with Dr. Jules Stein and Mr. Lew Wasserman.

Gary N. Holland, MD
2009–Present

Jerome and Joan Snyder Chair in Ophthalmology

Established in 2008 by Mr. and Mrs. Snyder to support the activities of a distinguished faculty member who directs the ophthalmology residency program, ensuring that UCLA's accredited program continues to offer rigorous and comprehensive instruction for individuals of the highest caliber.

Anthony C. Arnold, MD
2008–2017

Stacy L. Pineles, MD
2017–Present

Joan and Jerome Snyder Chair in Cornea Diseases

Established in 2013 by Mr. and Mrs. Snyder to support the activities of a distinguished faculty member in the area of corneal diseases and research.

Sophie X. Deng, MD, PhD
2019–Present

Joan and Jerome Snyder Chair in Vision Science

Established In 2018, this term chair will support the teaching and research activities of an excellent scientist and faculty member in the Vision-Science Division.

[Jules Stein Chair in Ophthalmology](#)

Established in 1982 as a memorial tribute to Dr. Jules Stein by his many friends, with the leadership of Mr. Samuel Goldwyn, Jr.

Wayne L. Hubbell, PhD
1983–Present

[Karen and Frank Dabby Endowed Chair in Ophthalmology](#)

Established in 2007 by Dr. and Mrs. Dabby as a term chair to support the activities of a distinguished faculty member in the area of orbital disease.

Robert Alan Goldberg, MD
2008–2018

Daniel B. Rootman, MD, MS
2019–Present

[Karl Kirchgessner Foundation Chair in Vision Science](#)

Established in 2001 as a term-appointment chair by a colleague of Dr. Jules Stein to promote basic-science research initiatives.

Debora B. Farber, PhD, DPhhc
2001–2018

David S. Williams, PhD
2019–Present

[Kolokotronis Chair in Ophthalmology](#)

Established in 2004 by Wendy and Theo Kolokotronis to support the teaching and research of a cataract surgeon and scientist.

Kevin M. Miller, MD
2005–Present

[Laraine and David Gerber Chair in Ophthalmology](#)

Established in 1998 as a term-appointment chair by Mr. and Mrs. Gerber and, with an additional pledge, converted to a permanent-appointment chair in 2009.

Joseph L. Demer, MD, PhD
2000–2004

Sherwin J. Isenberg, MD
2004–2019

[Leonard Apt Endowed Chair in Pediatric Ophthalmology](#)

Established in 2004 by Professor Emeritus of Ophthalmology and Founding Director of the Division of Pediatric Ophthalmology and Strabismus, Dr. Leonard Apt, with a gift from the trust of Frederic G. Rappaport, Dr. Apt's nephew.

Joseph L. Demer, MD, PhD
2005–2015

[Mary Oakley Foundation Chair in Neurodegenerative Diseases](#)

Established in 2013 by The Mary Oakley Foundation to support neurodegenerative diseases.

Anthony C. Arnold, MD
2017–Present

[Oppenheimer Brothers Chair](#)

Established in 2002 as a term chair by the Oppenheimer Brothers Foundation.

Joseph Horwitz, PhD
2003–2017

Suraj P. Bhat, PhD
2019–Present

[Rory Smith, MD, and Family Endowed Chair](#)

Established in 2019 by faculty alumna Dr. J. Bronwyn Bateman in honor of her late husband, Dr. Roderick "Rory" Smith.

[Smotrich Family Optometric Clinician-Scientist Chair](#)

Established in 2016 to support an optometric clinician-scientist at the UCLA Stein Eye Institute and will fund the appointee's education and research programs.

Ava K. Bittner, OD, PhD
2019–Present

[The Ahmanson Chair in Ophthalmology](#)

Established in 2006 by The Ahmanson Foundation as an administrative chair for the Retina Division Chief to further research, education, and clinical care programs.

Steven D. Schwartz, MD
2007–Present

[The Fran and Ray Stark Foundation Chair in Ophthalmology](#)

Established in 1992 as a term-appointment chair by the Fran and Ray Stark Foundation, and with an additional commitment, it was converted to a permanent-appointment chair in 2009.

Joseph Caprioli, MD
1997–2004

Anne L. Coleman, MD, PhD
2004–Present

[The Wasserman Professor of Ophthalmology](#)

Established in 1977 by Edie and Lew Wasserman to honor Dr. Jules Stein.

Manfred Spitznas, MD
1979–1981

Bartly J. Mondino, MD
Scholar 1984–1988
Professor 1988–2000

Ben J. Glasgow, MD
2003–Present

[Vernon O. Underwood Family Chair in Ophthalmology](#)

Established in 1995 as a term-appointment chair by Mrs. Adrienne Underwood Pingree in memory of her late husband, Mr. Vernon O. Underwood.

John R. Heckenlively, MD
1997–2004

Gary N. Holland, MD
2004–2009

Lynn K. Gordon, MD, PhD
2012–Present

[Walton Li Chair in Cornea and Uveitis](#)

Established in 2013 by Walton W. Li, MD, as an administrative chair for the Cornea and Uveitis Division to further research and teaching activities.

Anthony J. Aldave, MD
2014–Present

Doheny Eye Institute Endowed Chairs Supporting Department of Ophthalmology Faculty

A. Ray Irvine, Jr. MD, Chair in Clinical Ophthalmology

John A. Irvine, MD
2014–Present

Charles Stewart Warren and Hildegard Warren Endowed Research Chair

Vikas Chopra, MD
2017–present

Flora L. Thornton Endowed Chair in Vision Research

Alfredo A. Sadun, MD, PhD
2014–Present

Gavin S. Herbert Endowed Chair for Macular Degeneration

Michael Ip, MD
2019–Present

Mary D. Allen Chair in Vision Research

Deming Sun, MD
2015–Present

Rupert and Gertrude I. Steiger Vision Research Chair

Brian A. Francis, MD, MS
2015–Present

Stephen J. Ryan-Arnold and Mabel Beckman Foundation Endowed Presidential Chair

SriniVas R. Sadda, MD
2015–Present

Stein Eye Institute Fellowship Funds and Endowments

Abe Meyer Memorial Fellowship Fund

Established in 1969 by various donors to support clinical fellows at the Institute.

Jonathan Young, MD, PhD
2018–2019

Adelaide Stein Miller Research Fellowship

Established in 1977 by Mr. Charles Miller as a tribute to his wife, Adelaide Stein Miller, Dr. Jules Stein's sister.

Giovanni H. Greaves, MD
2018–2019

Aramont Fellowship Fund

Established in 2020 by the Aramont Charitable Foundation to enable a domestic fellow in the Division of Orbital and Ophthalmic Plastic Surgery to pursue advanced training under the mentorship of Dr. Robert Alan Goldberg.

Audrey and Jack Skirball Ocular Inflammatory Disease Fellowship

Established in 2011 by The Skirball Foundation to support the training of fellows specializing in ocular inflammatory disease.

Bert Levy Research Fellowship Fund

Established in 1995 by Mr. Bert Levy to enhance the educational opportunities of vision-science scholars and advance research in neuro-ophthalmology.

Cooperman Fellowship Fund

Established in 1988 by the Coopermans to support eye research and education, with emphasis on clinical ophthalmology.

David and Randi Fett Orbital and Ophthalmic Plastic Surgery Fellowship Endowment

Established in 2013 by Dr. David R. Fett and Ms. Randi Levine to support fellows in the Orbital and Ophthalmic Plastic Surgery Division.

Justin Karlin, MD, MS
2018–2019

David May II Fellowship Fund

Established in 1992 by the family of Mr. David May II to support advanced study and research in ophthalmology and vision science.

Christine Petersen, MD
2018–2019

Dr. Jack Rubin Memorial Fellowship

Established in 1987 by the family of Dr. Jack Rubin to support postdoctoral fellows.

Elsa and Louis Kelton Fellowship

Endowed by the Keltons in 1982 to support postdoctoral research and training.

Nathan Abraham, MD
2018–2019

Frances Howard Goldwyn Fellowship

Established in 1977 by Mr. Samuel Goldwyn, Jr., with gifts from Mrs. Goldwyn's estate and Dr. and Mrs. Jules Stein.

Christopher Lo, MD
2018–2019

Frederic G. Rappaport Endowed Fellowship in Retina/Oncology

Established in 2004 by Mrs. Jeanne A. Rappaport as a memorial to her son Frederic.

Jerome Comet Klein, MD, Fellowship and Lecture Fund

Established in 2007 by the Irving & Estelle Levy Foundation to provide fellowship and lecture support in the areas of orbital and ophthalmic plastic surgery.

John and Theiline McCone Fellowship

Established in 1989 by the McCones to support and enhance education programs and fellowship training in macular disease.

Wei "Wayne" Gui, MD
2018–2019

Niranjan Manoharan, MD
2018–2019

Jules Stein Research Fellowship

Established in 1982 by various donors to honor the memory of Charles Kenneth Feldman.

Lindsay M. De Andrade, MD
2018–2019

Jennifer Pan, MD
2018–2019

Klara Spinks Fleming Fellowship Fund

Established in 1985 by Klara Spinks Fleming to support cataract research.

Nathan Abraham, MD
2018–2019

Leonard Apt Endowed Fellowship in Pediatric Ophthalmology

Established in 2002 by founding chief of the Pediatric Ophthalmology and Strabismus Division, Leonard Apt, MD, to support outstanding clinical fellows in the field of pediatric ophthalmology and strabismus.

Leonard Apt, MD, Pediatric Fellowship Fund

Established in 2015 by the trust of Leonard Apt, MD, founding chief of the Pediatric Ophthalmology and Strabismus Division, to support pediatric ophthalmology fellowships.

Lindsay M. De Andrade, MD
2018–2019

Jennifer Pan, MD
2018–2019

Rosalind W. Alcott Fellowship

Established in 1978 by the Rosalind W. Alcott Charitable Remainder Trust for the training of outstanding postdoctoral fellows.

Nikisha A. Kothari, MD
2018–2019

Sanford and Erna Schulhofer Fellowship Fund

Established in 1986 by Mr. Sanford Schulhofer to support postdoctoral research and training in vision science.

The Harold and Pauline Price Fellowship

Established in 1987 by the Louis and Harold Price Foundation to support research and education in ophthalmology and vision care.

Terry Wood, MD
2018–2019

Thelma and William Brand Director's Fund

Established in 2004 with a trust from Mr. William F. Brand to benefit worthy students at the Stein Eye Institute.

The Mae and Lee Sherman Fellowship Fund

Established in 1981 by the Sherman family to support postdoctoral fellows.

Amir Marvasti, MD
2018–2019

Wilbur D. May Fellowship

Established in 2013 by the May family as a tribute to Mr. Wilbur D. May, the beloved uncle of Mr. David May II.

Jason Mingyi Huang, MD
2018–2019



Endowments for Research, Education, and Patient Care

Albert Sarnoff Endowed Cataract Fund
Amalia Simon Roth Endowment
Anne H. West Estate Fund
Anthony Eannelli Endowment for Retina Research
Arna Saphier Macular Degeneration Fund
Arthur Spitzer Fund
Audrey Hayden-Gradle Trust
Barbara P. Taylor Fund
Bradley R. Straatsma Research Fund
Card Family Research Fund
Chesley Jack Mills Trust
Daniel B. Whipple Fund
Dr. William F. Stein and Esther Elizabeth Stein Memorial Fund
Edward and Hannah Carter Fund
Elsie B. Ballantyne Regents Fund
Elsie B. Ballantyne UCLA Foundation Fund
Emily G. Plumb Estate and Trust
Emma B. Gillespie Fund
Endowment for Children with Uveitis
Esther Shandler Research Fund
Gerald Oppenheimer Family Foundation Center for the Prevention of Eye Disease Endowment Fund
Harold B. and Bernice L. Belfer Fund
Henry I. Baylis, MD, Endowed Fund in Orbital and Ophthalmic Plastic Surgery
Herb Ritts, Jr., Memorial Vision Fund
Herman King Fund
Hintze Glaucoma Research Fund
J. Richard Armstrong and Ardis Armstrong Fund
Jerome T. Pearlman, MD, Fund
John and Theiline McCone Macular Disease Research Fund

JSEI Maintenance Fund
Katherine L. Gardner Research Fund
Louis and Annette Kaufman Fund
Maggi Kelly Vision Fund
Marie and Jerry Hornstein Family Endowed Macular Degeneration Research Fund
Michael Huffington Ophthalmology Scholarship Fund
Pat and Joe Yzurdiaga Endowed Cataract Fund
Patricia and Joseph Yzurdiaga Endowed Vision Science Research Fund
Patricia Pearl Morrison Research Fund
Paul J. Vicari Endowed Cataract Research Fund
Raymond and Ruth Stotter Vision Science Research Fund
Richard B. Shapiro Vision Fund
Sara Kolb Memorial Fund
Stella F. Joseph Fund
The Annenberg Foundation Fund
The Karl Kirchgessner Foundation Ophthalmology Endowment Fund
The Leonard Apt, MD, Pediatric EyeSTAR Residency Training Fund
The Leonard Apt, MD, Pediatric Ophthalmology Fund
The Skirball Foundation Fund
UCLA Center for Eye Epidemiology
Uncle Claude Fund
Virginia Burns Oppenheimer Endowment Fund
Wickham Retina Research Fund
William R. Payden Fund for Glaucoma Research
William, Richard, & Roger Meyer Fund





Eye Health Programs

Patient Care Services

Committed to advancing eye health, UCLA Department of Ophthalmology board-certified faculty provide services ranging from routine eye examinations to the most complex sight-saving procedures.

The UCLA Stein Eye Institute and its affiliation partner, the Doheny Eye Institute, are ranked among the top in the nation for ophthalmology. Patients and referring physicians alike trust UCLA Department of Ophthalmology faculty to provide the highest level of care across every subspecialty, with premier services available at the UCLA Stein Eye Institute vision-science campus in Westwood, as well as at the UCLA Stein Eye Centers and Doheny Eye Centers UCLA neighborhood locations across the Southland.



UCLA Department of Ophthalmology

Los Angeles and Beyond

Learn more about our
LOCATIONS, PROVIDERS, and
SERVICES at:

[www.uclahealth.org/eye/
our-locations](http://www.uclahealth.org/eye/our-locations).

UCLA Stein Eye Institute

The **Stein Eye Institute** is a vision-science campus in Westwood that is home to state-of-the-art clinics, laboratories, and an outpatient surgical center equipped with the most advanced tools for precision surgery.

Direct consultation and treatment, including emerging therapies, is available through the **Ophthalmology Faculty Consultation Service**. Our faculty members have extensive, advanced training in ophthalmic subspecialties and afford referring physicians and patients with a valuable resource for special eye problems. Additionally, wide-ranging and subspecialty eye care in all medical and surgical areas of ophthalmology is offered through the **Comprehensive Ophthalmology Division**, which is staffed by members of the UCLA Medical Group.

The Institute's **outpatient surgical center**, housed in the award-winning Edie & Lew Wasserman Building, sets the standard for excellence in patient care and medical progress. Ophthalmic surgery of every kind—from cataract extraction and laser vision-correction surgeries to removal of ocular tumors—is performed. Faculty members and skilled medical specialists, including subspecialty fellows, medical residents, anesthesiologists, nurses, and technicians, ensure that each patient receives the highest quality preoperative and postoperative care possible.

The **Ophthalmology Inpatient Consultation Service**, operating 24 hours a day through the Ronald Reagan UCLA Medical Center and UCLA Medical Center Santa Monica, provides ophthalmic consultation and treatment to pediatric and adult patients who are admitted to the medical centers for inpatient care. The consultation team consists of physician-residents at the UCLA Stein Eye Institute, with subspecialty coverage provided by UCLA Department of Ophthalmology faculty.

100 Stein Plaza, UCLA
Los Angeles, CA 90095
Referral Service: (310) 825-5000
Emergency Service: (310) 825-3090
After-Hours Emergency Service:
(310) 825-2111

UCLA Stein Eye Centers

The UCLA Stein Eye Centers in Calabasas and Santa Monica provide excellence in clinical care along with neighborhood convenience. At each Center, UCLA Department of Ophthalmology faculty provide a full array of subspecialty care, surgical services, and diagnostic testing.

Stein Eye Center—Calabasas

The Stein Eye Center—Calabasas provides comprehensive and subspecialty eye care. Conveniently located directly off the 101 freeway, the newly built Center features fully equipped examination rooms, free on-site parking, and subspecialty care including cataract and LASIK surgery; glaucoma; diabetic retinopathy; macular degeneration; and functional and cosmetic oculoplastics. A wide range of ocular assessment is available, including visual field testing; corneal mapping (corneal topography); intraocular lens measurement; fluorescein angiography; spectral domain optical coherence tomography; and other diagnostic retinal imaging techniques.

The Stein Eye Center—Calabasas offers nearly all the subspecialty services, diagnostic testing, and treatment services available at the UCLA Stein Eye Institute in Westwood, with the UCLA faculty you know and trust.

26585 W. Agoura Rd., Suite 330
Calabasas, CA 91302
Telephone: (310) 825-5000
Fax: (310) 825-9246

Stein Eye Center—Santa Monica

The Stein Eye Center—Santa Monica offers the world-renowned comprehensive and subspecialty eye care of the UCLA Stein Eye Institute at a convenient neighborhood location. The Center features well-equipped examination rooms, an optical shop, on-site parking for easy access, and testing facilities offering a wide range of examinations, including visual field, corneal mapping (corneal topography), intraocular lens measurement, fluorescein angiography, spectral domain optical coherence tomography, and other diagnostic retinal imaging techniques.

Expert ophthalmologists at the Stein Eye Center—Santa Monica offer nearly all the subspecialty services, diagnostic testing, and treatment services available at the Stein Eye Institute in Westwood.

1807 Wilshire Blvd., Suite 203
Santa Monica, CA 90403
Telephone: (310) 829-0160
Fax: (310) 829-0170

Doheny Eye Centers UCLA

Convenient Doheny Eye Center UCLA locations across the Southland set the standard for excellence, with UCLA Department of Ophthalmology faculty providing the finest clinical care, surgical services, diagnostic testing, and treatment available.

Doheny Eye Center UCLA—Arcadia

The Doheny Eye Center UCLA—Arcadia serves patients in the broader Arcadia region and San Gabriel area, expanding the UCLA Department of Ophthalmology's reach in Los Angeles County. The renovated office includes 12 exam rooms, dedicated diagnostic equipment, and attractive patient areas. The Center provides comprehensive ophthalmology, and nearly all subspecialty services, including cornea, glaucoma, and retina.

The Doheny Eye Center—Arcadia is easily accessible from two freeways and provides free, on-site parking.

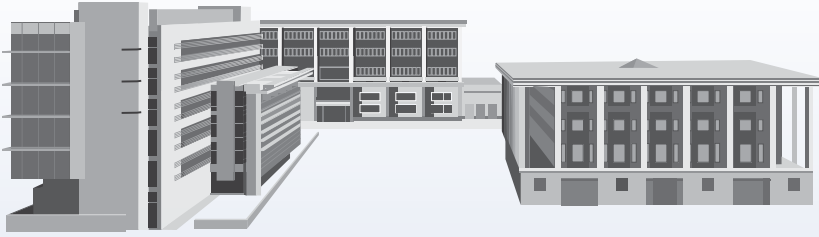
622 W. Duarte Rd., Suite 101
Arcadia, CA 91007
Telephone: (626) 254-9010
Fax: (626) 254-9019

Doheny Eye Center UCLA—Orange County

The Doheny Eye Center UCLA—Orange County is located in the Orange Coast Memorial Medical Center and broadens the reach of the UCLA Department of Ophthalmology south to Orange County.

The location offers comprehensive ophthalmology, as well as cornea, glaucoma, neuro-ophthalmology, pediatric and uveitis subspecialty services, and retina. The Doheny Eye Center UCLA—Orange County includes 12 exam rooms, dedicated diagnostic equipment, and comfortable patient areas.

Orange Coast Memorial
Medical Center
1811 Brookhurst St., Suite 6400
Fountain Valley, CA 92708
Telephone: (714) 963-1444
Fax: (714) 963-1234



UCLA Department of Ophthalmology Summary of Patient Care Statistics¹

	2018–2019	2019–2020
FACULTY CONSULTATION SERVICE		
Patient visits	153,771	140,963
INPATIENT CONSULTATION SERVICE		
Patient evaluations	781	581
CLINICAL LABORATORIES		
Procedures	92,235	84,837
SURGERY SERVICES		
Number of procedures ¹	22,596	16,417
Intravitreal Injections	12,748	12,633
MOBILE EYE CLINIC		
Number of patients	9,675	7,930
Ocular abnormalities	33%	29%
Number of trips	410	308
¹ Includes lasers		

Note: Due to COVID-19, our outpatient visits and surgical procedures in the 2019–2020 academic year were down¹.

Doheny Eye Center UCLA–Pasadena

The Doheny Eye Center UCLA–Pasadena serves as the primary hub of the Doheny Eye Centers UCLA. Located on the second floor of the Huntington Pavilion, the Center provides expanded vision care services and clinics devoted to retina and cornea; comprehensive ophthalmology and oculoplastics; neuro-ophthalmology; and glaucoma. Each subspecialty clinic has dedicated, state-of-the-art diagnostic laser suites, as well as in-office procedure rooms. Complex procedures are performed at the Huntington Pavilion Surgical Suites, which are located on the building’s third floor.

The Doheny Eye Center UCLA–Pasadena, located in the Huntington Pavilion, is home to a wide variety of medical practitioners, which provides physicians with ease of referral for patients requiring specialized eye care and provides patients with the added convenience of seeing their doctors and having any necessary services all in one location.

Huntington Pavilion
625 S. Fair Oaks Blvd., 2nd Floor
Pasadena, CA 91105
Telephone: (626) 817-4747
Fax: (626) 817-4748

Centers and Laboratories

Research and Treatment Centers

The Research and Treatment Centers provide subspecialty care from faculty physicians who are actively involved in related research, enabling emerging and experimental treatment options to be developed for a gamut of eye disorders. In addition to comprehensive treatment, the centers provide both patients and physicians with expert diagnostic and consultation services for diseases that are difficult to identify and treat. Ophthalmology faculty work closely with other specialists, both within the Stein Eye Institute and in other UCLA clinical departments, to create a multidisciplinary team customized for each patient's unique medical needs.

- ▶ Aesthetic Center
- ▶ Center for Community Outreach and Policy
 - UCLA Center for Eye Epidemiology
 - UCLA Mobile Eye Clinic
- ▶ Center to Prevent Childhood Blindness
- ▶ Center for Regenerative Medicine in Ophthalmology
- ▶ Clinical Research Center
- ▶ Contact Lens Center
- ▶ Diabetic Eye Disease and Retinal Vascular Center
- ▶ Eye Trauma and Emergency Center
- ▶ Gerald Oppenheimer Family Foundation Center for the Prevention of Eye Disease
- ▶ Glaucoma Center for Excellence in Care and Research
- ▶ Macular Disease Center
- ▶ Ocular Inflammatory Disease Center
- ▶ Ophthalmic Oncology Center
- ▶ Optic Neuropathy Center
- ▶ Orbital Disease Center
- ▶ UCLA Laser Refractive Center
- ▶ Vision Genetics Center
- ▶ Vision Proteomics Center
- ▶ Vision Rehabilitation Center

Diagnostic Services

Ophthalmology diagnostic services provide testing that offers precise measurements, photographs, and quantitative studies of the eye and the visual system. Diagnostic testing increases the accuracy of diagnosis and further augments the effectiveness of disease management. Our diagnostic services are available to eye care physicians in the community.

- ▶ Anterior Segment Diagnostic Laboratory
- ▶ Corneal Diagnostics
- ▶ Glaucoma Imaging Laboratory
- ▶ Medical Photography/Ultrasound
- ▶ Ocular Motility Clinical and Basic Science Laboratory
- ▶ Visual Field Laboratory
- ▶ Visual Physiology Diagnostic Laboratory

Research Laboratories

Laboratory-based research, also called basic vision-science research, forms the foundation for the clinical research, education, and patient care that are the visible hallmarks of the UCLA Stein Eye Institute. The Institute has over 20 specially equipped laboratories to support vision-science investigations. Organized around the interests of the research faculty, these distinct laboratories offer unique opportunities for students, physicians, and fellows to become involved in internationally and nationally renowned scientific study.

- ▶ Advanced Robotic Eye Surgery
- ▶ Biology and Genetics of Retinal Disease
- ▶ Cornea Biology Laboratory
- ▶ Cornea Genetics
- ▶ Developmental Neurobiology Laboratory
- ▶ Glaucoma Advanced Imaging Laboratory
- ▶ Lens Biophysics Laboratory
- ▶ Molecular Biology of Retinal Ganglion Cells Laboratory
- ▶ Molecular Neurobiology Laboratory
- ▶ Ophthalmic Biophysical Chemistry
- ▶ Ophthalmic Pathology Laboratory
- ▶ Photoreceptor Biochemistry Laboratory
- ▶ Photoreceptor/RPE Cell Biology
- ▶ Retina Biochemistry and Clinical Disease Modeling Laboratory
- ▶ Retinal Biochemistry Laboratory
- ▶ Retinal Cell Biology Laboratory
- ▶ Retinal Neurophysiology Laboratory
- ▶ Vision Molecular Biology Laboratory
- ▶ Visual Physiology Laboratory

Find out more about our
RESEARCH LABORATORIES at:
[www.uclahealth.org/eye/
research-laboratories](http://www.uclahealth.org/eye/research-laboratories).

Training Programs

The UCLA Department of Ophthalmology provides comprehensive training in ophthalmology and vision science to medical students, residents, and clinical and research fellows. Training programs encompass the gamut of ophthalmic and vision-science education, incorporating a full range of subjects in the study of the eye. Serving a large patient population with diverse vision problems offers innumerable training opportunities for both residents and clinical fellows, while the availability of a multitude of research laboratories ensures a wide choice of vision-science projects for all trainees. Predoctoral and postdoctoral research fellows benefit from the wealth of new and unfolding research generated by UCLA Department of Ophthalmology vision scientists.

Medical Students

Through the **UCLA Medical Student Program**, each academic year the UCLA Department of Ophthalmology extends instruction to UCLA medical students in their second, third, and fourth years of instruction. Through lectures, small group discussions, and clinical experience, all students have numerous training sessions from which to gain knowledge about eye diseases and develop eye examination skills that should be known by all physicians, regardless of their specialties. Students who are interested in ophthalmology as a career have additional learning opportunities in elective courses.

Medical Student Research Ophthalmology Program

The UCLA Medical Student Research Program provides select medical students with a year-long opportunity to participate in laboratory or clinical research in the field of ophthalmology. The goal of the program is to encourage medical students to pursue careers in academic ophthalmology.



Residents

The **UCLA Department of Ophthalmology Residency Program** is ranked one of the top in the country and covers the full breadth of ophthalmology training from general ophthalmology to ophthalmic subspecialties. The accredited three-year residency program trains 24 residents with eight new residents beginning the program each July.

Training incorporates the resources of the UCLA Stein Eye Institute, Harbor-UCLA Medical Center, Olive View-UCLA Medical Center, and the Veterans Affairs Greater Los Angeles Health-care System at West Los Angeles and Sepulveda. Through their clinical rotations, every resident has exposure to each medical center and gains clinical experience with a broad range of ophthalmic problems and patient populations. Certification by the American Board of Ophthalmology is a natural objective of the program.

EyeMBA: Innovation in Medical Education

Recognizing that future leaders in ophthalmology will need the financial, management, and measurement skills that are at the core of an MBA curriculum, the Stein Eye Institute created a national first for medical education with EyeMBA—a master's of business administration degree that is earned in tandem with an ophthalmology residency.

The only joint program of its kind, the Stein Eye Institute developed EyeMBA with the David Geffen School of Medicine at UCLA and the UCLA Anderson School of Management. Residents in the EyeMBA program gain skills that are broadly applicable to ophthalmologic leadership in academia, translational research, health system management, health care delivery, and the biomedical industry.

EyeSTAR: Combining Basic Science Research with Clinical Practice

For physicians interested in academic careers and professional leadership as clinician-scientists, the Stein Eye Institute offers the Ophthalmology Specialty Training and Advanced Research Program, referred to as EyeSTAR, which offers vision-science training combined with an ophthalmology residency. Appointees complete a residency program leading to certification in ophthalmology, as well as laboratory research experience leading to a doctorate, or postdoctoral training in the event that the trainee already has a doctorate. EyeSTAR trainees work under the guidance of a faculty advisory panel representing the clinical and research interests of each trainee.

EyeSTAR is recognized by the National Eye Institute and the Association of University Professors of Ophthalmology as a model training program for clinician-scientists in ophthalmology.



Fellows

The UCLA Department of Ophthalmology offers particularly well-qualified persons the opportunity to receive fellowship training in vision-science research or specific areas of clinical ophthalmology.

Vision Science Fellowship Training

Vision science fellowship training is laboratory based and offers both predoctoral and postdoctoral opportunities to trainees in specific areas of vision science that encompass a wide range of topics. Trainees work under the supervision of UCLA Department of Ophthalmology faculty members who are engaged in basic-science research and have active laboratories. The predoctoral or postdoctoral trainee and his/her faculty mentor develop the scope and nature of the training program.

An integrated program is also offered under the auspices of a **National Eye Institute Vision Science Training Grant** for predoctoral and postdoctoral fellows. The grant provides trainees with coordinated and organized exposure to a wide range of techniques, giving each fellow the broadest possible background in ophthalmology and the basic sciences.

Clinical Fellowship Training

Following successful completion of the residency program, clinical fellowship training combines outpatient, inpatient, and surgical experience in an ophthalmic subspecialty. The fellow assumes increasing responsibility for patient care under the supervision of faculty members responsible for the program. In addition to receiving training from faculty, the fellow instructs medical students and residents. Research is considered an important aspect of specialty training and a major prerequisite for assimilating future developments in ophthalmology. Fellows are expected to undertake independent investigation or to participate in one of the ongoing research projects in a field related to their specialty.

The UCLA Department of Ophthalmology offers clinical fellowships in the following subspecialty areas:

- ▶ Cornea and External Ocular Diseases and Refractive Surgery
- ▶ Glaucoma
- ▶ Medical Retina
- ▶ Neuro-Ophthalmology
- ▶ Ophthalmic Pathology
- ▶ Orbital and Ophthalmic Plastic Surgery
- ▶ Pediatric Ophthalmology and Strabismus
- ▶ Uveitis and Inflammatory Eye Disease
- ▶ Vitreoretinal Diseases and Surgery

International Fellowship Training

To promote and encourage research and education interaction with ophthalmology institutions throughout the world, the Stein Eye Institute offers an International Ophthalmology Fellowship and Exchange Program consisting of one-year to two-year fellowships under the supervision of specific Institute faculty. Candidates for these fellowships are nominated by prestigious institutions outside the United States and often hold academic positions within their own countries. Fellows participate in the clinical and research activities of ophthalmic subspecialties according to their training needs.

Find detailed information about our TRAINING PROGRAMS at:
<https://www.uclahealth.org/eye/training-programs>.





Faculty and
Colleagues

UCLA Department of Ophthalmology

Academic Divisions at Stein Eye Institute (SEI) and Doheny Eye Centers UCLA (DEC)

CATARACT AND REFRACTIVE SURGERY

John D. Bartlett, MD
Shawn Lin, MD
Kenneth L. Lu, MD
Kevin M. Miller, MD, Chief SEI
Mitra Nejad, MD

Optometrists

Tony Chan, OD
Carolyn Duong, OD
Amanda P. Havens, OD
Linda Hwang, OD
Mark Landig, OD

COMPREHENSIVE OPHTHALMOLOGY

Gavin G. Bahadur, MD
Rachel Feit-Leichman, MD
Tania Onclinx, MD
Susan S. Ransome, MD
Meryl L. Shapiro-Tuchin, MD
Ronald J. Smith, MD
Victoria Yom, MD

Optometrists

Michael Baker, OD
Benjamin Graham, OD
Vivian Shibayama, OD

CORNEA AND UVEITIS

Anthony J. Aldave, MD, Chief SEI
Saba Al-Hashimi, MD
Benjamin B. Bert, MD
Sophie X. Deng, MD, PhD
Simon Fung, MD
Gary N. Holland, MD
Hugo Y. Hsu, MD, Chief DEC
John A. Irvine, MD
Batool Jafri, MD
Olivia L. Lee, MD
Bartly J. Mondino, MD, Department Chair
Edmund Tsui, MD

GLAUCOMA

Joseph Caprioli, MD, Chief SEI
Vikas Chopra, MD
Anne L. Coleman, MD, PhD
Brian A. Francis, MD, Chief DEC
JoAnn A. Giaconi, MD
Alex A. Huang, MD, PhD
Simon K. Law, MD, PharmD
Kouros Nouri-Mahdavi, MD
Natik Piri, PhD
James C. Tan, MD, PhD

NEURO-OPHTHALMOLOGY

Anthony C. Arnold, MD, Chief SEI
Laura Bonelli, MD
Lynn K. Gordon, MD, PhD
Stacy L. Pineles, MD
Peter A. Quiros, MD
Alfredo A. Sadun, MD, PhD, Chief DEC

OPHTHALMIC PATHOLOGY

Ben J. Glasgow, MD

ORBITAL AND OPHTHALMIC PLASTIC SURGERY

Cynthia A. Boxrud, MD
Robert Alan Goldberg, MD, Chief SEI
Daniel B. Rootman, MD
Soheab Ugradar, MD

PEDIATRIC OPHTHALMOLOGY AND STRABISMUS

Joseph L. Demer, MD, PhD, Chief SEI
Simon Fung, MD
Monica R. Khitri, MD
Stacy L. Pineles, MD
Soh Youn Suh, MD
Federico G. Velez, MD

Optometrist

Laura Robbins, OD

RETINA

Gad Heilweil, MD
Hamid Hosseini, MD
Jean-Pierre Hubschman, MD
Michael S. Ip, MD, Chief DEC
Allan E. Kreiger, MD
Tara A. McCannel, MD, PhD
Pradeep S. Prasad, MD, MBA
Steven D. Schwartz, MD, Chief SEI
Irena Tsui, MD

Optometrists

Melissa W. Chun, OD
Jennie Kageyama, OD

RETINAL DISEASES AND OPHTHALMIC GENETICS

Michael B. Gorin, MD, PhD, Chief SEI
Phillip Le, MD, PhD
Colin A. McCannel, MD
Steven Nusinowitz, PhD
Srinivas R. Sadda, MD
David Sarraf, MD

VISION SCIENCE

Steven A. Barnes, PhD
Suraj P. Bhat, PhD
Nicholas C. Brecha, PhD
Gordon L. Fain, PhD
Debora B. Farber, PhD, DPhhc
Ben J. Glasgow, MD
Joseph Horwitz, PhD
Wayne L. Hubbell, PhD
Steven Nusinowitz, PhD
Yirong Peng, PhD
Natik Piri, PhD
Roxana A. Radu, MD
Alapakkam P. Sampath, PhD, Chief SEI
Deming Sun, MD
Hui Sun, PhD
Gabriel H. Travis, MD
David S. Williams, PhD
Xian-Jie Yang, PhD
Yuhua Zhang, PhD
Jie Zheng, PhD

Find out more about our
ACADEMIC DIVISIONS and
FACULTY at:

[www.uclahealth.org/eye/
academic-divisions.](http://www.uclahealth.org/eye/academic-divisions)



Bartly J. Mondino, MD

Bradley R. Straatsma, MD, Endowed Chair in Ophthalmology

Distinguished Professor of Ophthalmology

Chair, UCLA Department of Ophthalmology

Director, Stein Eye Institute

Affiliation Chair, Doheny Eye Institute

Board of Directors, Stein Eye Institute

Board of Directors (Observer), Doheny Eye Institute

Board of Directors, National Alliance for Eye and Vision Research/
Alliance for Eye and Vision Research

Member, UCLA Brain Research Institute

Member, Medical Advisory Board, Braille Institute

Dr. Mondino was named director of the Stein Eye Institute and chair of the UCLA Department of Ophthalmology in 1994, the culmination of a career in research and clinical care in cornea and infectious eye diseases.

As director and chair, Dr. Mondino has expanded the Stein Eye Institute's pillar programs; increased faculty support through the creation of endowed chairs; forged a historic affiliation with the Doheny Eye Institute; and broadened access to eye care with the opening of Stein and Doheny Eye Center UCLA locations across the Southland.

Through development and completion of the Edie & Lew Wasserman Building in 2014, redesign of Stein Plaza in 2015, and renovation of the Jules Stein Building in 2017, Dr. Mondino transformed the Stein Eye Institute into a vision-science campus at UCLA, creating a focal point for patient care, vision research, education, and community outreach at home and abroad.



Anthony J. Aldave, MD

Walton Li Chair in Cornea and Uveitis
Professor of Ophthalmology
Chief of the Cornea and Uveitis Division

Discovering the Genetic Basis of the Corneal Dystrophies

Dr. Aldave's clinical specialties are cornea and external disease. His laboratory research focuses on the molecular genetics of the corneal dystrophies, a group of inherited disorders that affect corneal clarity and constitute one of the primary indications for corneal transplantation.

Dr. Aldave provides clinical care at the Stein Eye Institute in Westwood.



Saba Al-Hashimi, MD

Health Sciences Assistant Clinical
Professor of Ophthalmology

Cornea, External Disease, and Refractive Surgery Specialist

Dr. Al-Hashimi is a clinician with a research interest in keratoconus and corneal crosslinking. His research focus involves halting the progression of corneal disease by using light and chemicals to strengthen the cornea.

Specializing in infections of the cornea, Dr. Al-Hashimi performs surgical procedures that include corneal transplantation, Descemet membrane stripping endothelial keratoplasty, Descemet membrane endothelial keratoplasty, deep anterior lamellar keratoplasty, corneal patch grafts, pterygium surgery, corneal repair, cataract surgery, and premium cataract surgery with femtosecond laser.

Patients can see "Dr. Saba" at the UCLA Stein Eye Institute.



Anthony C. Arnold, MD

Mary Oakley Foundation Chair in
Neurodegenerative Diseases
Professor of Clinical Ophthalmology

Chief of the Neuro-Ophthalmology
Division

Director of the UCLA Optic Neuropathy
Center

Vice Chair, Education

Ischemic and Inflammatory Diseases of the Optic Nerve

Dr. Arnold's clinical expertise is in neuro-ophthalmology, with a special emphasis on ischemic and inflammatory optic neuropathies and manifestations of tumors, stroke, and inflammation of the central nervous system. His research has focused on advanced imaging techniques to identify optic nerve circulatory diseases and to investigate their causes.

Dr. Arnold provides clinical care at the Stein Eye Institute in Westwood.



Gavin G. Bahadur, MD

Health Sciences Assistant Clinical
Professor of Ophthalmology

Cataract Surgery Outcomes and Glaucoma Detection

Dr. Bahadur's clinical specialties are comprehensive ophthalmology including cataract, pterygium, and glaucoma. His research activities include machine-learning algorithms for cataract surgery outcomes and glaucoma detection.

Dr. Bahadur provides clinical care at the Stein Eye Center–Santa Monica. He also performs manual small incision cataract surgery (MSICS) with Surgical Eye Expeditions International.



John D. Bartlett, MD

Health Sciences Associate Clinical
Professor of Ophthalmology

Cataract and Refractive Surgery, Clinical Informatics

Dr. Bartlett's clinical interest is cataract and refractive cataract surgery, with the goal to improve the focus of the eyes, reduce dependence on glasses, and restore vision potential. He teaches Stein Eye residents, training the next generation of eye surgeons to deal with challenging cases.

Dr. Bartlett is a UCLA physician informaticist and is involved in the implementation and optimization of electronic health records (EHRs) to promote effective organization, analysis, management, and use of clinical information. He is interested in using EHRs to enhance patient care, improve population health, and decrease health care costs.

Dr. Bartlett provides clinical care at the Stein Eye Institute in Westwood.



Suraj P. Bhat, PhD

Oppenheimer Brothers Chair
Professor of Ophthalmology
Member of the Molecular Biology Institute

Molecular Biology of Vision

Dr. Suraj Bhat's research impacts two important areas of vision: the ocular lens in the anterior eye and the retinal pigment epithelium (RPE) in the posterior eye. His laboratory, the Vision Molecular Biology Laboratory (VMBL) investigates gene activity that sustains transparency within the ocular lens and gene activity that sustains the physiological health of the RPE, which in turn sustains the neural activity in the retina that makes vision possible. VMBL is involved in delineating very early events (at the genomic and molecular level) that culminate in cataractogenesis in the ocular lens and age-related macular degeneration in the RPE.



Ava K. Bittner, OD, PhD

Smotrich Family Optometric
Clinician-Scientist Chair

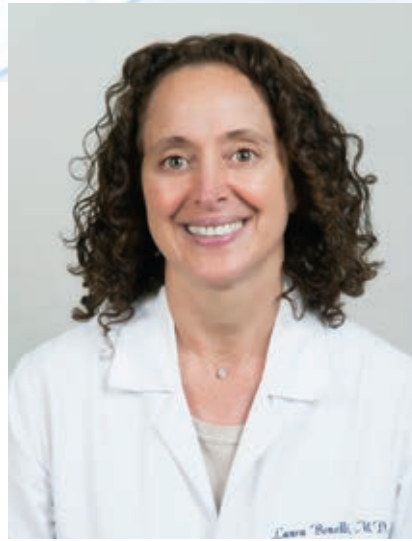
Chief of Optometric Services

Associate Professor of Ophthalmology

Low Vision Rehabilitation

Dr. Bittner's specialty is low vision rehabilitation. Her research activities include clinical trials to assess the use of novel approaches and technologies to improve access to low vision rehabilitation care and reading ability with visual assistive aids. Specifically, she is evaluating tele-rehabilitation, Bluetooth low energy beacon sensors, socially assistive robots, and wearable electronic visual enhancement devices for low vision.

Dr. Bittner provides clinical care at the Stein Eye Institute's Vision Rehabilitation Center located in the Doris Stein Building.



Laura Bonelli, MD

Health Sciences Assistant Clinical
Professor of Ophthalmology

Neuro-Ophthalmology

Dr. Bonelli completed her residency in ophthalmology, as well as fellowships in neuro-ophthalmology and oculoplastics, at the Hospital de Clínicas, University of Buenos Aires, Argentina.

Joining the UCLA Department of Ophthalmology in 2008, Dr. Bonelli specializes in comprehensive ophthalmology and neuro-ophthalmology. She sees patients at the Stein Eye Institute in Westwood and the Stein Eye Center—Santa Monica.

A committed educator, Dr. Bonelli teaches medical student courses at the David Geffen School of Medicine, regularly lectures at educational conferences, and instructs residents and neuro-ophthalmology fellows in the Department. She is the director of inpatient consultation services for the Ronald Reagan UCLA Medical Center and UCLA Medical Center, Santa Monica, where she oversaw a broad reorganization to improve services and to provide more efficient patient care. In recognition of her work with ophthalmology residents on the consultation services, Dr. Bonelli received the Stein Eye Institute Faculty Teaching Award in 2014.



Nicholas C. Brecha, PhD

Distinguished Professor of Neurobiology,
Ophthalmology, and Medicine

Member of the Brain Research Institute

Member of CURE: Center for
Digestive Diseases

Member of the California NanoSystems
Institute

Functional and Structural Organization of the Mammalian Retina

Dr. Brecha is a visual system neuroscientist whose expertise includes retinal neurochemistry, transmitters, synaptic and cellular structure, and neuronal circuitry regulating visual function.

His current research studies are furthering the understanding of 1) fundamental synaptic inhibitory processes mediating early vision in the outer retina and 2) neuronal cell structure and function mediating visual processing in the inner retina.

His studies are a prerequisite for understanding normal retinal function, and the impact on the development of therapeutic approaches and diagnostic tools essential for the treatment, prevention, and restoration of vision loss due to retinal injury and disease.



Joseph Caprioli, MD

David May II Chair in Ophthalmology
Distinguished Professor
of Ophthalmology
Chief of the Glaucoma Division
Director, Clinical and Research
Glaucoma Fellowship
Chair, Ophthalmology Quality
Improvement Committee

Causes and New Treatments for Glaucoma

Dr. Caprioli's clinical specialties are glaucoma, cataract, and anterior segment surgery. His long-term objectives in clinical and basic research are to identify those individuals at greatest risk for visual loss and to implement new treatment through effective neuroprotective strategies. Laboratory work focuses on mechanisms of retinal ganglion cell damage in glaucoma, with special emphasis on early detection through accurate assessment of the optic nerve and nerve fiber layer to measure the rate of progressive damage.

Dr. Caprioli provides clinical care at the Stein Eye Institute in Westwood.



Anne L. Coleman, MD, PhD

The Fran and Ray Stark Foundation
Chair in Ophthalmology
Professor of Ophthalmology
Professor of Epidemiology, Jonathan and
Karin Fielding School of Public Health
Director of the Stein Eye Institute
Centers for Community Outreach and
Policy, Eye Epidemiology, and the
UCLA Mobile Eye Clinic
Vice Chair of Academic Affairs,
UCLA Department of Ophthalmology

Glaucoma, Cataract, and Public Health

Dr. Coleman's clinical specialties are glaucoma and cataract. Her research activities include the etiology, diagnosis, treatment, and societal impact of glaucoma, cataracts, and pediatric eye diseases including quality-of-life research for patients impacted by these eye diseases. Her research encompasses the interface of eye care and public health focusing on underserved areas.

Dr. Coleman provides clinical care at the Stein Eye Institute in Westwood.



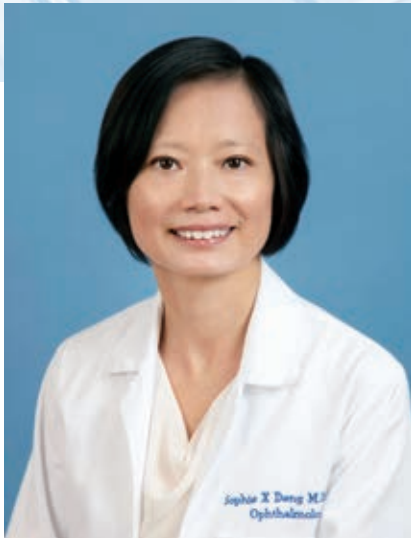
Joseph L. Demer, MD, PhD

Arthur L. Rosenbaum, MD, Chair in
Pediatric Ophthalmology
Professor of Ophthalmology
Professor of Neurology
Chief, Pediatric Ophthalmology and
Strabismus Division
Director, Fellowship in Pediatric
Ophthalmology and Strabismus
Director, Ocular Motility Laboratories
Chair, EyeSTAR Residency PhD/PostDoc
Program in Ophthalmology and
Visual Science

Motility and Vision

Dr. Demer's clinical specialties include pediatric ophthalmology, adult strabismus, and other disorders of ocular motility such as nystagmus. He is a biomedical engineer whose federally funded research includes anatomy and imaging of the eye muscles, and the biomechanics of eye movements and optic nerve disorders.

Dr. Demer provides clinical care and ophthalmic surgery at the Stein Eye Institute in Westwood.



Sophie X. Deng, MD, PhD

Joan and Jerome Snyder Chair in Cornea Diseases

Professor of Ophthalmology

Member of the UCLA Jonsson Comprehensive Cancer Center

Member of the UCLA Broad Stem Cell Research Center

Limbal Stem Cell Deficiency

Dr. Deng specializes in corneal and external ocular diseases, and cataracts. Her surgical areas include endothelial keratoplasty (DSEK and DMEK), deep anterior lamellar keratoplasty (DALK), penetrating keratoplasty, limbal stem cell transplantation, artificial cornea, and cataract.

Dr. Deng is the director of the Cornea Biology Laboratory at Stein Eye. Her research focuses on corneal epithelial stem cell regulation, deficiency, and regeneration. She aims to improve the current treatment for patients with limbal stem cell deficiency by using stem cell therapy to restore vision. Dr. Deng also conducts clinical studies to develop new imaging and molecular tests to accurately diagnose and stage limbal stem cell deficiency.



Debora B. Farber, PhD, DPhc

Distinguished Professor of Ophthalmology

Doctor *honoris causa*

Member of the Brain Research Institute

Member of the Molecular Biology Institute

Retinal Biochemistry, Molecular Biology, Genetics of Retinal Degenerations, and Studies on Embryonic Stem Cell-Derived Extracellular Vesicles

Dr. Farber's research focuses on the characterization of genes encoding key proteins in vision that when mutated cause blinding diseases. Examples: *β-PDE* gene (diseases in mice, dogs, and human RP), *RP1* gene (dominant RP), *rd7* gene (Enhanced S-Cone syndrome), and *ZBED4* and *RHBDD2* genes (arCRD and arRP, respectively). In addition, Dr. Farber studies ocular albinism resulting from mutations in the *OA1* gene, and the components of the *OA1* cascade controlling RPE melanosomes' biogenesis as well as guidance of ganglion cell axons through the brain's optic chiasm. Lastly, Dr. Farber investigates the use of microvesicles released from embryonic stem cells for the rescue of damaged retinas.



Simon Fung, MD

Assistant Professor of Ophthalmology

Pediatric Cornea and Anterior Segment Specialist

Dr. Fung specializes in cornea and anterior segment diseases, with a particular focus on those occurring among children and adolescents. His areas of surgical expertise include pediatric corneal transplantations using modern strategies, such as endothelial keratoplasty (DSAEK and DMEK) and deep anterior lamellar keratoplasty (DALK) techniques, as well as pediatric anterior eye conditions such as cataracts and glaucoma. His research focuses on the evaluation and treatment of complex ocular surface conditions, notably neurotrophic keratopathy and phlyctenular keratoconjunctivitis.

Dr. Fung provides clinical care at the UCLA Stein Eye Institute in Westwood, and has staffed the UCLA Mobile Eye Clinic since 2018.



JoAnn A. Giaconi, MD

Health Sciences Clinical Professor
of Ophthalmology

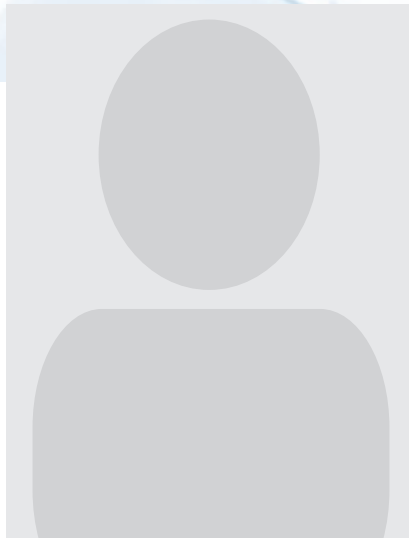
Chief of the Ophthalmology Section
at the Greater Los Angeles
VA Healthcare System

Co-Director of Medical Student
Education at the David Geffen
School of Medicine, UCLA

Adult and Pediatric Glaucoma

Dr. Giaconi's areas of clinical specialty are adult and pediatric glaucoma and cataract surgery. Her research interests are in the outcomes of glaucoma surgery. She also has a strong interest in medical education.

Dr. Giaconi provides clinical care at the Stein Eye Institute in Westwood and at the Veterans Administration Eye Clinic West Los Angeles campus.



Ben J. Glasgow, MD

The Wasserman Professor
of Ophthalmology

Professor of Pathology and
Laboratory Medicine

Chief of the Ophthalmic Pathology
Division

Ophthalmic Pathology

Dr. Glasgow specializes in ophthalmic pathology, and his research focus is the role of human lacrimal gland proteins in the protection and maintenance of the eye. His laboratory is investigating the structure-function relationship of tear lipocalin. By studying the molecular mechanisms of tear proteins, Dr. Glasgow is seeking to learn the normal functions of tear lipocalin and its role in maintaining the health of the ocular surface and in the prevention of dry eye diseases. Ideally this research will lead to new treatments for dry eye and have broad application to numerous other members of this protein family that transport small, insoluble molecules through the body.



Robert Alan Goldberg, MD

Bert O. Levy Endowed Chair in
Orbital and Ophthalmic Plastic Surgery

Professor of Ophthalmology

Chief of the Orbital and Ophthalmic
Plastic Surgery Division

Director of the UCLA Orbital Disease
Center

Co-Director of the UCLA Aesthetic Center

Diseases and Therapy of the Eyelid and Orbit

Dr. Goldberg is an internationally recognized surgeon, researcher, and teacher. He has developed surgical procedures that are now globally taught and practiced, including less invasive treatments for eye and orbit cancers, new surgeries for thyroid eye disease, and innovative surgical techniques for tearing problems. His research into orbital and eyelid anatomy is resulting in improved techniques and approaches to deep orbital disease. He has had leadership and executive positions in the American Society of Ophthalmic Plastic and Reconstructive Surgery, the American Academy of Cosmetic Surgery, and the American College of Surgeons.



Lynn K. Gordon, MD, PhD

Vernon O. Underwood Family Chair
in Ophthalmology

Professor of Ophthalmology

Senior Associate Dean for Equity and
Diversity Inclusion, David Geffen
School of Medicine at UCLA

Chair of the College of Applied Anatomy,
David Geffen School of Medicine
at UCLA

Neuro-Ophthalmology and Inflammatory Disease

Dr. Gordon's clinical specialty is neuro-ophthalmology. Her research centers on inflammatory diseases of the eye and adnexa and the role of the four transmembrane protein epithelial membrane protein 2 in ocular and cancer angiogenesis. Dr. Gordon is also the Senior Associate Dean for Equity and Diversity Inclusion at the David Geffen School of Medicine at UCLA.

Dr. Gordon provides clinical care in neuro-ophthalmology at the Stein Eye Institute in Westwood.



Michael B. Gorin, MD, PhD

Harold and Pauline Price Chair
in Ophthalmology

Professor of Ophthalmology

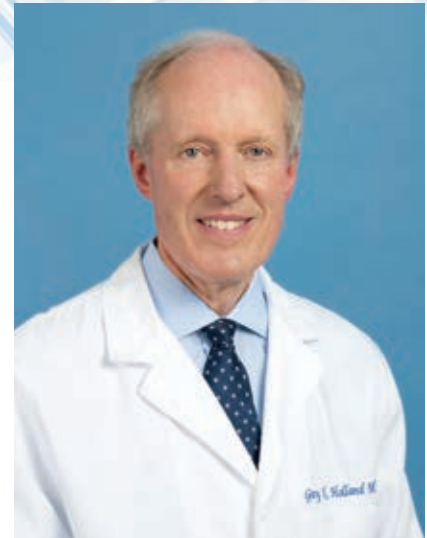
Professor of Human Genetics

Chief of the Division of Retinal Disorders
and Ophthalmic Genetics

Hereditary Eye Disorders and Molecular Genetics of Age-Related Maculopathy

Dr. Gorin's clinical expertise is in medical retina and ophthalmic genetic disorders. He has both a basic and translation research program that address the genetics of inherited retinal dystrophies and age-related macular degeneration, the biological basis of pain caused by light exposure, the study of von Hippel Lindau disease, etiology of central serous chorioretinopathy, drug and autoimmune-related retinopathies, genetics-based therapies for disease, and late-life morbidities associated with retinopathy of prematurity.

Dr. Gorin was among the first UCLA physicians to be boarded in Clinical Informatics, and he is exploring the use and analysis of clinical datasets to better understand disease and clinical outcomes.



Gary N. Holland, MD

Jack H. Skirball Chair in
Ocular Inflammatory Diseases

Professor of Ophthalmology

Director of the Ocular Inflammatory
Disease Center

Director of the UCLA Department of
Ophthalmology Clinical Research Center

Co-Director of Medical Student Education

Uveitis and Cornea-External Ocular Diseases

Dr. Holland specializes in uveitis and other inflammatory diseases of the eye.

His research activities focus on risk factors for, and clinical characteristics of, various infectious and inflammatory diseases, including ocular toxoplasmosis, cytomegalovirus retinitis, and chronic anterior uveitis in children.

Dr. Holland provides clinical care at the Stein Eye Institute in Westwood.



Hamid Hosseini, MD

Assistant Professor of Ophthalmology

Retinal and Macular Conditions

Dr. Hosseini specializes in retinal and macular conditions, such as macular degeneration, diabetic retinopathy, and retinal detachment.

Dr. Hosseini completed two fellowships at the UCLA Stein Eye Institute, the first in glaucoma and the second in retina. He participates in all activities of the Retina Division, including research, education, and clinical care.

He sees patients at the Stein Eye Institute in Westwood and Harbor-UCLA Medical Center.



Wayne L. Hubbell, PhD

Jules Stein Chair in Ophthalmology

Distinguished Professor of Ophthalmology

Distinguished Professor of Chemistry and Biochemistry

Molecular Basis of Phototransduction in the Vertebrate Retina

Dr. Hubbell's research is focused on understanding the relationship between molecular structure, plasticity, and conformational changes that control protein function in the visual system. Of particular interest are proteins that behave as "molecular switches." The overall goal is to determine the structure of these proteins in their native environment, monitor the changes in structure that accompany the transition to an active state, and to understand the role of protein flexibility in function.

To investigate these and other proteins, Dr. Hubbell's laboratory has developed the technique of site-directed spin labeling, a novel and powerful approach to the exploration of protein structure and dynamics.



Jean-Pierre Hubschman, MD

Associate Professor of Ophthalmology

Chief of Retina at Olive View-UCLA Medical Center

Director of the Advanced Robotic Eye Surgery Laboratory

Member of the Center for Advanced Surgical and Interventional Technology

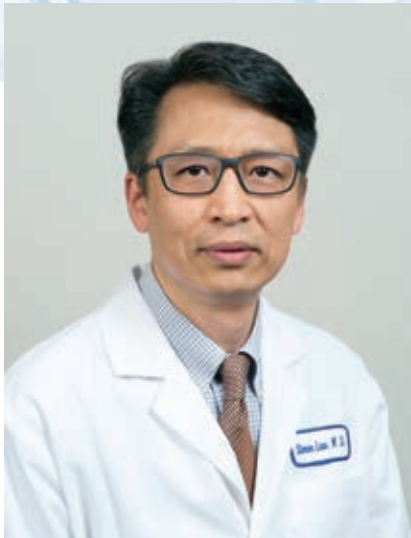
Member of the California NanoSystems Institute

Affiliate Faculty of the Bioengineering Department

Advanced Vitreoretinal Surgical Interventions and Robotics

Dr. Hubschman's clinical research focuses on the development and evaluation of new vitreoretinal surgical techniques and robotics for ophthalmic surgery. Automated surgery utilizing robotics promises to increase surgical precision and accuracy, as well as improve access to medical care. Dr. Hubschman's publications include research papers on the development of a new retinal patch for the treatment of retinal detachment, on the feasibility of robotic surgery in ophthalmology, and results of various clinical trials. Currently, he is also investigating the use of the terahertz laser for the evaluation of ocular tissue hydration.

Dr. Hubschman provides clinical care at the Stein Eye Institute in Westwood.



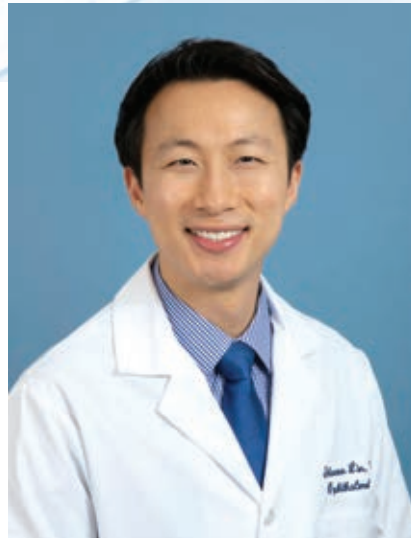
Simon K. Law, MD, PharmD

Health Sciences Clinical Professor
of Ophthalmology

Optic Disc Evaluation

Dr. Law's clinical specialties are glaucoma and cataract. His research activities include evaluation of the optic nerve in different racial groups and ocular pathologies, different patterns of glaucomatous visual function decline, outcomes of different glaucoma surgical procedures and medications in eye pressure control and vision restoration, and alternative therapy in glaucoma care.

Dr. Law provides clinical care at the Stein Eye Institute in Westwood.



Shawn R. Lin, MD

Health Sciences Assistant Clinical
Professor of Ophthalmology

Medical Director, Stein Eye
Center—Calabasas

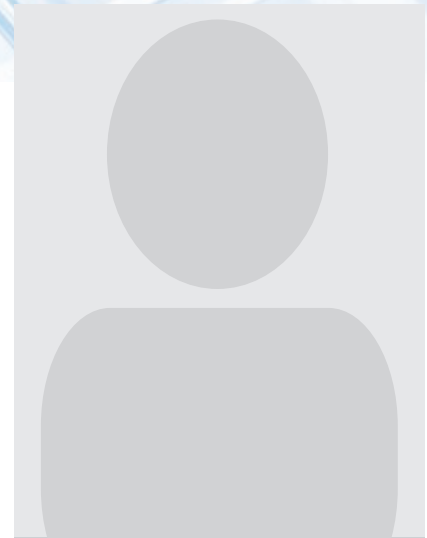
Cataract and Refractive Surgery

Specializing in cataract and refractive surgery, Dr. Lin obtained his MD and MBA from Stanford University. He conducted his ophthalmology residency at the UCLA Stein Eye Institute, and he completed a Heed Cornea Fellowship at the Massachusetts Eye and Ear Infirmary at Harvard University.

Dr. Lin's research is focused on combining human and artificial intelligence to deliver exceptional surgical results. He has authored more than a dozen peer-reviewed publications in leading ophthalmology journals, has written chapters on ophthalmology and cornea for textbooks, and has delivered keynote presentations at international scientific meetings.

Dr. Lin founded EyeGuru, an online educational platform visited more than 300,000 times a year by ophthalmologists from 125 countries. In this role, Dr. Lin helps to advance knowledge in the field and train the next generation of ophthalmologists.

Dr. Lin sees patients at the Stein Eye Institute in Westwood and the Stein Eye Center—Calabasas.



Colin A. McCannel, MD

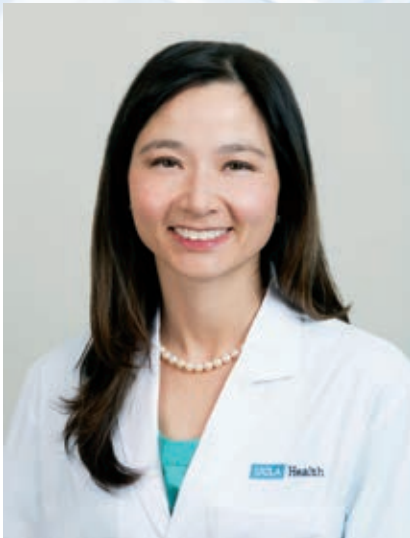
Professor of Clinical Ophthalmology
Medical Director, Stein Eye Center—
Santa Monica

Vitreoretinal Surgery

Dr. McCannel has a longstanding interest in the management of vitreoretinal conditions, particularly complex retinal detachments, complications of diabetic retinopathy, macular holes and epimacular membranes, and age-related macular degeneration. His clinical research efforts are directed at the improvement of vitreoretinal surgical techniques and outcomes, including the prevention of endophthalmitis following intravitreal injections.

Dr. McCannel devotes time to educational research as well. Currently, he is investigating the utility of virtual reality surgery simulation in teaching ophthalmic surgery. He has several ongoing protocols that assess ophthalmic surgical simulation in surgical teaching.

Dr. McCannel provides clinical care at the Stein Eye Institute in Westwood and the Stein Eye Center—Santa Monica.



Tara A. McCannel, MD, PhD

Health Sciences Clinical Professor of Ophthalmology
Director of the Ophthalmic Oncology Center

Metastatic Ocular Melanoma and Diseases of the Retina and Vitreous

Dr. McCannel is an ophthalmic oncologist, as well as a vitreoretinal surgeon. Dr. McCannel's Ophthalmic Oncology Laboratory is studying molecular markers in ocular melanoma to provide prognostic information to patients and advance understanding of metastatic disease. Discovery of candidate genes from tissue of patients undergoing surgical treatment for ocular melanoma is being explored. This information will be important to establish a better understanding of the biology of metastatic ocular melanoma and help develop better treatments for this cancer. New modalities are being investigated to predict, detect, and ultimately treat choroidal melanoma metastasis.

Dr. McCannel provides clinical care at the Stein Eye Institute in Westwood.



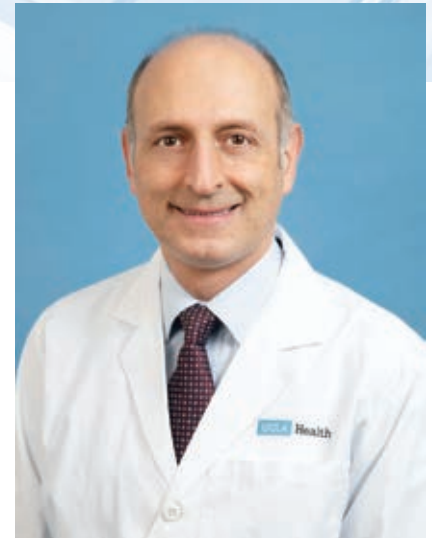
Kevin M. Miller, MD

Kolokotronos Chair in Ophthalmology
Professor of Clinical Ophthalmology
Chief of the Cataract and Refractive Surgery Division
Director of the Anterior Segment Diagnostic Laboratory

Cataract and Refractive Surgery

Dr. Miller is chief of the Cataract and Refractive Surgery Division and director of the Anterior Segment Diagnostic Laboratory. His research interests include devices and implants used in cataract and refractive surgery, outcomes of surgical procedures, astigmatism management, and artificial iris implantation.

Dr. Miller provides patient care in the Cataract and Refractive Surgery Suite on the second floor of the Edie and Lew Wasserman Building at the Stein Eye Institute.



Kouros Nouri-Mahdavi, MD, MSc

Associate Professor of Ophthalmology
Director of the Glaucoma Advanced Imaging Laboratory

Role of Structural and Functional Measurements for Detection of Glaucoma and Its Progression

Dr. Nouri-Mahdavi's areas of clinical interest are management of adult glaucoma and complex cataract surgery. His research activities include optimizing the role of structural and functional measurements for detection of glaucoma and its progression with an emphasis on advanced disease and macular optical coherence tomography imaging. More recently, his research laboratory has been exploring the use of artificial intelligence in glaucoma diagnostics. Another area of interest is the study of glaucoma surgical outcomes.

Dr. Nouri-Mahdavi provides clinical care at the Stein Eye Institute in Westwood, as well as the Stein Eye Center—Calabasas and the Stein Eye Center—Santa Monica.



Steven Nusinowitz, PhD

Professor of Ophthalmology
 Co-Director of the Visual Physiology Laboratory
 Director of the Live Imaging and Functional Evaluation (LIFE) Core

Mechanisms of Retinal Degeneration

Dr. Nusinowitz is a visual physiologist whose primary research interest is the study of the sites and mechanisms of disease action in inherited eye diseases. He is focused on understanding the cellular contributions to noninvasive measures of visual function and defining the sites and mechanisms of disease action in inherited retinal and visual pathway disorders. By testing hypotheses about the underlying pathophysiology in human disease, Dr. Nusinowitz hopes to provide a mechanism for the development of specific diagnostic tools that are sufficiently sensitive for early detection and better diagnosis of clinical disease.



Yirong Peng, PhD

Assistant Professor of Ophthalmology

Pathogenesis of Retinal Diseases

Dr. Peng is a neuroscientist whose research focuses on large-scale transcriptomic profiling of retinal cells in healthy and pathological conditions to understand human vision and provide insights for the study of ocular diseases.

Dr. Peng received her PhD in neurobiology from the Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China. Her doctoral research examined the role of functional interactions between inhibitory and excitatory synapses that maintain the stability of neural networks. Dr. Peng then joined the laboratory of Dr. Joshua Sanes at Harvard University as a postdoctoral fellow, where she leveraged high throughput single-cell transcriptomic methods to uncover key transcriptional factors that control the specification of retinal cell types.

At Stein Eye, Dr. Peng is continuing her development of state-of-the-art transcriptomic and genomic tools to reveal the molecular underpinnings of the formation of retinal circuits and the pathogenesis of retinal diseases.



Stacy L. Pineles, MD

Jerome and Joan Snyder Chair in Ophthalmology

Associate Professor of Ophthalmology
 Residency Director, Department of Ophthalmology

Pediatric Neuro-Ophthalmology, Amblyopia, and Neurologic Causes of Strabismus

Dr. Pineles' research interests include evaluating the surgical outcomes of strabismus surgery and studying pediatric optic nerve diseases. With her dual training in pediatric ophthalmology and neuro-ophthalmology, she has a special interest in pediatric neuro-ophthalmic diseases, as well as adult patients with amblyopia and neurologic causes of strabismus.

Dr. Pineles provides clinical care at the Stein Eye Institute in Westwood.



Natik Piri, PhD

Professor of Ophthalmology

Retinal Ganglion Cell Biology, Glaucomatous Neurodegeneration, and Neuroprotection

Dr. Piri's primary research is defining the mechanisms leading to retinal ganglion cell (RGC) degeneration in glaucomatous neuropathy; developing strategies for preserving RGCs against neurodegeneration; and identifying and characterizing the genes critical for RGC function and integrity. Characterization of RGC-expressed genes is fundamental to a better understanding of normal RGC physiology and pathophysiology.

Dr. Piri also focuses on understanding the degeneration of RGCs and their axons, which is a hallmark of glaucoma. He is also studying the involvement of oxidative stress and proteins of the thioredoxin system, particularly in RGC degeneration in the glaucoma model, and the neuroprotective effects of these proteins against glaucomatous RGC death.



Pradeep S. Prasad, MD, MBA

Health Sciences Associate Clinical
Professor of Ophthalmology

Chief, Division of Ophthalmology,
Harbor-UCLA Medical Center

Vitreoretinal Surgery and Disease Management

Dr. Prasad specializes in the medical and surgical management of diseases of the retina and vitreous. His research is focused on teleretinal screening for diabetic retinopathy, applications of wide-field fundus photography for retinal vascular disease, and health care delivery for low-income populations.

Dr. Prasad serves as the chief of the Division of Ophthalmology at Harbor-UCLA Medical Center where he provides clinical supervision and instruction to UCLA medical students as well as to Stein Eye residents and vitreo-retinal fellows.



Roxana A. Radu, MD

Assistant Professor of Ophthalmology

Retina Biochemistry and Clinical Disease Modeling Laboratory

Dr. Radu's scientific interest is to understand the mechanism of photoreceptor cell degeneration by integrating genetic, biochemical, cellular, and molecular approaches. Dr. Radu's research focuses on the formation and pathogenic role of bisretinoids in retinopathies such as recessive Stargardt disease and age-dependent macular degeneration. Her group aims to develop disease experimental models to investigate the bisretinoid-mediated complement dysregulation in the retinal pigment epithelium as a key player in visual loss. Her studies are supported by the NIH, private foundations, and philanthropic funds. Dr. Radu is also actively involved in training and teaching undergraduates, postgraduate fellows, and medical students.



Alapakkam P. Sampath, PhD

Professor of Ophthalmology and Neurobiology

Associate Director, Stein Eye Institute

Chief, Vision Science Division

Molecular Mechanisms Underlying Early Visual Processing

The Sampath laboratory is interested in understanding the molecular mechanisms underlying early visual processing. In particular, the focus of laboratory researchers has been on elucidating mechanisms that set the sensitivity of night vision. Night blindness, or nyctalopia, is a condition that results from abnormal signaling by the rod photoreceptors, or the retinal circuits that process rod-driven signals. Using physiological and genetic methods, the laboratory studies signal transmission in these retinal rod pathways to identify how these processes are optimized to allow our exquisite visual sensitivity.



David Sarraf, MD

Health Sciences Clinical Professor of Ophthalmology

Age-Related Macular Degeneration and Retinal Imaging

Dr. David Sarraf is clinical professor of ophthalmology at the UCLA Stein Eye Institute and member of the Retinal Disorders and Ophthalmic Genetics Division. He has published approximately 250 peer-reviewed research papers, case reports, and reviews and has authored 21 book chapters and is co-author for the second edition of *The Retina Atlas* and will be section editor for the 7th edition of *Ryan's Retina*. Dr. Sarraf is a world leader in the field of advanced retinal imaging and has delivered close to 300 invited lectures at meetings worldwide, including several endowed and keynote lectures.

Dr. Sarraf's focus of research interest is in the field of advanced retinal imaging. He has been a pioneer in the clinical application of OCT angiography and is a world expert on OCTA and OCT imaging of the macula. Dr. Sarraf was nominated to the American Ophthalmological Society because of his research work on the subject of AMD.



Steven D. Schwartz, MD

The Ahmanson Chair in Ophthalmology

Professor of Ophthalmology

Chief of the Retina Division

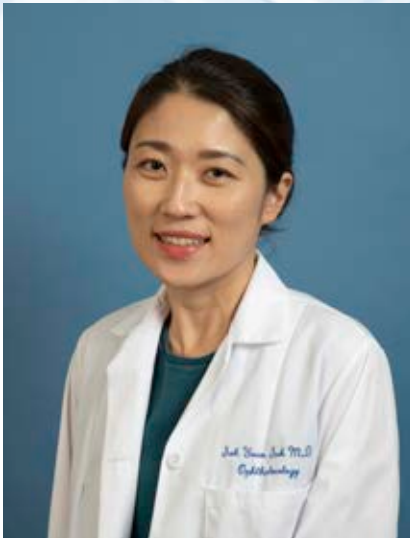
Director of the UCLA Diabetic Eye Disease and Retinal Vascular Center

Director of the Macula Center

Retinal Diseases and Stem Cell Research

Dr. Schwartz's primary areas of research include early diagnosis and treatment of diseases such as retinopathy of prematurity, diabetic eye disease, and macular degeneration. Dr. Schwartz's research includes evaluation of methods to measure optic nerve damage, and the role of structural and functional measurements for detection of glaucoma and its progression. Dr. Schwartz also leads clinical trials testing the use of stem cells to address vision loss from Stargardt macular dystrophy and dry age-related macular degeneration.

Dr. Schwartz provides clinical care at the Stein Eye Institute in Westwood.



Soh Youn Suh, MD

Health Sciences Clinical Instructor

Pediatric Ophthalmology and Adult Strabismus

Dr. Suh's clinical specialties are pediatric ophthalmology and adult strabismus. Her research interests include evaluating strain on the optic nerve head and globe displacement during horizontal ductions in patients and normal controls using magnetic resonance imaging and optical coherence tomography.

Dr. Suh provides clinical care at the Stein Eye Institute in Westwood and Olive View-UCLA Medical Center.



Hui Sun, PhD

Professor of Physiology and Ophthalmology

Member of Jonsson Comprehensive Cancer Center

Molecular Mechanism of Vitamin A Transport for Vision; Identification of New Therapeutic Targets for Blinding Diseases

Dr. Sun's laboratory aims to identify new therapeutic targets to treat still incurable human diseases, to study their molecular mechanisms, and to develop novel therapies based on the mechanisms. Through many years of research efforts, his laboratory has identified the cell-surface receptors for the most potent endogenous inhibitor of angiogenesis, developed novel techniques to screen for drugs that target these receptors, and developed the first small molecule drug candidates that specifically suppress pathogenic angiogenesis in diverse vision diseases and in cancer. These molecules have achieved therapeutic effects that no existing drugs can achieve and are being prepared for clinical trials.



Gabriel H. Travis, MD

Charles Kenneth Feldman Chair in Ophthalmology

Professor of Ophthalmology

Biochemistry of Vertebrate Photoreceptors and Mechanisms of Retinal Degeneration

Dr. Travis' laboratory uses biochemical and genetic approaches to study the visual cycle and its role in retinal and macular degenerations. Vision in vertebrates is mediated by two types of light-sensitive cells: rods and cones. These cells contain light-detecting molecules called opsin pigments. Detection of a single light particle bleaches the opsin pigment. Restoring light sensitivity to a bleached opsin involves an enzymatic pathway called the visual cycle. Mutations in the genes for many proteins of the visual cycle cause inherited blinding diseases.



Edmund Tsui, MD

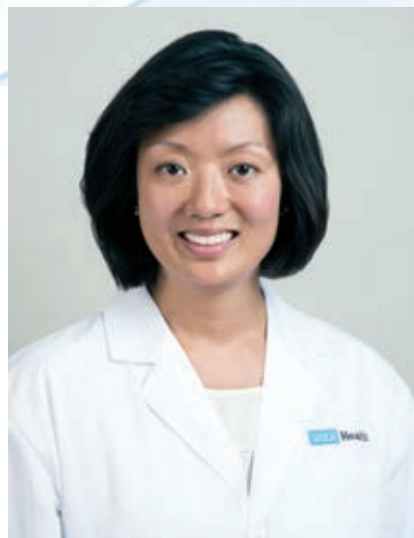
Assistant Professor of Ophthalmology

Uveitis and Ocular Inflammatory Diseases

Dr. Tsui specializes in the management of uveitis and ocular inflammatory diseases. He completed his medical training at Dartmouth Medical School followed by an ophthalmology residency at the New York University School of Medicine. He completed his fellowship in uveitis and ocular inflammatory disease at the Francis I. Proctor Foundation at the University of California, San Francisco.

Dr. Tsui's research focuses on the evaluation of imaging biomarkers to measure and quantify intraocular inflammation with optical coherence tomography and laser flare photometry. He serves on the Association for Research in Vision and Ophthalmology Continuing Medical Education Committee and the Advocacy and Outreach Committee. He is also a social media editor for the journals *Ophthalmology*, *Ophthalmology Retina*, and *Ophthalmology Glaucoma*.

Dr. Tsui provides care to patients at the Stein Eye Institute in Westwood.



Irena Tsui, MD

Associate Professor of Ophthalmology

Clinical Vitreoretinal Research

Dr. Tsui's clinical activities include adult and pediatric vitreoretinal diseases. Her research interests focus on retinopathy of prematurity and Zika virus eye abnormalities. Dr. Tsui teaches ophthalmology trainees and serves veterans at the Greater Los Angeles VA Healthcare System.

Dr. Tsui provides clinical care at the Stein Eye Institute in Westwood and the Doheny Eye Center UCLA–Arcadia.



Soheab Ugradar, MD

Health Sciences Clinical Instructor

Orbital and Ophthalmic Plastic Surgery

Dr. Ugradar came to Stein Eye from London, England, as an international fellow specializing in orbital and ophthalmic plastic surgery. He conducted his ophthalmology residency at Moorfields Eye Hospital, where he is still an honorary research fellow. Dr. Ugradar was ranked number one in the UK National Recruitment for Ophthalmology and is the recipient of numerous academic scholarship awards and honors for his research, including the Ophthalmology Research Gold Medal UK, the Bernice Brown Fellowship Award, the Young European researcher's award, and the Drapers' Company Prize for outstanding achievement at an undergraduate level. Dr. Ugradar regularly presents at international conferences and is a reviewer for multiple journals in the field of oculoplastics. His research has led to inventions that are currently under patent.

Dr. Ugradar sees patients at the Stein Eye Institute in Westwood, as well as the Stein Eye Center—Calabasas and the Stein Eye Center—Santa Monica.



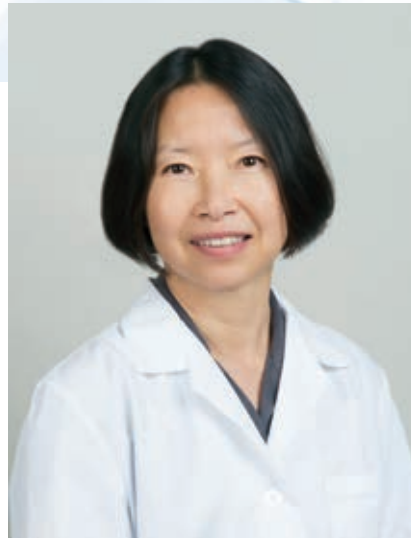
David S. Williams, PhD

Karl Kirchgessner Foundation Chair in Vision Science

Professor of Ophthalmology and Neurobiology

Cell Biology of the Retina and Inherited Retinal Disease

Dr. Williams' laboratory focuses on the cell biology of photoreceptor and retinal pigment epithelium cells. His group is especially interested in proteins that function in transport and compartmentalization within these cells. These proteins include those that underlie Usher syndrome and macular degeneration. Translational areas of his research involve gene therapy experiments aimed at preventing the blindness that ensues from Usher syndrome type 1B and studies on stem cell-derived RPE cells, which may be transplanted into retinas afflicted by macular degeneration.



Xian-Jie Yang, PhD

Ernest G. Herman Chair in Ophthalmology

Professor of Ophthalmology

Development and Disease Therapy of the Retina

Dr. Yang's research is focused on molecular mechanisms of retina development and repair. Her research approaches include using genetically engineered retinal degeneration models, recombinant virus mediated gene delivery, and human pluripotent stem cell-derived retinal neurons to simulate human diseases.

Dr. Yang's research laboratory is located at the Stein Eye Institute in Westwood. Her research activities are supported by NIH grants and institutional support.



Jie J. Zheng, PhD

Professor of Ophthalmology

Member of the Molecular Biology Institute

Member of the Jonsson Comprehensive Cancer Center

Member of the Brain Research Institute

Member of the California NanoSystems Institute

Therapeutic Development in Ophthalmology

Dr. Zheng's research is at the interface of biochemistry, computational biology, systems pharmacology, and drug discovery with an emphasis on therapeutic development in ophthalmology.

His laboratory is currently developing proteins and small molecules that can modulate signal transduction pathways, such as Wnt, Hedgehog, BMP, and Hippo pathways, in an effort to better understand the biological functions of these signaling pathways and to explore the therapeutic potential of these compounds and proteins. Aiming to establish new translational research within the scientific community at UCLA, Dr. Zheng's goal is to develop novel therapies for retinal degenerative diseases, glaucoma, and corneal disorders.



Steven A. Barnes, PhD

Professor of Ophthalmology

Ion Channel Function in Retinal Neurons

Dr. Barnes is a neurobiologist interested in how the retinal milieu in healthy and stressed states affects ion channels that mediate signaling within and between retinal neurons. The activity of ion channel proteins in retinal neurons governs how the retinal network optimizes image processing. Dr. Barnes seeks to define targets that could aid precision interventions in slowing or preventing vision loss in diseases such as glaucoma and macular degeneration. Important questions concern the limits that the bioenergetic environment puts on photoreceptor and ganglion cell sensitivity and signaling capabilities, as well as how early stages of this dysfunction are manifested.



Benjamin B. Bert, MD

Health Sciences Assistant Clinical Professor of Ophthalmology

Cornea-External Ocular Disease and Refractive Surgery

Dr. Bert provides comprehensive ophthalmic care and is a subspecialist in cornea/external disease. His areas of expertise include: dry eye/blepharitis, conjunctivitis, uveitis, acute corneal injury, and genetic corneal disorders, as well as cataract surgery with advanced intraocular lenses and refractive surgery.

Dr. Bert sees patients at the Doheny Eye Center UCLA offices in Orange County and Pasadena.



Vikas Chopra, MD

Charles Stewart Warren and Hildegard Warren Endowed Research Chair

Health Sciences Associate Clinical Professor of Ophthalmology

Medical Director, Doheny Eye Center UCLA–Pasadena

Glaucoma

Specializing in glaucoma, Dr. Chopra's research activities include advanced optic nerve and retinal nerve fiber layer imaging for early glaucoma detection, as well as development and validation of novel parameters for use in anterior segment optical coherence tomography devices as principal investigator at the Doheny Image Reading Center. Dr. Chopra also evaluates laser and surgical techniques for the management of glaucoma.

Dr. Chopra provides patient care at the Doheny Eye Center UCLA locations in Arcadia and Pasadena.



Brian A. Francis, MD, MS

Rupert and Gertrude I. Stieger
Vision Research Chair

Health Sciences Clinical Professor
of Ophthalmology

Director of Glaucoma Services,
Doheny Eye Centers UCLA

Medical Director, Doheny Eye Center
UCLA–Orange County

Glaucoma

Dr. Francis' clinical specialties are glaucoma and complex cataract. His research activities include: innovative glaucoma surgeries, minimally invasive glaucoma surgery, novel visual field techniques, glaucoma diagnostic and functional imaging, anterior segment imaging (ultrasound biomicroscopy and Fourier domain optical coherence tomography), and glaucoma laser surgery.

Dr. Francis sees patients at the Doheny Eye Center UCLA locations in Arcadia, Orange County, and Pasadena.



Kaustabh Ghosh, PhD

Associate Professor of Ophthalmology

Vascular Inflammation, Mechanobiology, Bioengineering, and Nanomedicine

Dr. Ghosh is an interdisciplinary researcher with expertise in vascular inflammation, mechanobiology, bioengineering, and nanomedicine.

He obtained his undergraduate degree in chemical engineering from the National Institute of Technology, India; his PhD in biomedical engineering from Stony Brook University, New York; and conducted his postdoctoral fellowship in the Vascular Biology Program at Boston Children's Hospital and Harvard Medical School.

Dr. Ghosh was associate professor of bioengineering at the University of California, Riverside (UCR), and participating faculty in the UCR Division of Biomedical Sciences, Stem Cell Center, and the Program in Cell, Molecular and Developmental Biology. The Ghosh Research Group at UCR focused on leveraging the principles of mechanobiology to examine and treat inflammation-mediated vascular degeneration associated with diabetic retinopathy and age-related macular degeneration.

Dr. Ghosh has active R01 grants from the National Eye Institute and was recently honored as Featured Scientist by the BrightFocus Foundation.



Gad Heilweil, MD

Health Sciences Assistant Clinical
Professor of Ophthalmology

Degenerative Retinal Disease

Dr. Heilweil's research activities include stem-cell therapy for degenerative retinal disease; retinal and uveal drug toxicity; and pharmacokinetics of intravitreal drugs.

In addition to providing patient care at the Stein Eye Institute in Westwood and the Stein Eye Center–Calabasas, Dr. Heilweil sees patients at the Doheny Eye Center UCLA locations in Arcadia, Orange County, and Pasadena.



Hugo Y. Hsu, MD

Health Sciences Clinical Professor
of Ophthalmology

Cornea and External Diseases

Dr. Hsu specializes in corneal infection and inflammation, corneal transplantation, anterior segment reconstruction, and cataract surgery. His research interests include corneal and ocular infections and ophthalmic antibiotics.

Dr. Hsu sees patients at the Doheny Eye Center UCLA locations in Arcadia, Orange County, and Pasadena.



Alex A. Huang, MD, PhD

Assistant Professor of Ophthalmology

Glaucoma

Dr. Huang's clinical specialties are in complex cataract and glaucoma surgery. His research is dedicated to understanding fluid flow in the eye to improve and customize glaucoma surgery. He also studies ocular changes that American astronauts experience in Space.

Dr. Huang provides clinical care at the Doheny Eye Center UCLA–Pasadena.



Michael S. Ip, MD

Gavin S. Herbert Endowed Chair for
Macular Degeneration

Professor of Ophthalmology

Service Chief, Doheny Retina Division

Medical Director,
Doheny Image Reading Center

Vitreoretinal Disease

Dr. Ip is the chief of the Vitreoretinal Surgery Service at the Doheny Eye Centers UCLA. His practice concentrates on the surgical management of complex retinal detachment, complications of diabetic retinopathy, macular holes, epiretinal membranes, and other vitreoretinal diseases amenable to surgical intervention.

Dr. Ip's research focuses on the design and conduct of clinical trials investigating treatments for diabetic retinopathy, age-related macular degeneration, and retinal venous occlusive disease. As medical director for the Doheny Image Reading Center, endpoint analysis for clinical trials is an additional area of research focus. In addition, Dr. Ip has served as the national director for numerous NIH-funded ophthalmic clinical trials.



John A. Irvine, MD

A. Ray Irvine, Jr., MD,
Chair in Clinical Ophthalmology

Health Sciences Clinical Professor
of Ophthalmology

Medical Director,
Doheny Eye Centers UCLA

Cornea and External Diseases

Dr. Irvine's clinical specialties are cornea and external diseases (eg, tumors, infections), anterior segment surgical consultation, and prosthetic replacement of the ocular surface ecosystem (PROSE). His research activities focus on ocular infections.

Dr. Irvine provides patient care at the Doheny Eye Center UCLA locations in Arcadia, Orange County, and Pasadena.



Ram Kannan, PhD

Adjunct Professor of Ophthalmology

Eye Physiology and Pathology

Dr. Kannan's research focuses on eye physiology and pathology. He currently investigates age-related macular degeneration, a leading cause of blindness in high-resource countries.



Monica R. Khitri, MD

Health Sciences Assistant Clinical
Professor of Ophthalmology

Pediatric Ophthalmic Diseases and Strabismus

Dr. Khitri specializes in the evaluation and treatment of pediatric ophthalmic diseases, including pediatric cataracts, nasolacrimal duct obstructions, amblyopia, and retinopathy of prematurity. She also treats and operates on strabismus in both children and adults.

She received her medical degree from the David Geffen School of Medicine at UCLA and completed her residency in ophthalmology at the Stein Eye Institute, followed by a fellowship in pediatric ophthalmology and strabismus at the Children's Hospital of Philadelphia.

Dr. Khitri is also a medical educator, researcher, and winner of over two dozen academic and professional awards, including the 2018 Faculty Teaching Award for the Stein Eye Institute ophthalmology residency program.

Dr. Khitri sees patients at the Doheny Eye Center UCLA locations in Arcadia, Pasadena, and Orange County. She also teaches residents and fellows at Harbor-UCLA Medical Center, where she is chief of the Pediatric Ophthalmology Service.



Olivia L. Lee, MD

Health Sciences Assistant Clinical Professor of Ophthalmology

Cornea/External Diseases and Uveitis; Corneal Imaging

Focusing on cornea/external diseases and uveitis, Dr. Lee's particular interest is in inflammatory ocular surface disease, corneal melts, pterygia, and anterior segment complications of uveitis. Dr. Lee performs all types of corneal transplants, as well as complex cataract surgery in uveitic eyes.

Dr. Lee's research interests are anterior segment imaging applied to the tear film, cornea, and conjunctiva. With her expertise in corneal imaging, a specular microscopy reading center was developed at the Doheny Image Reading Center, where she serves as an investigator.

Dr. Lee provides patient care at the Doheny Eye Center UCLA locations in Arcadia, Orange County, and Pasadena.



Kenneth L. Lu, MD

Health Sciences Assistant Clinical Professor of Ophthalmology

Medical Director,
Doheny Eye Center UCLA–Arcadia

Cataract and Refractive Surgery

Dr. Lu specializes in cataract and refractive surgery, and his research activities are focused in the same areas.

Dr. Lu sees patients at the Doheny Eye Center UCLA–Arcadia.



Peter A. Quiros, MD

Health Sciences Associate Clinical Professor of Ophthalmology

Neuro-Ophthalmology

A neuro-ophthalmologist, Dr. Quiros specializes in optic nerve disease, including optic neuritis and multiple sclerosis; double vision and adult strabismus; eye pain, headache, and idiopathic intracranial hypertension; Graves disease; orbital inflammatory syndromes; and stroke. Research includes idiopathic intracranial hypertension, headache, ocular myasthenia gravis, Graves disease, optic neuritis and multiple sclerosis, and visual rehabilitation after stroke. He was the principal investigator for the idiopathic intracranial hypertension treatment trial and is the principal investigator for the longitudinal idiopathic intracranial hypertension treatment trial. He is a member of the Neuro-Ophthalmology Researcher and Disease Investigators Consortium.

Dr. Quiros sees patients at the Doheny Eye Center UCLA locations in Orange County and Pasadena.



Daniel B. Rootman, MD, MS

Karen and Frank Dabby Endowed Chair
in Ophthalmology

Assistant Professor of Ophthalmology

Orbit and Ophthalmic Plastic Surgery

Dr. Rootman is an orbit and ophthalmic plastic surgery specialist with expertise in Graves disease, orbital surgery, orbital tumors, ptosis, lacrimal disorders, blepharoplasty, blepharospasm, Botox®, cosmetic dermal fillers, endoscopic eyebrow lift, eyelid surgery, eyelid tumors, and trauma. His research is developing and refining patient-centered outcome measures for surgical care; randomized clinical trials in surgery, including ptosis, Graves orbitopathy and lacrimal disease; health economics of eyelid and facial surgery; sociodemographics of facial trauma; physiology and pathobiology of ptosis; new approaches to surgery; and measurement and assessment in medical education.

Dr. Rootman sees patients at the Stein Eye Institute in Westwood and the Doheny Eye Center UCLA locations in Orange County and Pasadena.



SriniVas R. Sadda, MD

Stephen J. Ryan-Arnold and
Mabel Beckman Foundation
Endowed Presidential Chair

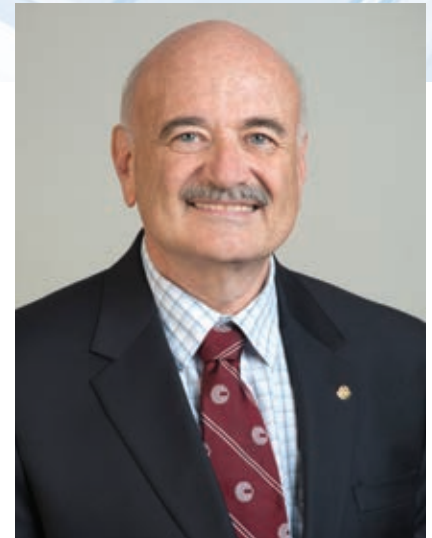
Professor of Ophthalmology

President and Chief Scientific Officer,
Doheny Eye Institute

Retinal and Macular Diseases

Dr. Sadda received his MD from Johns Hopkins University, where he also completed his ophthalmology residency and neuro-ophthalmology and medical retina fellowships. His clinical interests are macular degeneration and diabetic retinopathy and his research includes automated retinal image analysis and advanced retinal imaging technologies. He has more than 550 peer-reviewed publications and 20 book chapters, and has given over 450 presentations worldwide. He also serves as an editorial board member of *Ophthalmic Surgery, Lasers & Imaging, Retina, Graefe's, Ophthalmology Retina*, and *Ophthalmology*. He is also an editor of the 5th edition of the *Ryan's Retina* textbook.

Dr. Sadda provides clinical care at the Doheny Eye Center UCLA in Pasadena and Arcadia.



Alfredo A. Sadun, MD, PhD

Flora L. Thornton Endowed Chair
in Vision Research

Professor of Ophthalmology

Vice Chair, Doheny Eye Centers UCLA

Neuro-Ophthalmology

Dr. Sadun conducted his ophthalmology residency and fellowship in neuro-ophthalmology at Massachusetts Eye and Ear, Harvard Medical School. His clinical interests are diseases of the optic nerve, and more particularly, Leber hereditary optic neuropathy, toxic and nutritional optic neuropathies, and anterior and posterior ischemic optic neuropathies. He conducts research in these areas, as well as the assessment of the retina and optic nerve in Alzheimer disease and other neuro-degenerations. Dr. Sadun has authored approximately 400 peer-reviewed publications and 25 book chapters. His research activities focus on human visual neuro-anatomy; retinal ganglion cell degeneration and regeneration; and axon populations in the human optic nerve in development, aging, and disease. He has six clinical trials involving treatment of optic nerve diseases, and most particularly, mitochondrial impairments as a cause of optic nerve disease.

Dr. Sadun sees patients at the Doheny Eye Center UCLA—Pasadena.



Deming Sun, MD

Mary D. Allen Chair in Vision Research
Professor of Ophthalmology

Research Scientist

Dr. Sun is a researcher whose primary areas of investigation include uveitis, autoimmune diseases, optic neuritis, animal disease models, and T-cell biology.



James C. Tan, MD, PhD

Associate Professor of Ophthalmology

Glaucoma

Dr. Tan is a dual fellowship-trained glaucoma specialist. He treats the full spectrum of cataract and glaucoma conditions, ranging from mild to complex. His treatments and surgeries focus on safe and effective outcomes using advanced techniques. Dr. Tan has authored over 100 scientific papers, abstracts, book chapters, and books. His glaucoma research addresses advanced imaging, molecular pathogenesis, drug development, and surgical techniques. He has received awards from the National Institutes of Health, Research to Prevent Blindness, and the American Glaucoma Society.

Dr. Tan provides patient care at the Doheny Eye Center UCLA locations in Arcadia and Pasadena.



Yuhua Zhang, PhD

Associate Professor of Ophthalmology

Retinal Imaging

Dr. Zhang is an optical engineer and retinal imaging specialist, whose research encompasses state-of-the-art tools to study blinding eye disorders, including next-generation 3-D imaging technology for viewing the retina in patients with age-related macular degeneration at the cellular level.

His technology integrates adaptive optics, scanning laser ophthalmoscopy, and optical coherence tomography to study the vision-producing cells and tiniest blood vessels of the eye. Understanding their interplay will help answer questions about causes of vision loss, improve prognoses for patients, and lead to directed treatments to slow or prevent vision loss.

Stein Eye Institute Members Based at Other Sites

James W. Bisley, PhD

Professor of Neurobiology and Psychology

Member of the Brain Research Institute

Cognitive Processing of Visual Information

Dr. Bisley's research revolves around understanding the neural mechanisms underlying the cognitive processing of visual information. These cognitive processes include visual perception, visual memory, visual attention, and the visual guidance of eye movements. Recent work has focused on how the responses of neurons in the posterior parietal cortex and prefrontal cortex are involved in the allocation of visual attention and how they guide eye movements in goal-directed visual search.

Patrick T. Dowling, MD, MPH

Chair, UCLA Department of Family Medicine

The Kaiser Endowed Professor of Community Medicine

Health Care Policy and Access for Underserved Populations

Dr. Dowling has received grant funding for more than 30 years to link medical education to underserved neighborhoods thereby providing access to care. Further, he has worked with Dr. Anne Coleman and the Care Harbor program to provide free medical, dental, and eye care to 3,500 low-income families, and the medically indigent of Los Angeles.

Antoni Ribas, MD, PhD

Professor of Medicine, Surgery, and Molecular and Medical Pharmacology

Malignant Melanoma

Dr. Ribas is a physician-scientist who conducts laboratory and clinical research in malignant melanoma, focusing on gene engineered adoptive cell transfer (ACT) therapies, anti-CTLA4 antibodies, anti-PD-1 antibodies, and BRAF and MEK inhibitors.

Dario L. Ringach, PhD

Professor of Neurobiology and Psychology, Biomedical Engineering Program

Visual Perception and Neurophysiology

Dr. Ringach's research focuses on the relationship between eye movements and visual perception, as well as how motor planning and execution, such as reaching, grasping, navigating, and adjusting body posture, is influenced by visual information and impaired vision. In collaboration with a team of neurosurgeons at UCLA, Dr. Ringach's laboratory is also recording the brain activity of patients with epilepsy who are undergoing clinical evaluation for surgical treatment, shedding new light into the processes involved in object recognition and perception.

Professional Research Series

Christian Altenbach, PhD

Research Ophthalmologist

Structure and Function of Rhodopsin

The membrane protein rhodopsin is a critical first step in visual transduction, converting light energy into a chemical form in the photoreceptor cell of the eye. To understand this process on a detailed molecular level, Dr. Altenbach is using site-directed spin labeling and electron paramagnetic resonance spectroscopy to study the structure of rhodopsin in the absence of light, as well as the changes in structure caused by light.

Michael Bridges, PhD

Assistant Project Scientist

Paramagnetic Resonance Methodologies

Dr. Bridges' research in the laboratory of Dr. Wayne Hubbell is centered on the development and application of new pulsed electron paramagnetic resonance methodologies. Protein conformational dynamics and structural relaxation are his central focus with the goal of characterizing the timescales and motional amplitudes of functional activation.

Barry L. Burgess, BS

Research Specialist

Degenerative Retinal Disease Research

Mr. Burgess provides research support for the Photoreceptor/RPE Cell Biology Laboratory of Dr. David Williams. Research interests include production of differentiated RPE cells from human stem cell precursors and developing in vitro models of oxidative stress involved in degenerative retinal disease progression.

Doug Chung, PhD

Assistant Project Scientist

Corneal Endothelial Dystrophies

Dr. Chung's research focus is elucidating the mechanisms involved in the pathogenesis of inherited corneal endothelial dystrophies in an effort to develop novel gene-based therapeutic approaches.

Matthias Elgeti, PhD

Assistant Project Scientist

Development of Common Structure/Function Relationships of GPCR Activation Based on the Rhodopsin Model System

Dr. Elgeti's work focuses on the activation mechanisms of G protein coupled receptors (GPCRs), which are involved in many cellular signaling processes and represent major drug targets. He addresses his questions by comparing visual rhodopsin with other prototypical GPCRs using site-directed spin labeling (SDSL) and electron paramagnetic resonance (EPR) spectroscopy.

Rikard Frederiksen, PhD

Assistant Research Ophthalmologist

Adaptation

Dr. Frederiksen's main research interest is adaptation, specifically how the rods and cones in the retina adapt to different light intensities.

Rajendra Gangalum, PhD

Assistant Research Specialist

Function and Regulation of Small Heat Shock Protein α B-crystallin in Health and Disease

Dr. Gangalum's research seeks to gain understanding of the physiological function of α B-crystallin in the developing ocular lens and non-ocular tissues. α B-crystallin has been shown to associate with pathologies such as cataracts, cancer, age-related macular degeneration, and various neurodegenerative diseases.

Sheyla Gonzalez Garrido, PhD

Assistant Project Scientist

Limbal Stem Cells

Dr. Gonzalez's research aims to improve the ex vivo expansion of limbal epithelial stem cells (LSCs) by modulating Notch signaling in individuals suffering from limbal stem cell deficiency. The identification of niche factors could help to improve the in vitro production of LSCs for transplantation.

Sonia Guha, PhD

Assistant Project Scientist

Unraveling New Therapeutic Targets for Ocular Albinism

Dr. Guha studies genes that may be associated with the misrouting of retinal ganglion cell (RGC) axons at the brain's optic chiasm in individuals affected with X-linked ocular albinism type 1 (*OA1*). This disease is also characterized by hypopigmentation and presence of macromelanosomes in the RPE. How the reduced pigmentation of *OA1* RPE exerts its effects on the RGCs to influence the misrouting of their axons at the optic chiasm remains unsolved, and Dr. Guha's findings have the potential to unravel new therapeutic targets for *OA1*.

Joanna J. Kaylor, PhD

Associate Project Scientist

Visual Chromophore Regeneration in the Retina of the Eye

Dr. Kaylor has discovered that light plays a vital role in regeneration of visual chromophore in the retina. She recently identified a non-enzymatic process that generates visual pigment in photoreceptor membranes in light. Her research now focuses on the function of retinal G-protein coupled receptor (RGR).

Jacky M. K. Kwong, PhD

Research Ophthalmologist

Degeneration of Retinal Ganglion Cells and Neuroprotection

Dr. Kwong identifies novel neuroprotective and regenerative therapies for glaucoma that preserve and restore the nerve cells. He utilizes animal models related to optic nerve injury and glaucoma to understand the progression of retinal ganglion cell degeneration, and pharmacologic techniques and functional assessments to evaluate therapies.

Anna Matynia, PhD

Associate Research Ophthalmologist

Mechanisms Underlying Photoallodynia

Dr. Matynia's research investigates the mechanisms underlying photoallodynia, a condition in which normal levels of light produce or enhance ocular or headache pain. Using behavioral, molecular, genetic, and cellular approaches, the laboratory focuses on corneal, retinal, and central mechanisms from dry eye injury, achromatopsia, and migraine, respectively.

Alejandra Young, PhD

Assistant Project Scientist

Ocular Albinism

Dr. Young's research is focused on the study of the molecular mechanisms that cause ocular albinism type 1 (OA1), a disease caused by mutations in the *OA1* gene and characterized by hypopigmentation of the retinal pigment epithelium and abnormal crossing of the optic axons at the optic chiasm. In addition, she investigates the potential therapeutic use of engineered human embryonic stem cell-derived extracellular vesicles for the treatment of ocular albinism.

Professional Clinical Series

Melissa W. Chun, OD

Associate Clinical Professor
of Ophthalmology

Director of the UCLA
Vision Rehabilitation Center

Vision Rehabilitation

Dr. Chun's clinical research interests are in vision rehabilitation outcomes and training techniques that maximize visual function. She is a member of the Low Vision Research Network, a nationwide collaboration of low vision specialists for multicenter clinical studies. She is also involved in visual outcome measures for various clinical studies on macular degeneration.



Uday Devgan, MD, FACS, FRCS

Clinical Professor of Ophthalmology

Chief of Ophthalmology,
Olive View-UCLA Medical Center

Dr. Devgan is a cataract and refractive surgery specialist who has taught ophthalmic surgery in more than 50 countries. He has been actively involved in resident teaching for more than two decades, and he has mentored more than 180 residents over the course of thousands of ocular surgeries, including advising former residents after the culmination of their training. Passionate about teaching the next generation of ophthalmologists, Dr. Devgan publishes the cataract surgery teaching website CataractCoach.com, and he has been honored with the ophthalmology Faculty Teaching Award an unprecedented four times.



Rachel Feit-Leichman, MD

Associate Physician Diplomat

Cataract Surgery

Dr. Feit-Leichman divides her time between supervising residents and providing patient care at the Stein Eye Institute's Urgent Care Clinic, and teaching cataract surgery and overseeing residents at the ophthalmology clinic of the Harbor-UCLA Medical Center. Dr. Feit-Leichman is also active in striving to improve patient access to eye care in the greater Los Angeles County Healthcare System.

Batool Jafri, MD

Associate Physician Diplomat

Assistant Clinical Professor
of Ophthalmology

Cornea/External Disease/ Refractive Surgery

Dr. Jafri provides patient care as well as supervision to resident physicians and cornea fellows. Her focus is medical and surgical treatment of diseases of the cornea, external disease, and refractive conditions like near and far sightedness. Dr. Jafri provides general ophthalmic care and offers cataract surgery with premium intraocular lens implants at the Stein Eye Center—Santa Monica.

Phillip Le, MD, PhD

Associate Physician Diplomat

Retinal and Macular Diseases

Dr. Le is a comprehensive ophthalmologist who specializes in retinal and macular diseases. He sees patients at the Doheny Eye Center UCLA—Pasadena.

Mitra Nejad, MD

Associate Physician Diplomat

Clinical Instructor of Ophthalmology

Cataract and Refractive Surgery

Dr. Nejad practices comprehensive ophthalmology with a focus on cataract surgery and laser refractive surgery in the Stein Eye Institute's Cataract and Refractive Surgery Division. Dr. Nejad is an instructor and research mentor for UCLA medical students and supervises the UCLA residents in both cataract and laser refractive surgery. She is also a volunteer surgical instructor for resident cataract surgery at Harbor-UCLA Medical Center.

Tania Onclinx, MD

Associate Physician Diplomat

Clinical Instructor of Ophthalmology

Urgent Care and Clinical Supervision

Dr. Onclinx attends at the Urgent Care Walk-In service at the Stein Eye Institute, and she teaches resident physicians and medical students at the Stein Eye Institute during their subspecialty clinical rotation. She also provides clinical supervision to resident physicians at Ronald Reagan UCLA Medical Center and UCLA Medical Center, Santa Monica.

Susan S. Ransome, MD

Associate Physician Diplomat

Clinical Instructor of Ophthalmology

HIV and Diabetic Retinopathy

Dr. Ransome is participating in a clinical research study involving HIV-infected patients who have diabetes to see whether there is increased risk of development or progression of diabetic retinopathy when subjects are treated for abdominal lipodystrophy with Egrifta (tesamorelin).

Meryl L. Shapiro-Tuchin, MD

Associate Physician Diplomat

Assistant Clinical Professor
of Ophthalmology

Co-Director of the Ophthalmology
Inpatient Consultation Service

Comprehensive Ophthalmology

Dr. Shapiro-Tuchin provides clinical supervision to resident physicians. She functions as co-director of the Ophthalmology Inpatient Consultation Service, assisting resident physicians in their evaluation of inpatients admitted to the Ronald Reagan UCLA Medical Center and the UCLA Medical Center, Santa Monica.

Ronald J. Smith, MD

Associate Physician Diplomat

Associate Clinical Professor
of Ophthalmology

Objective Assessment of Surgical Technique and Training

Dr. Smith's research interest is the objective assessment of surgical technique and development of evidence-based surgical training for residents to improve patient care. In addition to teaching residents at the Veterans Affairs Greater Los Angeles Healthcare System and in the UCLA Microsurgery Laboratory, Dr. Smith provides cornea and comprehensive eye care to patients at the Stein Eye Center—Santa Monica.

Laura A. Syniuta, MD

Associate Physician Diplomat

Pediatric Ophthalmology and Strabismus

Dr. Syniuta completed her fellowship training in pediatric ophthalmology and strabismus at the Stein Eye Institute in 1999. With children's eye and learning disorders being her passion, she sees patients at the Stein Eye Center—Santa Monica and has staffed the UCLA Mobile Eye Clinic since 2011.

Federico G. Velez, MD

Associate Physician Diplomate

Strabismus and Childhood Eye Disorders

Dr. Velez's primary research interest is studying the mechanisms of congenital and acquired forms of strabismus. He has participated in the development of guidelines for preoperative assessment and surgical approaches to patients with convergent (esotropia), divergent (exotropia), and vertical forms of strabismus, and has developed new techniques to treat pediatric patients with eyelid abnormalities and cataracts.

Victoria Yom, MD

Associate Physician Diplomate

Cornea and External Diseases

Dr. Yom provides comprehensive ophthalmic care and is a subspecialist in cornea/external disease. Her areas of interest include: dry eye, blepharitis, conjunctivitis, uveitis, as well as cataract surgery with advanced intraocular lenses and corneal transplantation. Dr. Yom provides clinical care at the UCLA Stein Eye Institute in Westwood and the Doheny Eye Center UCLA locations in Arcadia and Pasadena.

LECTURER

Kathleen L. Boldy, VMD

Lecturer in Ophthalmology



Volunteer Faculty

CLINICAL PROFESSORS OF OPHTHALMOLOGY

J. Bronwyn Bateman, MD
Bruce B. Becker, MD, PC
Michael S. Berlin, MD
William P. Chen, MD
Michael Colvard, MD
Paul Deiter, MD (Senior Status)
Uday Devgan, MD, FACS, FRCS
Chief of Ophthalmology
Olive View-UCLA Medical Center
Donald Dickerson, MD (Senior Status)
Donald S. Fong, MD, MPH
Leland M. Garrison, MD
Ronald Gaster, MD
Thomas A. Hanscom, MD
Dale Heuer, MD
John D. Hofbauer, MD
Kenneth J. Hoffer, MD
C. Richard Hulquist, MD
Barry M. Kerman, MD
Roger A. Kohn, MD
Howard R. Krauss, MD
Benjamin C. Kwan, MD
Jeremy Levenson, MD (Senior Status)
Jonathan I. Macy, MD
Ezra Maguen, MD
Robert K. Maloney, MD
Samuel Masket, MD
Leon G. Partamian, MD
George Primbs, MD (Senior Status)
Yaron S. Rabinowitz, MD
George M. Rajacich, MD
Teresa O. Rosales, MD
Robert J. Schechter, MD (Senior Status)
Jerry Sebag, MD
Alan L. Shabo, MD
Norman Shorr, MD
Roger W. Sorenson, MD (Senior Status)

ASSOCIATE CLINICAL PROFESSORS OF OPHTHALMOLOGY

Gerrald Barron, MD (Senior Status)
Arnold Barton, MD (Senior Status)
Kevin J. Belville, MD
Louis Bernstein, MD (Senior Status)
W. Benton Boone, MD
Harvey Brown, MD
Andrew E. Choy, MD
Melissa W. Chun, OD
Peter J. Cornell, MD
Bernard Davidorf, MD (Senior Status)
Paul B. Donzis, MD
Robert E. Engstrom, MD
Kathryn M. Gardner, MD
Donald I. Goldstein, MD
Michael J. Groth, MD
Andrew Henrick, MD
Edwin P. Hill, MD
Jonathan A. Hoenig, MD
Richard H. Hoft, MD
David F. Kamin, MD
Stanley Kopelow, MD (Senior Status)
Joseph Lambert, MD (Senior Status)
Brian L. Lee, MD
Steven Leibowitz, MD
Gene Matzkin, MD (Senior Status)
Joan E. McFarland, MD
James McKinzie, MD (Senior Status)
Alan Norton, MD (Senior Status)
John F. Paschal, MD (Senior Status)
Firas Rahhal, MD
Michael Reynard, MD
David S. Robbin, MD
David E. Savar, MD
Timothy V. Scott, MD
Kayur Shah, MD
Albert Sheffer, MD
James D. Shuler, MD
Yossi Sidikaro, MD, PhD
Matthew Sloan, MD
Ronald J. Smith, MD
Alfred Solish, MD, MS
Kenneth D. Steinsapir, MD
Sadiqa Stelzner, MD, MA, FACS
William C. Stivelman, MD (Senior Status)
Hector L. Sulit, MD
Kamal A. Zakka, MD

ASSISTANT CLINICAL PROFESSORS OF OPHTHALMOLOGY

David H. Aizuss, MD
Malvin B. Anders, MD
Richard K. Apt, MD
Reginald G. Ariyasu, MD, PhD
Arthur A. Astorino, MD
Mark A. Baskin, MD
Arthur Benjamin, MD
Katherine L. Bergwerk, MD
Betsy E. Blechman, MD
Cynthia A. Boxrud, MD
Amarpreet S. Brar, MD
Almira W. Cann, MD, PhD
Arnett Carraby, MD
Vicki K. Chan, MD
Andrew M. Chang, MD
Candice Chen, MD
Thomas B-H. Choi, MD
Milton W. Chu, MD
Robert A. Clark, MD
Charles A. Cooper, MD
Hajir Dadgostar, MD
Yadavinder P. Dang, MD
Jonathan M. Davidorf, MD
John L. Davidson, MD
Sanford S. Davidson, MD
Louise Cooley Davis, MD
Farid Eghbali, OD
Troy R. Elander, MD
Naomi L. Ellenhorn, MD
Calvin T. Eng, MD
Doreen T. Fazio, MD
Sanford G. Feldman, MD
Laura E. Fox, MD
Ronald P. Gallemore, MD
George H. Garcia, MD
Leslie C. Garland, MD (Senior Status)
W. James Gealy, Jr., MD
Damien Goldberg, MD
Lawrence "Tim" Goodwin, MD
Lawrence H. Green, MD (Senior Status)
Richard Havunjian, MD
Man M. Singh Hayreh, MD
Matthew L. Hecht, MD
David A. Hollander, MD
Jeffrey Hong, MD
Catherine J. Hwang, MD, MPH

Morton P. Israel, MD
Steven J. Jacobson, MD
Batoool Jafri, MD
Aarchan Joshi, MD
Véronique H. Jotterand, MD
Jason Jun, MD
Ganesha Kandavel, MD
J. David Karlin, MD
David S. Katzin, MD
James F. Kleckner, MD (Senior Status)
Jerome R. Klein, MD
Craig H. Kliger, MD
Howard E. Lazerson, MD (Senior Status)
Robert T. Lin, MD
Joanne E. Low, MD
Bryant J. Lum, MD
Michael C. Lynch, MD
M. Polly McKinstry, MD
Ashish M. Mehta, MD
Kenneth J. Miller, MD (Senior Status)
David R. Milstein, MD
Ronald L. Morton, MD
Roger L. Novack, MD, PhD
David Paikal, MD
Alpa A.S. Patel, MD
James H. Peace, MD
Gilbert Perlman, MD (Senior Status)
Cheryl J. Powell, MD
John R. Privett, MD (Senior Status)
Laurence N. Roer, MD
Gerald Sanders, MD (Senior Status)
Aaron M. Savar, MD
Barry S. Seibel, MD

Meryl Shapiro-Tuchin, MD
David M. Shultz, MD
Eliot B. Siegel, MD
Lance M. Siegel, MD
John D. Slaney, MD
Robert J. Smyth, MD
Kenneth O. Sparks, MD
Mehryar "Ray" Taban, MD, FACS
Homayoun Tabandeh, MD
Robert C. Tarter, MD
Debra G. Tennen, MD
Teddy Y. Tong, MD
Sterling M. Trenberth, MD
(Senior Status)
Robert C. Tudor, MD (Senior Status)
Henry E. Ullman, MD
Tay J. Weinman, MD (Senior Status)
Irwin S. Weiss, MD (Senior Status)
Sidney J. Weiss, MD
Jon D. Wender, MD
Scott Whitcup, MD
David L. Williams, MD (Senior Status)
Jeffrey V. Winston, MD
David M. Winters, MD (Senior Status)
David L. Wirta, MD
Barry J. Wolstan, MD
Wilson C. Wu, MD, PhD
Michael C. Yang, MD
Patrick C. Yeh, MD
Richard H. Yook, MD (Senior Status)
Andrew Young, MD
Peter D. Zeegen, MD (Senior Status)

CLINICAL INSTRUCTORS IN OPHTHALMOLOGY

Michael L. Baker, OD
Eduardo Besser, MD
Maria Braun, MD
Stephen S. Bylsma, MD
Andrew Caster, MD
John J. Darin, MD (Senior Status)
Paul J. Dougherty, MD
Sean Dumars, MD
Daniel Ebroon, MD
Brad S. Elkins, MD
Nicole Fram, MD
Benjamin Graham, OD
Pamela Golchet, MD
Satvinder Gujral, MD
Lawrence M. Hopp, MD, MS
Anisha J. Judge, MD
Ganesha Kandavel, MD
Michael Kapamajian, MD
Douglas Katsev, MD
Rajesh Khanna, MD
Julie A. King, MD
Mark H. Kramar, MD
Daniel Krivoy, MD
Mark Landig, OD
Amir Marvasti, MD
Laurie C. McCall, MD
Mitra Nejad, MD
Jayantkumar Patel, MD
Susan S. Ransome, MD
Steven H. Rauchman, MD
Richard H. Roe, MD
Christian Sanfilippo, MD
Louis M. Savar, MD
Vivian Shibayama, OD
Mark Silverberg, MD
Abraham Soroudi, MD
Sharon N. Spooner-Dailey, MD
Laura A. Syniuta, MD
Rosalind Vo, MD
Mark Volpicelli, MD
Ye Elaine Wang, MD
Mathew Wang, MD
Peter H. Win, MD

Robert W. Baloh, MD

Professor of Neurology and Surgery
(Head and Neck)

Ferdinand V. Coroniti, PhD

Professor, Department of Physics
and Astronomy

David Eisenberg, DPhil

Investigator, Howard Hughes
Medical Institute

Paul D. Boyer Professor of Biochemistry
and Molecular Biology

Professor, Departments of Chemistry and
Biochemistry, and Biological Chemistry

Molecular Biology Institute

Alan M. Fogelman, MD

Castera Professor and Executive Chair
Department of Medicine

Alan D. Grinnell, PhD

Professor of Physiology and
Physiological Science

Director, Jerry Lewis Neuromuscular
Research Center

Director, Ahmanson Laboratory of
Neurobiology

C. Kumar Patel, PhD

Professor, Department of Physics
and Astronomy

Leonard H. Rome, PhD

Senior Associate Dean for Research
Professor of Biological Chemistry

Peter C. Whybrow, MD

Judson Braun Professor and
Executive Chair
Department of Psychiatry and
Biobehavioral Sciences

Director and Physician in Chief
Neuropsychiatric Institute

Dean Bok, PhD

Dolly Green Chair of Ophthalmology

Professor of Ophthalmology Emeritus

Distinguished Research Professor
of Neurobiology

Member of the Brain Research Institute

Richard Casey, MD

Health Sciences Clinical Professor
Emeritus

Gordon L. Fain, PhD

Distinguished Professor of the
Departments of Integrative Biology/
Physiology Emeritus

Professor of Ophthalmology
(Active Recall)

Michael O. Hall, PhD

Professor of Ophthalmology Emeritus

Founding Member of the
Stein Eye Institute

Robert S. Hepler, MD

Professor of Ophthalmology Emeritus

Founding Chief, Neuro-Ophthalmology
Division

Joseph Horwitz, PhD

Distinguished Professor of
Ophthalmology Emeritus (Active Recall)

Sherwin D. Isenberg, MD

Professor of Ophthalmology and
Pediatrics Emeritus

Allan E. Kreiger, MD

Professor of Ophthalmology Emeritus
(Active Recall)

Founding Chief, Retina Division

Ralph D. Levinson, MD

Health Sciences Clinical Professor of
Ophthalmology Emeritus



**Bradley R. Straatsma, MD,
JD**

Professor of Ophthalmology Emeritus

Founding Chair, Department
of Ophthalmology

Founding Director, Stein Eye Institute

Barry A. Weissman, OD, PhD

Professor of Ophthalmology Emeritus

Marc O. Yoshizumi, MD

Professor of Ophthalmology Emeritus

Residents

THIRD-YEAR RESIDENTS 2017–2020

Judd Cahoon, MD
 Tamara L. Lenis, MD, PhD (EyeSTAR)
 Cameron Pole, MD
 David T. Stark, MD, PhD (EyeSTAR)
 William Stoddard, MD
 Sandip Suresh, MD
 Qing Wang, MD, PhD (EyeSTAR)
 Madeline Yung, MD

SECOND-YEAR RESIDENTS 2018–2021

Michael DaSilva, MD
 Eliot Dow, MD
 Nicholas lafe, MD
 Jaffer Kattan, MD
 Anh Pham, MD, PhD (EyeSTAR)
 Ernest Puckett, MD
 Austin Woolley, MD
 Andrea Yonge, MD

FIRST-YEAR RESIDENTS 2019–2022

Abhinav Golla, MD, MPH
 Terry Hseih, MD, PhD
 Yoon Lee, MD
 Justin Park, MD
 Andres Parra, MD
 Ravin Sajnani, MD
 Lynn Shih, MD
 Claire Smith, MD, MFA

EyeSTAR Trainees

Adrian Au, MD
 Sarah Cheng, MD
 Erika Ellis, MD
 Tamara L. Lenis, MD
 Anh H. Pham, MD, PhD
 David Stark, MD, PhD
 Michel Sun, MD, PhD
 Qing Wang, MD, PhD

EyeMBA Trainee

Cory Hoferlin, MD

Fellows

Cornea/External Ocular Diseases and Refractive Surgery

Kishan Gupta, MD
 Andrew Lee, MD
 Arpine Barsegian, MD
 (Doheny Eye Centers UCLA)

Glaucoma

Victoria Tseng, MD, PhD
 Peter Dentone, MD
 (Doheny Eye Centers UCLA)
 Andrew Chen, MD

Medical Retina and Ophthalmic Genetics

Alexander Juhn, MD
 Tieu Vy Nguyen, MD

Neuro-Ophthalmology

None

Orbital and Ophthalmic Plastic Surgery

Liza Cohen, MD
 Justin Karlin, MD

Pathology (Eye)

None

Pediatric Ophthalmology and Strabismus

None

Uveitis and Inflammatory Eye Disease

None

Vitreoretinal Diseases and Surgery

Wei Gui, MD
 Kirk Hou, MD, PhD
 Niranjana Manoharan, MD
 Adam Weiner, MD

International Fellows

Cornea Research

Clémence Bonnet, MD
France
 Seyed Reza Ghaffari Dehkharghani, MD
Iran

Duangratn Niruthisard, MD
Thailand

Rutuja Unhale, MD
India

Comprehensive Ophthalmology/ Cataract

None

Glaucoma

Agustina de Gainza, MD
Argentina

Qiang Fu, MD
China

Golnoush Mahmoudi Nezhad, MD
Iran

Vahid Mohammadzadeh, MD
Iran

Diana Salazar Vega, MD
Colombia

Yifan Song, MD
China

Xiaobin Xie, MD
 (Doheny Eye Centers UCLA)
China

Medical Retina and Ophthalmic Genetics

Jeeyun Ahn, MD
Korea

Giulia Corradetti, MD
Italy

Assaf Hilely, MD
Israel

Neuro-Ophthalmology

Alvaro Mejia Vergara, MD
Mexico

Eduardo Nicolas Seleme Herrero, MD
Chile

Orbital and Ophthalmic Plastic Surgery

Alexandra Manta, MD
Romania

Pediatric Ophthalmology

Mohammad Aleassa, MD
Jordan
Sunghyuk Moon, MD
Korea
Federica Solanes, MD
Chile

Uveitis

None

Visual Physiology

None

Vitreoretinal Diseases and Surgery

Frederic Gunnemann, MD
Germany
Moritz Pettenkofer, MD
Germany

**Predocctoral
Research Fellows**

Kevin Eden
W. Blake Gilmore
Khristopher Griffis
Norianne Ingram
Margaux Kreitman
Eunice Ng
Joseph Park
Katie Pohl
Gabriel Pollock
Gabriela Sendek

**Postdoctoral
Research Fellows**

Abhishek Chadha, PhD
Arpita Dave, PhD
Aurelie Dos Santos, PhD
Antonio Escudero Paniagua, PhD
Matthew Gerber, PhD
Boyu Gu, PhD
Roni Hazim, PhD
Nan Hultgren, PhD
Somaye Jafari, PhD
Ala Morshedian, PhD
Joann Roberts, PhD
Maxime Ruiz, PhD
Simona Torriano, PhD
Ankita Umapathy, PhD
Tongzhou Xu, PhD
Chi Zhang, PhD
Wenlin Zhang, MD, PhD





Research
and Funding

Exploring the Optic Nerve

Stein/Doheny Research Group Leads the Way in Neuro-Ophthalmology Clinical Trials



Medical visualization showing an overhead view of the human head. The optic nerve, which connects the eyes to the brain, is highlighted in blue.

A research team of neuro-ophthalmologists in the UCLA Department of Ophthalmology is attracting considerable interest from pharmaceutical companies for the group's expertise in optic nerve diseases. Although the diseases studied by **Alfredo A. Sadun, MD, PhD**, and his colleagues are rare, they are increasingly viewed as models for both ophthalmologic and non-ophthalmologic conditions that affect much larger populations, but are more complex and difficult to study.

Dr. Sadun, Flora L. Thornton Endowed Chair in Vision Research at Doheny and vice chair of ophthalmology, Doheny Eye Center UCLA, is part of six formal clinical trials in neuro-ophthalmology, making the UCLA Department of Ophthalmology group by far the most active neuro-ophthalmology research group in the country. Neuro-ophthalmology is a subspecialty focusing on how the brain works with the eye and processes visual information, as well as how the eye sends messages to the brain. From the beginning of his career, Dr. Sadun has been a leader in the latter, also known as the afferent pathway.

In particular, Dr. Sadun and his colleagues have concentrated on the optic nerve—the cable connecting the eye and the brain, composed of 1.2 million fibers, each representing a different pixel point on the brain's vision map. "It turns out that there are obvious and not-so-obvious diseases of the optic nerve," Dr. Sadun explains. "The optic nerve can suffer any disease the brain can—such as tumors, stroke, and multiple sclerosis—but there are also diseases that affect the optic nerve specifically, which is what I find to be the most compelling." Intriguingly, these conditions almost all involve injury in one way or another to mitochondria—the powerhouse of cells. "In these diseases, if the mitochondria become sick, the canary in the coal mine is the optic nerve," Dr. Sadun says.

Dr. Sadun is especially interested in Leber's hereditary optic neuropathy, a disease that affects only the genes of the mitochondria and can cause sudden and permanent blindness, usually among individuals in their teens or 20s. The genetics for Leber's are simple—when the mother has a genetic defect in her mitochondria, it will always be passed down to her children; Leber's cannot be passed by the father. "The genetic defect is necessary but not sufficient for blindness," Dr. Sadun notes. "Something else triggers the disease and makes carriers go blind, suddenly and dramatically."

Leber's hereditary optic neuropathy is extremely rare—so rare, in fact, that Dr. Sadun sees many of the patients from throughout the United States who are suspected of having the disease. But the central involvement of mitochondria in the disease also makes it of considerable interest as it becomes increasingly apparent that mitochondria are important in other, more common conditions. These include vision diseases such as macular degeneration and glaucoma, as well as neurological diseases such as Alzheimer's and Parkinson's. With three decades of experience determining the natural history of a pure mitochondrial disease, Dr. Sadun's group has emerged as a focal point for clinical trials of optic nerve conditions such as Leber's that could also prove effective in treating the more common conditions.

Of the six ongoing clinical trials headed by the UCLA Department of Ophthalmology team, four involve Leber's hereditary optic neuropathy; the other two are for patients who experience a type of stroke of the optic nerve, properly termed acute nonarteritic anterior ischemic optic neuropathy (NAION), in which a loss of blood flow to the nerve causes sudden vision loss in one eye. Three of the trials for Leber's use gene therapy—injecting a virus that delivers a "good" version of

the mutated gene into the inner layer of the eye, where the cells that give birth to the optic nerve reside. The fourth Leber's-related study is the latest in a series of trials Dr. Sadun has led using small molecules—in this case, in the form of a topical ophthalmic solution—designed to allow the affected cells to compensate for the genetic error.

As recently as 15 years ago, there were no neuro-ophthalmology clinical trials in the United States, Dr. Sadun notes, because of the perceived small size of the market for neuro-ophthalmologic drugs. That was before it became apparent that because the optic nerve is part of the brain, clinical trials involving diseases of the optic nerve could serve as testing grounds for more complex neurological diseases that affect far more people.

Dr. Sadun made that point early in his career with a study he published in the mid-1980s showing that the optic nerve is also damaged in Alzheimer's disease. "The reason I chose that approach was that I figured one quick measurement of visual function such as color vision was substantially easier than subjecting people to a few days of psychometric examinations," Dr. Sadun explains. "We have much better ways of measuring signs and symptoms for the eye."

Ever since, he has consistently made the case that the accessibility of the optic nerve—through both vision testing and the ability to image the eye as a transparent organ—renders it a powerful model for gaining insight into a host of neurological diseases. "There is much less 'noise' in studies of the optic nerve than there would be for something like Alzheimer's disease, where there are so many variations that could potential influence the results," Dr. Sadun says. "Any disease of the brain also affects the optic nerve, but whereas the brain is diffuse, complicated, and hard to measure, in the optic nerve these diseases are very precise.

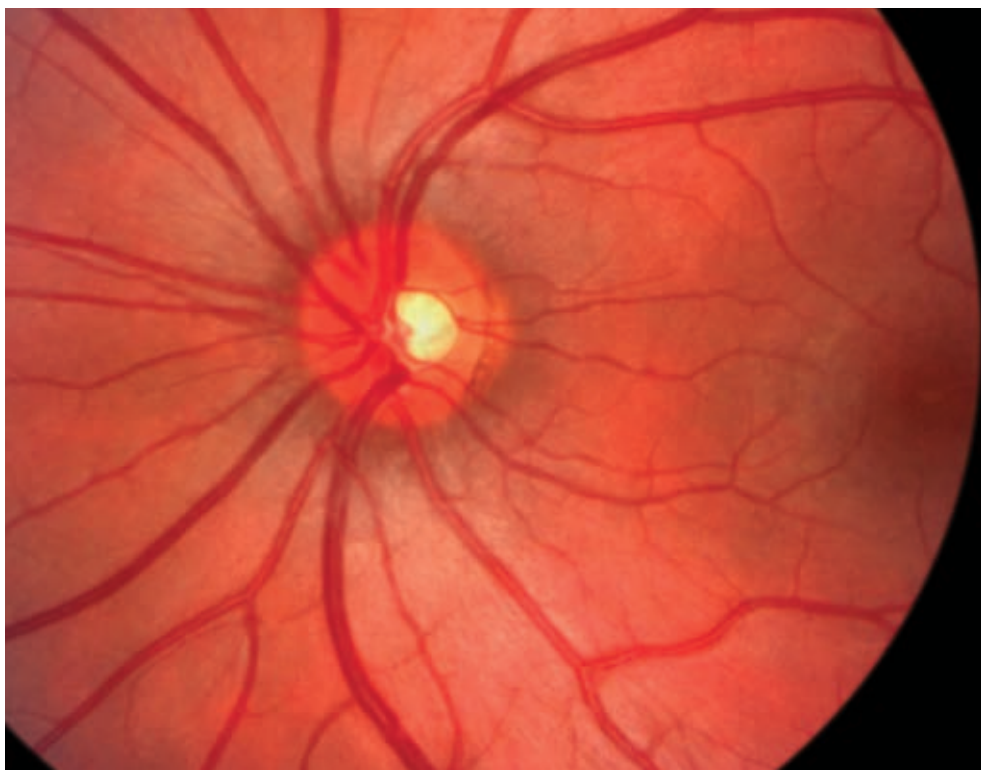
We know the starting point is 1.2 million fibers, we know their size and location, and any damage can be assessed accurately through a variety of tests. In addition, when we have a patient complaining of a black spot or blurred vision, that's much more specific than when an Alzheimer's patient complains of not being able to think right."

Using the optic nerve as a model for neurological studies, results in less "noise," which means it takes fewer patients to prove the efficacy of a treatment, Dr. Sadun notes. The hope is that once that proof of principle is established for patients with optic nerve conditions, the same therapy could be tested in patients with the more common neurological diseases, using the already established information about dosing and side effects. That potential to benefit large numbers of patients is what makes the neuro-ophthalmology research at the UCLA Department of Ophthalmology of such great interest to the pharmaceutical industry.

"The optic nerve can suffer any disease the brain can—such as tumors, stroke, and multiple sclerosis—but there are also diseases that affect the optic nerve specifically, which is what I find to be the most compelling."

ALFREDO A. SADUN, MD, PHD

Vice Chair of Ophthalmology,
Doheny Eye Center UCLA



Research Contracts and Grants

Vision-Science Research Active Funding

ADMINISTERED BY THE
STEIN EYE INSTITUTE

Faculty

Suraj P. Bhat, PhD

Childhood Cataractogenesis:
Heterogeneity of Gene Expression
National Eye Institute
Duration: 1/1/15–12/31/19
\$329,180

Ava K. Bittner, OD, PhD

CARE Study: Community Access
Through Remote Eyesight
Administration for Community Living
Sub-award from
New England College of Optometry
Duration: 9/30/19–9/29/22
\$75,764

Joseph Caprioli, MD

Clinical Research Program in Glaucoma
Simms-Mann Family Foundation
Duration: 7/1/14–6/30/20
\$50,000

Anne L. Coleman, MD, PhD

2019 Grant Application to the
Nicholas Endowment for the
UCLA Mobile Eye Clinic (UMEC)
The Nicholas Endowment
Duration: 12/5/19–12/31/20
\$75,000

Joseph L. Demer, MD, PhD

Biomechanical Analysis in
Strabismus Surgery
National Eye Institute
Duration: 5/1/20–4/30/24
\$405,075

Data-Driven Biomechanical Simulation
of Eye Movement and Strabismus
National Eye Institute
Sub-award from
George Mason University
Duration: 6/1/19–5/30/23
\$100,575

Sophie X. Deng, MD, PhD

Development of Stem Cell-Based
Therapies for Limbal Stem Cell
Deficiency
National Eye Institute
Duration: 2/1/19–1/31/24
\$250,000

Development of Small-Molecule
Wnt Mimetics for Corneal Epithelial
Cell Regeneration
National Eye Institute
(Multi-PI with Jie J. Zheng, PhD)
Duration: 9/30/18–8/31/22
\$318,703

Gordon L. Fain, PhD

Physiology of Photoreceptors
National Eye Institute
Duration: 8/1/17–7/31/21
\$250,000

Visual Integration in the Retina of the
Sea Lamprey *Petromyzon Marinus*
Great Lakes Fishery Commission
Duration: 1/1/19–12/31/21
\$73,562

Debora B. Farber, PhD, DPhhc

Patient-Derived iPSCs, CRISPR/Cas
and RPE-Derived Exosomes for the
Treatment of Ocular Albinism
Vision of Children
Duration: 6/1/16–12/31/20
\$163,783

Gary N. Holland, MD

Systemic Immunosuppressive Therapy
for Eye Diseases
Cohort Study (SITE)
University of Pittsburgh
Duration: 3/2/16–3/2/21
Non-monetary Contract

Systemic Immunosuppressive Therapy
for Eye Disease
(Cancer Surveillance and Research
Branch/CCR)
University of Pittsburgh
Duration: 3/2/16–3/2/21
Non-monetary Contract

Measuring Vision-Related Function and
Quality of Life in Children with Uveitis
Children's Hospital and Regional
Medical Center
Duration: 5/15/18–5/14/20
\$2,778

Joseph Horwitz, PhD

Analysis of Lens Crystallins and
Cataractous Mutants at
High Hydrostatic Pressure
National Eye Institute
Duration: 4/1/14–3/31/20
\$150,000

Alex A. Huang, MD, PhD

Discovery and Characterization of
Anterior Sclera Pathology in Glaucoma
National Eye Institute
Duration: 9/30/14–9/29/19
\$203,981

Research to Prevent Blindness
Career Development Award
Research to Prevent Blindness, Inc.
Duration: 1/1/16–6/30/20
\$75,000

Wayne L. Hubbell, PhD

Molecular Basis of Membrane Excitation
National Eye Institute
Duration: 5/1/15–4/30/20
\$313,480

Jean-Pierre Hubschman, MD

Vitreoretinal Surgery via Robotic
Microsurgical System with Image
Guidance, Force Feedback, Virtual
Fixture, and Augmented Reality
National Eye Institute
Duration: 2/1/19–1/31/24
\$286,083

Intraocular Robotic Interventional and
Surgical System for Automated
Cataract Surgery
National Eye Institute
Duration: 9/30/19–8/31/23
\$393,944

A Natural History of Macular
(Parafoveal) Telangiectasia
Lowy Medical Research Institute
Duration: 9/1/05–12/31/21
\$72,650

Michael Ip, MD

The SCORE 2 Long-Term Follow-Up
(SCORE2 LTF)
National Eye Institute
Sub-award from
Pennsylvania State University
Duration: 4/1/19–3/31/21
\$29,579

Bartly J. Mondino, MD

RPB Unrestricted Grant
Research to Prevent Blindness, Inc.
Duration: 1/1/12–12/31/20
\$115,000

Kouros Nouri-Mahdavi, MD

Detection of Disease Progression in
Advanced Glaucoma
National Eye Institute
Duration: 3/1/20–2/28/25
\$261,500

Stacy L. Pineles, MD

Physical Injuries in Patients with
Pediatric Eye Diseases
National Eye Institute
Duration: 1/1/19–12/31/20
\$125,000

RPB Walt and Lilly Disney Award for
Amblyopia Research
Research to Prevent Blindness, Inc.
Duration: 7/1/14–12/31/19
\$100,000

Roxana Radu, MD

The Role of Complement in Recessive
Stargardt Disease
National Eye Institute
Duration: 8/1/15–7/31/21
\$250,000

Identification of Bisretinoid Levels in
ABca4^{-/-} Mouse Retinas
NightstaRx
Duration: 9/26/18–9/25/19
\$25,641

Analysis of Bisretinoids in the
Abca4^{-/-} Mouse Eyes
Biogen Research Corporation
Duration: 2/25/20–8/25/20
\$32,525

Alapakkam P. Sampath, PhD

Molecular Basis of Photoreceptor Wiring
National Eye Institute
(Multi-PI award with Scripps Clinic and
Research Foundation)
Duration: 5/1/17–4/30/22
\$90,760

Analyses of Retinal Circuits After
Rod Rescue in a Mouse Model of
Human Blindness
National Eye Institute
(Multi-PI award with University of
Southern California)
Duration: 9/1/16–8/31/21
\$95,673

Vision Science Training Program
National Eye Institute
Duration: 9/1/17–8/31/22
\$238,263

Molecular Mechanisms of
Photoreceptor Adaptation
National Eye Institute
Duration: 2/1/19–1/31/24
\$267,551

David Sarraf, MD

In Vivo Ultrastructure of
Chorioretinal Disease
National Eye Institute
Sub-award from Doheny Eye Institute
\$16,515

Gabriel H. Travis, MD

Instrumentation Grant for Stein Eye
Investigators
Bruce Ford and Anne Smith Bundy
Foundation
Duration: 8/16/11–8/15/20
\$100,000

Mechanisms for Light-Driven
Chromophore Synthesis by
Müller Cells to Regenerate Cone Opsin
and Maintain Cone Sensitivity
National Eye Institute
Duration: 1/1/20–12/31/24
\$276,107

Irena Tsui, MD

Retinal and Choroidal Vasculature
Changes in Healthy and
High-Risk Pregnancies
National Eye Institute
Duration: 2/1/20–1/31/22
\$165,063

David S. Williams, PhD

The Photoreceptor Cilium
National Eye Institute
Duration: 5/1/13–4/30/20
\$250,000

Photoreceptor Disk Membrane
Morphogenesis
National Eye Institute
Sub-award from
University of California, Santa Barbara
Duration: 4/1/15–3/31/20
\$124,797

Stein Eye Institute Core Grant for
Vision Research
National Eye Institute
Duration: 9/1/15–6/30/20
\$500,000

Gene Editing of the Usher 1B Gene
Foundation Fighting Blindness
Duration: 6/1/17–5/31/20
\$100,000

Cellular Mechanisms of Disease in
Patient-Specific RPE Cells
Foundation Fighting Blindness
Sub-award from
University of California, San Francisco
Duration: 6/1/17–5/31/20
\$164,930

RPE Cell Biology, Aging, and Disease
National Eye Institute
Duration: 9/1/17–5/31/22
\$296,846

Test of Readthrough Drug Treatment for
UGA PTC in the Usher 1B Gene
Foundation Fighting Blindness
Duration: 1/1/19–12/31/21
\$180,615

Exploring the Relationship of
Water Flow Across the RPE and
Mutant-MYO7A/Usher 1B
National Eye Institute
Duration: 1/1/20–12/31/21
\$150,000

Understanding Mitochondrial Defects in
Choroideremia RPE
Choroideremia Research Foundation
Duration: 2/1/20–1/31/21
\$61,079

Xian-Jie Yang, PhD

Neuroprotection Mechanism for
Photoreceptors
National Eye Institute
Duration: 5/1/16–4/30/21
\$366,660

Jie Zheng, PhD

Development of Small-Molecule
Wnt Mimetics for Corneal Epithelial
Cell Regeneration
National Eye Institute (Multi-PI with
Sophie Deng, MD, PhD)
Duration: 9/30/18–8/31/22
\$318,703

Professional Research Series

Doug Chung, PhD

Elucidating the Role of SLC4A11 in Congenital Hereditary Endothelial Dystrophy
Knights Templar Eye Foundation, Inc.
Duration: 7/1/19–12/31/20
\$65,000

Sonia Guha, PhD

Role of Doublecortin in Axonal Misrouting in OA1 -/- Mice
Vision of Children
Duration: 7/1/14–11/12/20
\$159,848

Anna Matynia, PhD

Targeted Hsp70 as a Therapeutic for Central Retinal Artery Occlusion
Rubicon Biotechnology
Duration: 9/30/17–9/30/19
\$40,400

Molecular, Cellular, Anatomical, and Neurobiological Investigation of Melanopsin-Expressing Corneal Innervation, and Its Role in Pain and Photophobia
National Eye Institute
Duration: 2/1/20–12/31/24
\$250,000

Microglia Function in Pathogenesis of Retinal Hemangioblastomas Associated with Von Hippel-Lindau Disease
VHL Alliance
Duration: 11/15/19–11/14/22
\$50,000

Alejandra Young, PhD

Identification of the OA1 Molecule Partners Critical for Axonal Guidance of RGCs Growth Cones
(Proposal Continuation of Grant #20142326)
Vision of Children
Duration: 11/1/13–11/30/20
\$215,566

Vision-Science Research Active Funding

ADMINISTERED BY THE DOHENY EYE INSTITUTE

Steven Barnes, PhD

Functional Resilience of Retinal Ganglion Cells During Mitochondrial Dysfunction
Glaucoma Research Foundation
Shaffer Grant
Duration: 3/1/19–2/29/20
\$50,000

Alex A. Huang, MD, PhD

Glaukos Research (Outflowing Imaging)
Glaukos Corporation
Duration: 10/27/15–11/30/19
\$10,000/two years

Dynamic Variable Aqueous Humor Outflow and Glaucoma Therapies in the Human Eye
National Eye Institute
Duration: 5/1/20–4/30/25
\$341,397

Investigating Subconjunctival Lymphatics for the Treatment of Glaucoma and Eye Disorders
Glaucoma Research Foundation
Shaffer Grant
Duration: 2/1/20–1/31/21
\$50,000

Ram Kannan, PhD

Novel Mechanism of Subretinal Fibrosis in Age-Related Macular Degeneration
National Eye Institute
Duration: 5/1/20–4/30/24
\$304,708

Srinivas R. Sadda, MD

Advanced Image Analysis Tools for Diabetic Retinopathy Telemedicine Application
Eyenuk, Inc.
Sub-award on NEI Grant SB1EY027241
Duration: 9/30/16–7/31/19
\$19,108

Automated Image-based Biomarker Computation Tools for Diabetic Retinopathy
Eyenuk, Inc.
Sub-award on NEI Grant TR000377
Duration: 7/1/18–6/30/20
\$84,010

Functionally Validated Structural Endpoints for Early AMD
University of Alabama at Birmingham
Sub-award on NEI Grant EY029595
Duration: 5/1/19–2/29/24
\$125,203

Discovery and Validation of AMD Biomarkers for Progression Using Deep Learning
National Eye Institute
Duration: 8/1/19–7/31/21
\$150,000

Artificial Intelligence for Assessment of Stargardt Macular Atrophy
National Eye Institute
Duration: 1/1/20–12/31/21
\$150,000

Automated End-to-End Retinal Screening System with Robotic Image Capture and Deep Learning
Eyenuk, Inc.
Sub-award on NEI Grant EY029652
Duration: 9/30/19–9/29/20
\$9,554

Alfredo A. Sadun, MD, PhD

Post-mortem Analysis of LHON Patient Who Had Received AAV-2 w/ ND4 Intravitreal Injection in One Eye
GenSight
Duration: 7/20/18–10/31/19
\$12,739

Deming Sun, MD

Role of IL-17+ Autoreactive T Cells in Experimental Autoimmune Uveitis (EAU)
National Eye Institute
Duration: 1/1/20–12/31/23
\$300,608

Determination of the Role of Adenosine Deaminase on Two Major Pathogenic (IFN- γ + and IL-17+) T Cells Responses
Leadiant Biosciences
Duration: 1/1/20–12/31/20
\$51,400

James C. Tan, MD, PhD

Fibrillin-1 and TGFB2 Abnormality Models PAOG
Pathogenesis and Treatment
National Eye Institute
Duration: 9/30/17–11/30/19
\$250,000

Contractile Modulation of Distal Aqueous Humor Drainage
National Eye Institute
Duration: 6/1/18–11/30/19
\$125,000

Yuhua Zhang, PhD
In Vivo Ultrastructure of
Chorioretinal Disease
National Eye Institute
Duration: 1/1/19–12/31/20
\$239,899

Clinical Research Active Funding

ADMINISTERED BY UCLA

Anthony J. Aldave, MD
Vision Restoration with a
Collagen Crosslinked Boston
Keratoprosthesis Unit
Department of Defense
Sub-award from
Massachusetts Eye and Ear Infirmary
Duration: 9/1/15–8/31/20
\$81,011

Genetic Factors in Keratoconus
Cedars-Sinai Medical Center;
funded by National Eye Institute
Duration: 12/1/14–2/28/19
\$10,800

Benjamin B. Bert, MD
Treatment of Ocular Discomfort in
Glaucoma Patients Using Multiple
Topical Medications
Novartis Pharmaceuticals
Duration: 3/31/20–12/31/21
\$83,553

Ava K. Bittner, OD, PhD
Beacon Sensors and Telerehabilitation
to Assess and Improve Use of Devices
for Visual Functioning (BeST-AID)
National Eye Institute
Duration: 2/1/19–1/31/21
\$276,090

Development of a Behavioral
Intervention with Socially Assistive
Robots to Enhance Magnification
Device Use for Reading
National Eye Institute
Duration: 2/1/20–1/31/22
\$169,327

Beacon Sensors and Telerehabilitation
to Assess and Improve Use of Devices
for Visual Functioning (BeST-AID)
American Academy of Optometry
Duration: 3/1/19–2/28/21
\$100,000

Joseph Caprioli, MD
Protocol INN-005
InnFocus, Inc
Duration: 2/4/16–11/13/19
\$435,556

INN-005-EXT
InnFocus, Inc
Duration: 4/29/20–4/28/25
\$63,388

Sophie X. Deng, MD, PhD
Safety and Feasibility of Cultivated
Autologous Limbal Stem Cells for
Limbal Stem Cell Deficiency
California Institute for Regenerative
Medicine (CIRM)
Duration: 12/1/19–11/20/23
\$1,400,000

K-321-201
Kowa Research Institute, Inc.
Duration: 6/17/20–6/17/24
\$1,341,428

Brian A. Francis, MD, MS
MED-MA-EYE-0635
Allergan Sales, LLC
Duration: 4/1/20–12/31/20
\$37,350

Simon Fung, MD
Structural and Functional Changes of
Corneal Innervation After Treatment
with Cenegermin
Dompé S.p.A.
Duration: 3/12/20–1/1/25
\$287,946

Michael B. Gorin, MD, PhD
Xolaris
NightstaRx
Duration: 9/28/17–8/31/19
(pending renewal)
\$135,770

NIGHT
NightstaRx
Duration: 6/18/15–3/26/20
\$120,123

ALK-001
Alkeus Pharmaceuticals
Duration: 5/23/16–8/22/20
\$46,070

ARIS
Greater Baltimore Medical Center;
funded by National Eye Institute
Duration: 5/1/19–6/1/24
\$80,000

STAR
NightstaRx
Duration: 6/13/18–6/13/21
\$96,333

Gary N. Holland, MD
META-MUST
National Eye Institute
Sub-award from
Johns Hopkins University
Duration: 9/30/14–1/31/21
\$39,180

ZEDS
New York University
Duration: 4/3/17–7/31/21
\$345,545

ADalimumab Vs. Conventional
ImmunoSupprESSION for Uveitis
(ADVISE) Trial
National Eye Institute
Sub-award from
Johns Hopkins University
Duration: 9/30/18–8/31/23
\$23,785

Predicting Uveitis Onset in Children with
Juvenile Idiopathic Arthritis
National Eye Institute
Sub-award from
Cincinnati Children's Hospital
Duration: 9/20/19–6/30/20
\$98,280

Jean-Pierre Hubschman, MD
Extension Study of NT-501 Ciliary
Neurotrophic Factor (CNTF) Implant for
Macular Telangiectasia (MacTel)
Lowy Medical Research Institute
Duration: 8/14/17–6/30/22
\$53,145

A Phase 3 Multicenter Randomized,
Sham-Controlled Study to Determine
the Safety and Efficacy of Renexus® in
Macular Telangiectasia Type 2
Lowy Medical Research Institute
Duration: 2/26/18–12/31/21
\$290,150

Michael Ip, MD
APL2-304
Apellis Pharmaceuticals
Duration: 5/9/19–5/8/23
\$420,429

RHINE
Genentech, Inc.
Duration: 3/5/19–3/5/23
\$470,911

AR-1105-CS201
Aerie Pharmaceuticals Inc.
Duration: 5/16/19–5/15/21
\$70,607

AR13503
Aerie Pharmaceuticals Inc.
Duration: 7/24/19–7/23/23
\$1,389,358

GR40550
Genentech Foundation
Duration: 1/17/20–1/16/24
\$1,427,007

OPT1039 Clinical Evaluation of the
P200xe Indy
Optos PLC
Duration: 4/17/20–4/16/24
\$238,060

John A. Irvine

CAM-101-01
Cambium Medical Technologies, LLC
Duration: 7/10/19–7/9/23
\$74,572

Rustum Karanjia, MD, PhD

Photopic Negative Response (PhNR)
as an Objective Outcome Measure in
Mitochondrial Disease
United Mitochondrial Disease
Foundation
Duration: 12/1/17–11/20/20
\$100,000

Olivia L. Lee, MD

OCU-300
Ocugen, Inc.
Duration: 1/4/19–1/4/22
\$342,513

Colin A. McCannel, MD

GR40548
Genentech, Inc.
Duration: 11/15/18–11/15/21
\$455,806

GR40549
Genentech, Inc.
Duration: 11/26/18–1/26/22
\$453,341

GR40550
Genentech, Inc.
Duration: 1/13/20–1/12/24
\$1,427,007

ADX-2191-PVR-001
Aldeyra Therapeutics, Inc.
Duration: 2/14/20–2/13/24
\$108,913

Tara A. McCannel, MD, PhD

AU-011-101
Aura Biosciences Inc.
Duration: 6/15/20–1/2/30
\$107,566

Kouros Nouri-Mahdavi, MD

High-Rate High-Resolution Chip-Scale
Ranging: A Paradigm Shift in Optical
Coherence Tomography
Alcon Laboratories, Inc.
Duration: 7/1/19–6/30/21

Detection of Disease Progression in
Advanced Glaucoma
National Eye Institute
Duration: 3/1/20–2/28/21
\$401,500

Stacy L. Pineles, MD

Integrating Perceptual Learning
Approaches into Effective Therapies for
Low Vision
National Eye Institute
Sub-award from
University of California Riverside
Duration: 9/1/13–7/31/19
\$166,874

Pediatric Eye Disease Investigator
Group (PEDIG)
Jaeb Center for Health Research
Duration: 1/1/19–12/31/23
\$28,499

Luminopia VR Device Amblyopia Study
Luminopia, Inc.
Duration: 11/28/18–11/28/21
\$52,103

Peter A. Quiros, MD

QRK207
Quark Pharmaceuticals, Inc.
Duration: 8/4/16–3/26/20
\$121,227

RGN-ON-002

Regenera Pharma, Ltd.
Duration: 1/2/19–1/2/22
\$232,016

Daniel B. Rootman, MD

RVT-1401-2001
Immunovant, Inc.
Duration: 5/14/19–5/13/23
\$292,758

SriniVas R. Sadda, MD

BIRC-01
Boston Image Reading Center
Duration: 2/1/18–2/28/21
\$42,520

ARIS

Greater Baltimore Medical Center;
funded by National Eye Institute
Duration: 5/1/19–6/1/24
\$80,000

Alfredo A. Sadun, MD, PhD

EPI-743
Edison Pharmaceuticals, Inc.
Duration: 10/17/14–9/24/20
\$55,860

SPILH-2010

Stealth BioTherapeutics, Inc.
Duration: 2/12/16–8/25/19
\$415,909

Reality LHON Registry
GenSight Biologics
Duration: 1/16/18–10/31/20
\$45,810

GS-LHON-CLIN-06

GenSight Biologics
Duration: 1/3/18–1/3/21
\$474,754

GS-LHON-CLIN-05

GenSight Biologics
Duration: 8/23/18–8/23/21
\$214,091

David Sarraf, MD

The IAI-OCTA Study
Regeneron Pharmaceuticals, Inc.
Duration: 3/28/17–5/26/21
\$211,609

GR40973

Genentech, Inc.
Duration: 8/2/19–10/31/22
\$207,624

In Vivo Ultrastructure of
Chorioretinal Disease
National Eye Institute
Sub-award from
University of California Riverside
Duration: 1/3/19–12/31/20
\$25,763

Steve D. Schwartz, MD

MA09-hRPE-001
Astellas Institute for
Regenerative Medicine
Duration: 4/5/11–5/7/20
\$734,750

ACT MA09-hRPE 001(SMD) LTFU
Astellas Institute for
Regenerative Medicine
Duration: 4/5/11–5/7/20
\$661,734

7317-CL-0003

Astellas Institute for Regenerative
Medicine
Duration: 8/22/18–8/22/21
\$680,530

OPH2005

Ophthotech Corporation
Duration: 4/10/18–4/10/21
\$305,751

Edmund Tsui, MD

Kowa FM-700

Kowa Research Institute, Inc.

Duration: 2/1/20–2/1/22

\$249,600

Discovery of Quantitative Imaging

Biomarkers in Pediatric Anterior Uveitis

Knights Templar Eye Foundation, Inc.

Duration: 7/1/20–6/30/21

\$70,000

Irena Tsui, MD

Retinal and Choroidal Vasculature

Changes in Healthy and High-Risk

Pregnancies

National Eye Institute

Duration: 2/1/20–1/31/21

\$249,063



Clinical Research Studies

Clinical Trials

RECRUITING IN FISCAL YEAR 2020

Evaluation of Efficacy of Microblepharoexfoliation Procedure for Treating Anterior Blepharitis

To investigate the efficacy of an FDA approved eyelid-cleaning procedure called BlephEx™ as an adjunct to commercially available eyelid cleansing wipes in the treatment of eyelid debris and inflammation and to validate the grading score of lid contamination, which is used to indicate the severity of anterior blepharitis (eyelid inflammation). Investigator: Saba Al-Hashimi, MD

Pilot Study Comparing Three Delivery Methods of Mitomycin C for Trabeculectomy Surgery

In this pilot explorative study, investigators are going to estimate and compare the outcomes of three different delivery methods of MMC for trabeculectomy: a subconjunctival injection at the site of future trabeculectomy two to four weeks before the surgery, a subconjunctival injection intraoperatively, and topical sponge applied intraoperatively (typical use) in patients with primary open angle glaucoma who did not have any prior filtering surgeries. Investigators: Joseph Caprioli, MD, Anne L. Coleman, MD, PhD, JoAnn A. Giaconi, MD, Simon K. Law, MD, PharmD, and Kouros Nouri-Mahdavi, MD

Safety and Feasibility of Cultivated Autologous Limbal Stem Cells (LSCs) for Limbal Stem Cell Deficiency

Cell therapy using cultivated autologous LSCs has been developed as a potentially better alternative to various direct transplantation methods of limbal tissues; it greatly lowers the risk of damage to the donor eye by decreasing the amount of tissues that need to be harvested from the donor. Investigators: Sophie X. Deng, MD, Anthony J. Aldave, MD, and Vivian Shibayama, OD

Effect of Glaucoma Drainage Devices on the Cornea in Comparison to Filtering Surgery with Antimetabolites in Cases of Glaucoma

This study aims to evaluate the endothelial cell number in patients undergoing glaucoma drainage device implantation as part of their regular eye care in comparison to the endothelial cell number in patients having filtering surgery with antimetabolites or medical treatment. Investigators: JoAnn A. Giaconi, MD, Joseph Caprioli, MD, Anne L. Coleman, MD, PhD, Simon K. Law, MD, PharmD, and Kouros Nouri-Mahdavi, MD

Phase 3 Clinical Trial of Retinal Gene Therapy for Choroideremia

The objective of the study is to evaluate the efficacy and safety of a single subretinal injection of AAV2-REP1 in subjects with choroideremia. Investigator: Michael Gorin, MD, PhD

A Multicenter, Open-Label, Safety, Tolerability, and Efficacy of AR-13503 in Subjects with Neovascular Age-Related Macular Degeneration (nAMD) and Subjects with Diabetic Macular Edema (DME)

The AR-13503 SR implant is an experimental implant that is extremely small, dissolves naturally in the body, and contains 10.6 micrograms of the study drug AR-13503. Once the AR-13503 SR implant is placed in the eye, the study drug releases slowly, and the implant dissolves over the course of 4 to 6 months. Investigators: Michael S. Ip, MD, Srinivas R. Sadda, MD, Gad Heilweil, MD, Mohammed Khan, MD, and Phillip Le, MD, PhD

Clinical Trial of Topical Fibrinogen-Depleted Human Platelet Lysate in Patients with Dry Eye Secondary to Graft vs. Host Disease

This is a Phase 1/2, randomized, double-masked, parallel-group, multicenter clinical trial to evaluate the safety and exploratory efficacy of two concentrations of Topical Fibrinogen-Depleted Human Platelet Lysate (FD hPL) eye drop compared to control eye drops in adult patients with dry eye disease (DED) secondary to graft vs. host disease. Investigators: John A. Irvine, MD, and Olivia L. Lee, MD

A Double-Masked Clinical Study Evaluating the Efficacy and Safety of RPh201 Treatment in Participants with Previous NAION

The primary study objective is to evaluate the efficacy and safety of twice-weekly subcutaneous (SC) administration of RPh201 over 26 weeks on visual function in participants with prior nonarteritic anterior ischemic optic neuropathy (NAION). Investigators: Peter A. Quiros, MD, and Alfredo A. Sadun, MD, PhD

A Phase 2b, Multicenter, Randomized, Double-blind, Placebo-controlled Study of RVT-1401 for the Treatment of Patients with Active, Moderate to Severe Graves Ophthalmopathy

The purpose of the study is to assess the efficacy and safety/tolerability of three dose regimens of RVT-1401 in the treatment of active, moderate to severe GO patients. In addition, the study is designed to characterize RVT-1401 exposure to reduction in anti-TSHR IgG. Investigator: Daniel B. Rootman, MD, MS, and Robert Alan Goldberg, MD

A Phase 3 Study to Compare the Efficacy and Safety of Intravitreal APL-2 Therapy with Sham Injections in Patients with Geographic Atrophy (GA) Secondary to Age-Related Macular Degeneration (AMD)

To evaluate the efficacy of APL-2 compared to sham injection in patients with GA secondary to AMD assessed by change in the total area of GA lesions from baseline as measured by FAF. Investigators: Michael S. Ip, MD, Srinivas R. Sadda, MD, Gad Heilweil, MD, Mohammed Khan, MD, and Phillip Le, MD, PhD

Arm-Mounted Heidelberg OCT-A for Noninvasive Vascular Zone Imaging in Infants with Retinopathy of Prematurity (ROP)

This study evaluates OCT-A imaging data on preterm infants who are screened and/or treated for ROP, especially evaluating the potentially beneficial effects of anti-VEGF treatment on foveal development and visual outcomes. Investigators: Alex A. Huang, MD, PhD, and Irena Tsui, MD

Determining the Safety and Efficacy of Renexus in Macular Telangiectasia Type 2

This study is assessing the safety of the NT-501 implant in patients with macular telangiectasia type 2. The implant, a small capsule of cells that is placed inside the eye, allows a controlled, sustained release of CNTF directly to the retina. Investigators: Jean-Pierre Hubschman, MD, Steven D. Schwartz, MD, and Hamid Hosseini, MD

Evaluating the Safety and Efficacy of Light-Activated AU-011 for the Treatment of Subjects with Small to Medium Primary Choroidal Melanoma

Primary objectives are to evaluate the safety of intravitreal administration of one of three dose levels and repeat dose regimens of light-activated AU-011 and one or two laser applications in the treatment of subjects with small to medium primary choroidal melanoma. Secondary objectives include evaluating the immunogenicity and effectiveness of AU-011. Investigators: Tara A. McCannel, MD, PhD, Colin A. McCannel, MD, and Melissa W. Chun, OD

Evaluation of a New Drug for Stargardt Disease

The study purpose is to find out whether a new drug for Stargardt disease is safe and effective. There are currently no proven treatments for Stargardt disease, a disease that leads to blindness in almost all cases. Investigators: Michael B. Gorin, MD, PhD, and Steven Nusinowitz, PhD

Evaluation of Corneal Cross-Linking Keratoprosthesis Carrier Tissue

This clinical trial evaluates the safety and efficacy of corneal collagen cross-linking the keratoprosthesis carrier tissue in subjects who are candidates for high-risk keratoprosthesis implantation because of a history of corneal melts, sterile corneal ulcers, or autoimmune diseases (eg, Stevens-Johnson syndrome, ocular cicatricial pemphigoid). Investigators: Anthony J. Aldave, MD, and Sophie X. Deng, MD, PhD

Macular Edema Ranibizumab vs. Intravitreal Anti-inflammatory Therapy (MERIT) Trial

The MERIT Trial was designed to determine which intravitreal therapy offers the best balance of effectiveness and tolerability in treating persistent uveitic macular edema in eyes with controlled uveitis but persistent macular edema, specifically by comparing the relative efficacy and safety of intravitreal ranibizumab (Lucentis®) and intravitreal methotrexate to intravitreal dexamethasone implant (Ozurdex®). Investigators: Gary N. Holland, MD, Colin A. McCannel, MD, and Pradeep S. Prasad, MD

Study of Luminopia One Digital Therapeutic as Amblyopia Treatment

The primary objective of this study is to establish the safety and efficacy of the Luminopia One therapeutic for the treatment of amblyopia. Investigators: Joseph L. Demer, MD, PhD, Simon Fung, MD, and Stacy L. Pineles, MD

Zoster Eye Disease Study (ZEDS)

The purpose of this study is to find out whether one year of a low dose of valacyclovir reduces complications of shingles affecting the eye. The study will involve two groups of participants who have eye problems due to shingles. One group will receive daily valacyclovir medication and the other group will receive a placebo. Investigators: Gary N. Holland, MD, Anthony J. Aldave, MD, Sophie X. Deng, MD, PhD, and John A. Irvine, MD

Clinical Trials

NOT RECRUITING IN FISCAL YEAR 2020

A Multicenter, Open-Label Extension Study to Evaluate the Long-Term Safety and Tolerability of the Port Delivery System with Ranibizumab in Patients with Neovascular Age-Related Macular Degeneration (PORTAL)

Continuous delivery of ranibizumab from the implant, with a prolonged fixed period between refills, is a novel approach that may result in less-frequent need for retreatment than monthly dosing and patient monitoring. Investigators: Colin A. McCannel, MD, Pradeep S. Prasad, MD, MBA, and David Sarraf, MD

A Phase 3 Study of the Efficacy, Safety, and Pharmacokinetics of the Port Delivery System with Ranibizumab in Patients with Neovascular Age-Related Macular Degeneration (ARCHWAY)

The primary objective of this study is to evaluate the non-inferiority and equivalence in efficacy of ranibizumab delivered via the PDS Q24W with the 100mg/mL formulation compared with that of 10mg/mL Q4W intravitreal ranibizumab injections. Investigators: Colin A. McCannel, MD, Pradeep S. Prasad, MD, MBA, and David Sarraf, MD

A Protocol to Follow-up with Patients on Emergency Administration of EPI-743 with Leber Hereditary Optic Neuropathy

EPI-743, a form of vitamin E that has been changed to a new compound in the laboratory, is an experimental drug that may improve mitochondrial function. Mitochondrial disease manifestations appeared to improve when the EPI-743 was given to cells from a patient with Leber hereditary optic neuropathy that were grown in the laboratory. Investigator: Alfredo A. Sadun, MD, PhD

A Trial of QPI-1007 Delivered by Single or Multi-Dose Intravitreal Injection(s) to Subjects with Acute Nonarteritic Anterior Ischemic Optic Neuropathy (NAION)

This research study tests whether the experimental drug QPI-1007 helps prevent loss of visual acuity. QPI-1007 is being developed to treat vision loss that can occur when there is not enough blood flow to the nerve tissue in the eye, such as after a stroke of the optic nerve or from NAION. Investigators: Peter A. Quiros, MD, Gad Heilweil, MD, Michael S. Ip, MD, Mohammad Khan, MD, Alfredo A. Sadun, MD, PhD

Corticosteroids for Uveitic Macular Edema (ADVISE)

This research study compares three treatments for macular edema in patients who have uveitis. Macular edema is swelling of the retina at the back of the eye, and it can cause vision loss. The standard treatment is to inject corticosteroid drugs next to the eye or directly into the eye. Investigators: Gary N. Holland, MD, and Colin A. McCannel, MD

Evaluating the Efficacy of a Single Intravitreal Injection for Patients with Leber Hereditary Optic Neuropathy

This clinical trial is to assess the effectiveness of a gene therapy in improving the visual outcome in patients with Leber Hereditary Optic Neuropathy (LHON) due to a mitochondrial mutation. Investigator: Alfredo A. Sadun, MD, PhD

Evaluating the Use of an Implant for Patients with Macular Degeneration

This clinical trial determines the efficacy, safety, and pharmacokinetics of ranibizumab delivered through the implant using three ranibizumab-formulation arms compared with the control arm in patients with subfoveal neovascular (wet) age-related macular degeneration. The study also evaluates the safety of the ranibizumab port delivery system combination product. Investigators: Colin A. McCannel, MD, Tara A. McCannel, MD, PhD, Pradeep S. Prasad, MD, MBA, Michael B. Gorin, MD, PhD, David Sarraf, MD, Michael S. Ip, MD, Phuc Le, MD, Gad Heilweil, MD, SriniVas R. Sadda, MD

Extension Study of NT-501 Ciliary Neurotrophic Factor Implant for Macular Telangiectasia

The primary objective of this study is to investigate long-term safety and efficacy of the NT-501 implant in participants previously enrolled in NTMT protocols. Investigators: Jean-Pierre Hubschman, MD, Steven D. Schwartz, MD, and Hamid Hosseini, MD

IAI-OCTA Study

This study is utilizing a new, FDA approved, non-standard of care technology (optical coherence tomography-angiography by Optovue) to image and evaluate the treatment outcomes of using standard of care intravitreal Aflibercept injections for their approved use in patients diagnosed with neovascular age-related macular degeneration who are naive to previous Anti-VEGF therapies. Investigator: David Sarraf, MD

Research with Retinal Cells Derived from Stem Cells for Stargardt Macular Dystrophy

This study evaluates the long-term safety and tolerability of MA09-hRPE cellular therapy in subjects with advanced Stargardt macular dystrophy from one to five years following the surgical procedure to implant the MA09-hRPE cells. Investigators: Steven D. Schwartz, MD, Hamid Hosseini, MD, Jean-Pierre Hubschman, MD, Pradeep Prasad, MD, and Irena Tsui, MD

Safety and Effectiveness of the CustomFlex Artificial Iris Prosthesis for the Treatment of Iris Defects

This study is being conducted to evaluate the safety and effectiveness of an artificial iris prosthesis for the treatment of full or partial aniridia resulting from congenital aniridia, acquired iris defects (including traumatic iris defects and mydriasis), or conditions associated with full or partial aniridia, such as ocular or oculocutaneous albinism and iridocorneal endothelial (ICE) syndrome, and iris coloboma. Investigators: Anthony J. Aldave, MD, and Kevin M. Miller, MD

Study for Retinopathy of Prematurity

This study is to determine if intravitreal ranibizumab is superior to laser ablation therapy in the treatment of retinopathy of prematurity (ROP). The study will assess the ability of these treatments to lead to regression of active ROP and prevent the development of ocular complications that are associated with poor visual outcome. Investigator: Irena Tsui, MD

Clinical Studies

Beacon Sensors and Telerehabilitation

The primary goal of this project is to refine the methods and procedures for implementing innovative technologies for low vision rehabilitation, in order to develop future protocols for randomized controlled trials. Investigators: Ava K. Bittner, OD, PhD, Melissa Chun, OD, and Jennie Kageyama, OD

Research to Evaluate Latest Improvements with Electronic Visual Enhancement Devices (RELIEVED)

This prospective study aims to evaluate patient preferences for wearable electronic visual aids for low vision rehabilitation and changes in visual functioning with these devices. Investigators: Ava K. Bittner, OD, PhD, Melissa Chun, OD, and Jennie Kageyama, OD

Development of a Behavioral Intervention with Socially Assistive Robots to Enhance Magnification Device Use for Reading

The primary goals of this research are to perform the initial development and preliminary evaluation of a prototype socially assistive robot specifically for low vision rehabilitation involving reading with magnifiers, in order to develop future protocols for larger scale clinical trials. Investigators: Ava K. Bittner, OD, PhD, Melissa Chun, OD, and Jennie Kageyama, OD

Low Vision Patients' Preferences for Illumination During Near Reading

This prospective longitudinal study aims to evaluate low vision patients' reading performance and level of difficulty when using additional preferred lighting for near reading as provided by a commercially available desk lamp or a bulb placed in a generic gooseneck desk lamp specified according to the patient's preferred settings with a lighting assessment tool. Investigators: Ava K. Bittner, OD, PhD, Melissa Chun, OD, and Jennie Kageyama, OD

AMD Ryan Initiative Study—Longitudinal Study of Early AMD and Reticular Pseudodrusen

The primary objectives of the study are to enroll participants with early AMD to assess rate of change in drusen volume and progression rates to large drusen, and associate these morphologic changes with psychophysical changes, including visual acuity and dark adaptation. Investigators: Michael B. Gorin, MD, PhD, and SriniVas R. Sadda, MD

Anterior Imaging of Ocular Muscles

Presbyopia is poorly understood and may be due to the lens in the eye becoming harder or the muscles that help focus vision for reading becoming weaker with age. The aim of this study is to utilize OCT imaging technology to better understand and develop therapies to combat presbyopia. Investigator: Alex A. Huang, MD, PhD

OCT-A and Visual Acuity in Human Immunodeficiency Virus Associated Neuroretinal Disorder

This study aims to characterize the microvascular abnormalities in patients with HIV via OCT-A and investigate the relationships between capillary density, nerve fiber layer thickness, and other measures of visual function (visual acuity, contrast sensitivity, color vision, visual fields). In addition, to compare the OCT-A data in HIV-positive patients vs. controls to evaluate the hypothesis that HIV-positive patients have significant differences in microvascular flow compared to normal eyes. Investigators: Gary N. Holland, MD, and David Sarraf, MD

Comparison of MHz OCT to Standard OCT imaging

This study will test a new MHz OCT system developed by engineering collaborators and compare the performance of this new OCT system to a standard clinical OCT device. The newly designed OCT system will be five to 10 times faster, leading to a marked improvement in resolution and significant reduction of artifacts. Investigator: Kouros Nouri-Mahdavi, MD

Ocular Imaging Study

This study is about improving existing anterior and posterior segment imaging using optical coherence tomography (OCT) instruments and/or other imaging devices. Investigators would like to know if different imaging devices can improve the quality of images and visualization of imaged tissues. Investigators: Srinivas R. Sadda, MD, Anthony C. Arnold, MD, Vikas Chopra, MD, Brian A. Francis, MD, MS, Gad Heilweil, MD, Hugo Y. Hsu, MD, Alex S. Huang, MD, PhD, Michael S. Ip, MD, John A. Irvine, MD, Phillip Le, MD, Alfredo A. Sadun, MD, PhD, David Sarraf, MD, James C. Tan, MD, PhD, and Irena Tsui, MD

Non Exudative Age-Related Macular Degeneration Imaged with Swept Source OCT

OCT imaging with SS-OCTA will be utilized to study the natural history of disease. Investigator: Srinivas R. Sadda, MD

In-Vivo Ultrastructure of Choriorretinal Diseases

The study will utilize a novel adaptive optics (AO) imaging instrument that integrates scanning laser ophthalmoscopy and optical coherence tomography (AO-SLO-OCT), allowing for in-vivo ultrastructure assessment of RPD and individual photoreceptors in both en face and cross-sectional planes. The study will use the AO imaging to monitor the progression of the RPD and their impact on overlying photoreceptors. Investigators: David Sarraf, MD, and Yuhua Zhang, PhD

A Clinical Trial of the Efficacy of an Investigational Drug in Patients with Geographic Atrophy (GA) Secondary to Age-Related Macular Degeneration (Gallego)

The purpose of this study is to compare the safety and efficacy of FHTR2163 versus a simulated injection on patients with GA secondary to AMD. Investigators: David Sarraf, MD, Michael B. Gorin, MD, PhD, Colin A. McCannel, MD, Pradeep S. Prasad, MD, MBA

A Prospective Study Examining Pentosan Retinal Toxicity

Patients will be evaluated for the dose and treatment duration of Pentosan. The goal is to determine the risk and toxic profile of Pentosan, as well as the incidence of interstitial cystitis, in an effort to establish clinical guidelines for retinal toxicity screening. Investigator: David Sarraf, MD

Anterior Chamber Flare Measurements

The evaluation and detection of inflammation is critical in management of uveitis. Flare, which is one of the commonly assessed ocular inflammation parameters, is the appearance of light reflected from solutes in the anterior chamber. This study seeks to compare two platforms of laser flare photometry and to evaluate the reproducibility of these measurements. Investigators: Edmund Tsui, MD and Gary N. Holland, MD

Imaging of Intraocular Inflammation

The aim of this proposed research is to longitudinally monitor intraocular inflammation in patients with uveitis. Investigators: Edmund Tsui, MD, Simon Fung, MD, and Gary N. Holland, MD

Study of Ocular Disease Using Hyper Parallel Optical Coherence Tomography

A novel imaging technology termed hyper parallel OCT (HP-OCT) will be used to evaluate patients with cataracts, corneal disease, macular disease, optic nerve disease, and iris changes that may occur from associated ocular diseases and procedures, as well as uveitic diseases as detected with clinical examination or ancillary testing, such as with standard OCT. Investigators: Edmund Tsui, MD, and Saba Al-Hashimi, MD

Analysis of the Corneal and Limbal Epithelial Changes in Limbal Stem Cell Deficiency Using In Vivo Confocal Microscopy

Investigators are working to establish a system for diagnosing limbal stem cell deficiency at a cellular level by correlating the information from impression cytology tests, confocal microscopy pictures, and medical records. Investigators: Anthony J. Aldave, MD, and Sophie X. Deng, MD, PhD

Biomechanical Analysis in Strabismus Surgery

This study aims to develop new diagnostic tests and computer models that will lead to improvements in strabismus surgery. Tests of binocular alignment and eye movements, as well as magnetic resonance imaging of the extraocular muscles, are being performed in the Institute's Clinical and Basic Science Ocular Motility Laboratory before and after strabismus surgery. To date, this research has fundamentally contributed to the knowledge of the functional anatomy of the extraocular muscles and connective tissues, and allowed discovery of causes of common strabismus and development of new types of surgeries. Investigator: Joseph L. Demer, MD, PhD

Effect of External Eyelid Weighting on Lid Position in Normal and Ptosis Patients

This investigation compares the ability of normal and ptotic patients to maintain eyelid position by adapting to acute and dramatic changes in protracting forces by using eyelid weights. This project will help elucidate the physiology of the eyelid position maintenance system, and provide insight into its ability to respond to changes in disease. Investigator: Daniel B. Rootman, MD, MS

Eye Health Imaging Study

The purpose of this study is to expand the normative database for the Heidelberg Spectralis OCT by collecting ophthalmic data from healthy eyes of people of Hispanic/Latino, Asian, and African American descent. Investigators: Kouros Nouri-Mahdavi, MD, and Joseph Caprioli, MD

Genetic and Anatomic Studies of Eye Movement Disorders

This study is conducting magnetic resonance imaging of the extraocular muscles. This procedure clarifies the phenotypes and mechanisms of congenital cranial dysinnervation syndromes whose hereditary properties have been characterized using modern molecular genetics. Patients with these syndromes have severe forms of strabismus. Investigator: Joseph L. Demer, MD, PhD

Hyaluronic Acid Gels for Upper Lid Retraction in Active State Thyroid Eye Disease

This study is to determine if hyaluronic acid gel (HAG) can be used to correct upper eyelid retraction, improve dry eye related symptoms, aesthetic appearance, and quality of life in active-stage thyroid eye disease (TED). The study also aims to determine the long-term outcome of TED and how long the effects of HAG can last. Investigator: Daniel B. Rootman, MD, MS

Molecular and Cytogenetic Studies of Ocular Melanoma

This research is to study ocular melanoma tumor tissue and to identify key molecular and genetic features that could help predict those patients who may be at high risk for metastasis. Investigators: Lynn K. Gordon, MD, PhD, Tara A. McCannel, MD, PhD, and Bradley R. Straatsma, MD, JD

Natural History Study of Leber Hereditary Optic Neuropathy

Leber hereditary optic neuropathy (LHON) is one of the diseases where the mitochondria of the retina cells are not functioning correctly, which can lead to loss of vision. This study is to obtain electroretinography (ERG) data and optical coherence tomography (OCT) data from patients who carry the Leber hereditary optic neuropathy gene. Investigator: Alfredo A. Sadun, MD, PhD

Natural History Study of Macular Telangiectasia

The primary study objective is to develop a registry of participants with MacTel Type 2 (as confirmed by the Reading Center) who may agree to be contacted for inclusion in future clinical trials. Investigators: Jean-Pierre Hubschman, MD, Hamid Hosseini, MD, Allan E. Kreiger, MD, Tara A. McCannel, MD, PhD, Pradeep S. Prasad, MD, MBA, Irena Tsui, MD, and Steven D. Schwartz, MD

Noninvasive Methods for Early Detection of Alzheimer Disease

The purpose of this study is to obtain electroretinography data and optical coherence tomography data from patients with Alzheimer disease, with the aim of permitting earlier intervention and improved disease monitoring. Investigator: Alfredo A. Sadun, MD, PhD

Observational Study of Patients Diagnosed with Idiopathic Bilateral Cataracts

The purpose of this study is to understand better how many people who have been diagnosed with early-onset idiopathic bilateral cataracts may have a rare but treatable disease called cerebrotendinous xanthomatosis (CTX). Often one of the first signs of CTX is cataract from an unknown cause at an early age. Investigators: Federico G. Velez, MD, Stacy L. Pineles, MD, and Joseph L. Demer, MD, PhD

Ocular Biometric Measurements in Angle-Closure Glaucoma

The purpose of this study is to determine the potential contributing factors in angle-closure patients of different ethnicities and to determine predictive factors for this type of glaucoma. Investigators: Joseph Caprioli, MD, Anne L. Coleman, MD, PhD, Simon K. Law, MD, PharmD, and Kouros Nouri-Mahdavi, MD

Oculoplastic Registry

Many orbital and ophthalmic plastic surgical diseases are not well studied in the medical literature. The purpose of this study is to contribute to a large database of electronic measurements from medical records that allow us to study diseases in a way that was difficult or impossible before. Investigators: Robert Alan Goldberg, MD, and Daniel B. Rootman, MD, MS

Optic Nerve in Amblyopia

Amblyopia is a major cause of childhood visual loss. This study uses high resolution, surface-coil magnetic resonance imaging to study optic nerve size in amblyopia. It tests the theory that the optic nerve is smaller than normal in amblyopia and that optic nerve size may be a limiting factor in restoration of vision by amblyopia treatment. Investigator: Joseph L. Demer, MD, PhD

Optical Coherence Tomography Angiography Images of Pregnant Women

This study aims to identify changes that occur in the retina as a result of gestational associated diseases (eg, gestational diabetes, high blood pressure, increased myopia) and unknown changes that may affect the eyes during gestation and in the two to three months following birth. Investigator: Irena Tsui, MD

Optical Coherence Tomography Angiography of Foveal Avascular Zone in Premature Children

This prospective study evaluates blood vessel development in children and adults who are born early and compares them with children and adults who were not born early, by getting optical coherence tomography (OCT), OCT-angiography, color pictures, refraction, and axial length on subjects with retinopathy of prematurity and without retinopathy of prematurity. Investigators: Irena Tsui, MD, Stacy L. Pineles, MD, and Federico G. Velez, MD

Pediatric Cornea and Anterior Segment Diseases Registry

Pediatric cornea and anterior segment diseases are rarely encountered by ophthalmologists. As such, details on the causes, features, and optimal treatment for these conditions are inadequately described. The information on this registry would allow us to study these diseases. Investigator: Simon Fung, MD

Pediatric Optic Neuritis Prospective Outcomes Study (PON1)

Optic neuritis is an acute inflammatory disease of the optic nerve. The purpose of this study is to collect information about children who have optic neuritis and what happens to their eyesight. Investigator: Stacy L. Pineles, MD

PET/CT Imaging for Early Detection of Ocular Melanoma

This research involves the use of combined positron emission tomography (PET)/computed tomography (CT) scans in subjects with ocular melanoma to ideally develop better ways of monitoring for tumor spread and allow for early treatment if metastasis is found. Investigators: Tara A. McCannel, MD, PhD, and Bradley R. Straatsma, MD, JD

Pro-Inflammatory Cytokines, Dry Eye, and Thyroid Eye Disease

This study is to determine whether there are specific inflammatory proteins in tears of patients with active-stage thyroid eye disease (TED). If these inflammatory proteins exist, the study aims to determine whether they can be used to predict dry eye symptomatology and TED activity. Investigators: Robert Alan Goldberg, MD, and Daniel B. Rootman, MD, MS

Ptosis Surgery Outcomes Scale

This investigation is to define and validate a universal measure for ptosis outcomes that can be used in defining both value and efficacy in ptosis surgery. Investigator: Daniel B. Rootman, MD, MS

Studies on Tissue in Autoimmune Diseases

This study aims to determine the cause of eye problems in Graves disease and other autoimmune diseases. Examination is being done of material removed from orbits during surgical therapy for Graves disease or other problems requiring surgery on the tissue surrounding the eyes, of thyroid tissue removed during the course of surgical therapy, or of blood drawn for laboratory tests. Investigator: Robert Alan Goldberg, MD

Study of Macular Disease Using Spectral Domain Optical Coherence Tomography Angiography (SD-OCTA)

The RTVue XR 100 Avanti with SSADA will be used to screen patients with macular disease as detected with clinical examination or ancillary testing, such as with standard OCT, color fundus photography, fluorescein angiography, or fundus autofluorescence. Investigators: Michael B. Gorin, MD, PhD, Colin A. McCannel, MD, David Sarraf, MD, and Steven D. Schwartz, MD

Understanding the Genetics of Inherited Eye Disorders

This study searches for the gene(s) responsible for inherited disorders that are either specific to the eye or are part of the medical condition. The study provides for the clinical characterization of affected individuals and at-risk family members, in conjunction with molecular genetic testing, to identify the causative genes and mutations. Investigators: Anthony J. Aldave, MD, and Michael B. Gorin, MD, PhD

An Extended-Use Program of Elamipretide Topical Ophthalmic Solution for Patients with Leber Hereditary Optic Neuropathy (LHON)

This extended-use program is to provide elamipretide to patients with LHON previously enrolled in the SPILH-201 clinical trial who are still benefiting from treatment per the discretion of the treating physician. Investigators: Alfredo A. Sadun, MD, and Rustum Karanjia, MD

Characteristics of the Brow–Eyelid Margin Relationship

The study purpose is to determine if changing the effect of gravity has an effect on eyelid position. Investigators: Robert Alan Goldberg, MD, and Daniel B. Rootman, MD, MS

Clinical Measurements of the Optic Nerve in Glaucoma

The goal of this study is to develop novel structural measures of the optic nerve and nerve fiber layer, which are sensitive and specific for early and progressive glaucomatous optic nerve damage. Investigators: Joseph Caprioli, MD, Anne L. Coleman, MD, PhD, and Simon K. Law, MD, PharmD

Effect of Yoga on Glaucoma

The purpose of this study is to examine the practice of yoga and its ability to improve a patient's vision by relieving stress and reducing eye pressure. Investigator: Anne L. Coleman, MD, PhD

Evaluating a Microshunt for the Treatment of Glaucoma

This study is to assess the safety and efficacy of a microshunt when used to lower intraocular pressure (IOP) in subjects with primary open angle glaucoma whose IOP is not controlled when using maximum-tolerated glaucoma medications. Investigators: Joseph Caprioli, MD, PhD, JoAnn A. Giacconi, MD, Simon K. Law, MD, PharmD, and Brian A. Francis, MD, MS

Glaucoma Imaging Study

This study is evaluating different imaging techniques and their use in improving open-angle glaucoma detection. Investigators: Kouros Nouri-Mahdavi, MD, and Joseph Caprioli, MD

Identifying Novel Genes for Fuchs Corneal Endothelial Dystrophy

Investigators are working to identify the gene(s) responsible for Fuchs corneal endothelial dystrophy, an inherited disorder that may result in irreversible corneal swelling and loss of vision. Investigators: Anthony J. Aldave, MD, Gary N. Holland, MD, and Bartly J. Mondino, MD

Long-term Follow-up of ND4 LHON Subjects Treated with GS010

Ocular Gene Therapy in the RESCUE or REVERSE

To assess the long-term safety of intravitreal GS010 administration up to five years post treatment in subjects who were treated in the RESCUE or REVERSE studies. Investigators: Alfredo A. Sadun, MD, and Rustum Karanjia, MD

Natural History of the Progression of Choroideremia

This study characterizes the visual function and retinal structural changes associated with X-linked choroideremia with the intention of determining the best means of measuring disease progression and the rate of natural progression for this condition. Investigators: Michael B. Gorin, MD, PhD, and Steven Nusinowitz, PhD

Natural History of the Progression of X-Linked Retinitis Pigmentosa

This study is to characterize the visual function and retinal structural changes associated with X-linked retinitis pigmentosa to determine the best means of measuring disease progression and the rate of natural progression for this condition. Investigator: Michael B. Gorin, MD, PhD

Neuroendocrine Tumor Metastases in the Eye and Orbit

The purpose of this study is to understand the diversity in presentation of carcinoid tumors of the orbit, as well as to identify, stage, and grade related factors that may affect prognosis and thus treatment decisions. Also considered will be if there are features of carcinoid tumor presentations in the orbit that can predict outcome and thus guide therapeutic decision-making. Investigator: Daniel B. Rootman, MD, MS

Ocular Hypertension Treatment Study

Since topical hypotensive medications are safe and effective in delaying or preventing primary open angle glaucoma, this study is examining whether other forms of treatment can be deferred with little or no penalty. Investigator: Anne L. Coleman, MD, PhD

Ocular Protrusion in Sitting and Supine Positions

The aim of this study is to compare the degree of ocular protrusion in normal individuals and patients with thyroid eye disease between sitting and lying (supine) positions. Investigators: Robert Alan Goldberg, MD, and Daniel B. Rootman, MD, MS

Ocular Surface Microbiome Study

This study aims to investigate and understand the normal ecosystem of microbes that live on the eye's surface and how their ecological system changes and responds to routine eye care and treatments. Investigators: Hugo Hsu, MD, Vikas Chopra, MD, and Gad Heilweil, MD

Optic Nerve Appearance in Age-Related Macular Degeneration

In order to evaluate the relationship between macular degeneration and optic nerve change, digital imaging technology and photography are being used to assess the structural appearance of the optic nerve in patients with age-related macular degeneration. Investigator: Simon K. Law, MD, PharmD

Pediatric Cataract Surgery Outcomes Registry

The study aim is to collect core clinical data on children and teens undergoing surgery for cataracts in order to conduct analyses and generate hypotheses. Clinical outcomes data will be collected from affected subjects after cataract surgery has been performed. Investigators: Stacy L. Pineles, MD, and Federico G. Velez, MD

Research with Retinal Cells Derived from Stem Cells for Dry Age-Related Macular Degeneration (AMD)

This study evaluates the long-term safety and tolerability of MA09-hRPE cellular therapy in subjects with advanced dry AMD from one to five years following the surgical procedure to implant the MA09-hRPE cells. Investigators: Steven D. Schwartz, MD, Hamid Hosseini, MD, Jean-Pierre Hubschman, MD, Pradeep S. Prasad, MD, MBA, and Irena Tsui, MD

Role of Pattern Electroretinogram (PERG) in Glaucoma

This study is researching the electrophysiological test, pattern electroretinogram (PERG) to determine the role of PERG in estimating the risk of future glaucoma progression and the reversibility of glaucomatous damage after treatment. The latter could help clinicians better determine to what extent eye pressure needs to be lowered to prevent disease progression. Investigators: Joseph Caprioli, MD, Anne L. Coleman, MD, PhD, JoAnn A. Giaconi, MD, Simon K. Law, MD, PharmD, and Kouros Nouri-Mahdavi, MD

Sweep Visual Evoked Potential for Use in Amblyopia and Pediatric Optic Nerve Disorders

Using a new technique, investigators are measuring vision in preverbal children to diagnose and follow optic nerve diseases. Currently, treatment decisions are based on clinical examinations that are insensitive and reveal vision loss well after permanent damage has taken place. This technique allows more accurate examinations, which leads to provision of treatments at the first signs of vision loss and thereby decreases the risk of permanent damage. Investigators: Joseph L. Demer, MD, PhD, Sherwin J. Isenberg, MD, Stacy L. Pineles, MD, and Federico G. Velez, MD

Temporal Fossa in Different Ethnicities

The aim of this study is to investigate differences in anatomy of temporal fossa between different ethnicities using three-dimensional CT scan images. Better knowledge of these differences is important for cosmetic procedures to achieve better results and fewer complications. Investigators: Robert Alan Goldberg, MD, and Catherine J. Hwang, MD

Vision-Related Quality of Life and Ocular Dominance

This study is designed to evaluate how quality of life is impacted by glaucoma in relation to eye dominance. It aims to determine whether quality of life is affected more by glaucoma if it primarily affects the dominant eye. Investigators: Joseph Caprioli, MD, Anne L. Coleman, MD, PhD, JoAnn A. Giaconi, MD, and Simon K. Law, MD, PharmD

2019–2020 Publications of the Full-Time Faculty

July 2019

Strauss RW, Kong X, Ho A, Jha A, West S, **Ip MS**, Bernstein PS, Birch DG, Cideciyan AV, Michaelides M, Sahel JA, Sunness JS, Traboulsi EI, Zrenner E, Pitetta S, Jenkins D, Hariri AH, Sadda SV, Scholl HPN, ProgStar Study Group. Progression of Stargardt Disease as Determined by Fundus Autofluorescence Over a 12-Month Period: ProgStar Report No. 11. *JAMA Ophthalmol*. 2019;137(10):1134–1145.

Umapathy A, **Williams DS**. Live Imaging of Organelle Motility in RPE Flatmounts. *Adv Exp Med Biol*. 2019;1185:389–393.

Dos Santos A, Balayan A, Funderburgh ML, Ngo J, Funderburgh JL, **Deng SX**. Differentiation Capacity of Human Mesenchymal Stem Cells into Keratocyte Lineage. *Invest Ophthalmol Vis Sci*. 2019 Jul 1;60(8):3013–3023.

Nassisi M, Tepelus T, Nittala MG, **Sadda SR**. Choriocapillaris flow impairment predicts the development and enlargement of drusen. *Graefes Arch Clin Exp Ophthalmol*. 2019 Oct; 257(10):2079–2085. Epub 2019 Jul 1.

Le Q, Chauhan T, **Deng SX**. Diagnostic criteria for limbal stem cell deficiency before surgical intervention—A systematic literature review and analysis. *Surv Ophthalmol*. 2020 Jan–Feb; 65(1):32–40. Epub 2019 Jul 2. Review.

Francone A, Huang JM, Ma J, Tsao TC, Rosen J, **Hubschman JP**. The Effect of Haptic Feedback on Efficiency and Safety During Preretinal Membrane Peeling Simulation. *Transl Vis Sci Technol*. 2019 Jul 3;8(4):2. eCollection 2019.

Mason AF, Yewdall NA, Welzen PLW, Shao J, van Stevendaal M, van Hest JCM, **Williams DS**, Abdelmohsen LKEA. Mimicking Cellular Compartmentalization in a Hierarchical Protocell through Spontaneous Spatial Organization. *ACS Cent Sci*. 2019 Aug 28; 5(8):1360–1365. Epub 2019 Jul 3.

Pool KL, Adachi K, Karnezis S, Salamon N, Romero T, Nielsen-Saines K, Pone S, Boechat M, Aibe M, Gomes da Silva T, Ribeiro CTM, Boechat MI, Brasil P, Zin A, **Tsui I**, Gaw SL, Daltro P, Ribeiro BG, Fazecas T, Hygino da Cruz LC, Nogueira R, Vasconcelos Z, Pereira JP Jr, Saad Salles T, Barbosa CN, Chen W, Foo SS, Jung J, Moreira ME, Pone M. Association Between Neonatal Neuroimaging and Clinical Outcomes in Zika-Exposed Infants From Rio de Janeiro, Brazil. *JAMA Netw Open*. 2019 Jul 3;2(7):e198124.

Nielsen-Saines K, Brasil P, Kerin T, Vasconcelos Z, Gabaglia CR, Damasceno L, Pone M, Abreu de Carvalho LM, Pone SM, Zin AA, **Tsui I**, Salles TRS, da Cunha DC, Costa RP, Malacarne J, Reis AB, Hasue RH, Aizawa CYP, Genovesi FF, Einspieler C, Marschik PB, Pereira JP, Gaw SL, Adachi K, Cherry JD, Xu Z, Cheng G, Moreira ME. Delayed childhood neurodevelopment and neurosensory alterations in the second year of life in a prospective cohort of ZIKV-exposed children. *Nat Med*. 2019 Aug; 25(8):1213–1217. Epub 2019 Jul 8.

Wang T, Pahlberg J, Cafaro J, Frederiksen R, Cooper AJ, **Sampath AP**, Field GD, Chen J. Activation of Rod Input in a Model of Retinal Degeneration Reverses Retinal Remodeling and Induces Formation of Functional Synapses and Recovery of Visual Signaling in the Adult Retina. *J Neurosci*. 2019 Aug 21;39(34):6798–6810. Epub 2019 Jul 8.

Bai X, **Yang XJ**, Chen L. Generation of an integration-free induced pluripotent stem cell line (FDEENTI003-A) from a patient with pathological myopia. *Stem Cell Res*. 2019 Aug;39:101495. Epub 2019 Jul 9.

Wu Y, Seong YJ, Li K, Choi D, Park E, Daghlian GH, Jung E, Bui K, Zhao L, Madhavan S, Daghlian S, Daghlian P, Chin D, Cho IT, Wong AK, Heur M, Zhang-Nunes S, Tan JC, Ema M, Wong TT, **Huang AS**, Hong YK. Organogenesis and distribution of the ocular lymphatic vessels in the anterior eye. *JCI Insight*. 2020 Jul 9;5(13).

Shojaati G, Khandaker I, Funderburgh ML, Mann MM, Basu R, Stolz DB, Geary ML, Dos Santos A, **Deng SX**, Funderburgh JL. Mesenchymal Stem Cells Reduce Corneal Fibrosis and Inflammation via Extracellular Vesicle-Mediated Delivery of miRNA. *Stem Cells Transl Med*. 2019 Nov;8(11):1192–1201. Epub 2019 Jul 10.

Li J, Liu X, Abdelmohsen LKEA, **Williams DS**, Huang X. Spatial Organization in Proteinaceous Membrane-Stabilized Coacervate Protocells. *Small*. 2019 Sep;15(36):e1902893. Epub 2019 Jul 12.

Tsui E, Leong BCS, Mehta N, Gupta A, Goduni L, Cunningham ET Jr, Freund KB, Lee GD, Dedania VS, Yannuzzi LA, Modi YS. Evaluation of segmental retinal arteritis with optical coherence tomography angiography. *Retin Cases Brief Rep*. 2019 Jul 15.

Thanos A, Shwayder T, Papakostas TD, Corradetti G, Capone A Jr, **Sarraf D**, Shields CL, Trese MT. Retinal Vascular Abnormalities in Phakomatosis Pigmentovascularis. *Ophthalmol Retina*. 2019 Dec;3(12):1098–1104. Epub 2019 Jul 16.

González S, Uhm H, **Deng SX**. Notch Inhibition Prevents Differentiation of Human Limbal Stem/Progenitor Cells in vitro. *Sci Rep*. 2019 Jul 17;9(1):10373.

Tsui E, Gonzales JA. Retinal Vasculitis Associated with Ipilimumab. *Ocul Immunol Inflamm*. 2019 Jul 17:1–3.

Sadda SR, Campbell J, Dugel PU, Holekamp NM, Kiss S, Loewenstein A, Augustin AJ, Shih V, Xu X, Wykoff CC, Whitcup SM. Relationship between duration and extent of oedema and visual acuity outcome with ranibizumab in diabetic macular oedema: A post hoc analysis of Protocol I data. *Eye (Lond)*. 2020 Mar;34(3):480–490. Epub 2019 Jul 18.

- Govetto A, **Hubschman JP, Sarraf D**, Figueroa MS, Bottoni F, dell’Omo R, Curcio CA, Seidenari P, Delledonne G, Gunzenhauser R, Ferrara M, Au A, Virgili G, Scialdone A, Repetto R, Romano MR. The role of Müller cells in tractional macular disorders: an optical coherence tomography study and physical model of mechanical force transmission. *Br J Ophthalmol*. 2020 Apr;104(4):466–472. Epub 2019 Jul 20.
- Tsui E**, Goldberg NR, Pillai C, Goduni L, Freund KB. Multimodal imaging of IgG4-related papillitis and retinal disease. *Retin Cases Brief Rep*. 2019 Jul 22.
- Wykoff CC, Nittala MG, Zhou B, Fan W, Velaga SB, Lampen SIR, Rusakevich AM, Ehlers JP, Babiuch A, Brown DM, **Ip MS, Sadda SR**; Intravitreal Aflibercept for Retinal Nonperfusion in Proliferative Diabetic Retinopathy Study Group. Intravitreal Aflibercept for Retinal Nonperfusion in Proliferative Diabetic Retinopathy: Outcomes from the Randomized RECOVERY Trial. *Ophthalmol Retina*. 2019 Dec;3(12):1076–1086. Epub 2019 Jul 24.
- Pollock SC, **Arnold AC**, Miller NR. Vessels in full view: preserved vascular clarity in acute arteritic anterior ischaemic optic neuropathy. *Acta Ophthalmol*. 2019 Nov;97(7):727–728. Epub 2019 Jul 25. Review.
- Fan W, Uji A, Wang K, Falavarjani KG, Wykoff CC, Brown DM, Van Hemert J, Sagong M, **Sadda SR, Ip M**. Severity of Diabetic Macular Edema Correlates with Retinal Vascular Bed Area on Ultra-Wide Field Fluorescein Angiography: DAVE Study. *Retina*. 2019 Jul 26.
- Handa JT, Bowes Rickman C, Dick AD, **Gorin MB**, Miller JW, Toth CA, Ueffing M, Zarbin M, Farrer LA. A systems biology approach towards understanding and treating non-neovascular age-related macular degeneration. *Nat Commun*. 2019 Jul 26;10(1):3347. Review.
- Saha S, Nassisi M, Wang M, Lindenberg S, Kanagasigam Y, **Sadda S**, Hu ZJ. Automated Detection and Classification of Early AMD Biomarkers Using Deep Learning. *Sci Rep*. 2019 Jul 29; 9(1):10990.
- Bellemo V, Lim G, Rim TH, Tan GSW, Cheung CY, **Sadda S**, He MG, Tufail A, Lee ML, Hsu W, Ting DSW. Artificial Intelligence Screening for Diabetic Retinopathy: The Real-World Emerging Application. *Curr Diab Rep*. 2019 Jul 31; 19(9):72.
- Shi Y, Yang X, Marion KM, **Francis BA, Sadda SR, Chopra V**. Novel and Semi-automated 360-Degree Gonioscopic Anterior Chamber Angle Imaging in Under 60 Seconds. *Ophthalmol Glaucoma* Jul–Aug 2019;2(4):215–223.
- August 2019**
- Essilfie JO, Kattan J, **Demer JL, Rootman DB**. Cross-Sectional Soft-Tissue Composition and the Distribution of Blue Cutaneous Discoloration in the Lower Eyelid after Hyaluronic Acid Injection. *Plast Reconstr Surg*. 2019 Aug;144(2):336–339. *Clinical Trial*.
- Huang AS**, Stenger MB, Macias BR. Gravitational Influence on Intraocular Pressure: Implications for Spaceflight and Disease. *J Glaucoma*. 2019 Aug; 28(8):756–764. Review.
- Nouri-Mahdavi K**. Usefulness of Macular Temporal Vertical Asymmetry for Differentiating Optic Neuropathies from Glaucoma. *Ophthalmology*. 2019 Aug;126(8):1140.
- Paap MK, Milman T, **Ugradar S**, Silkiss RZ. Assessing Retrobulbar Hyaluronidase as a Treatment for Filler-Induced Blindness in a Cadaver Model. *Plast Reconstr Surg*. 2019 Aug; 144(2):315–320.
- Sarraf D**. Ocular imaging in the Canadian Journal of Ophthalmology. *Can J Ophthalmol*. 2019 Aug;54(4):410.
- Sultan W, Asanad S, Karanjia R, **Sadun AA**. Long-term attenuation of the deep capillary plexus in SLE utilizing OCTA. *Can J Ophthalmol*. 2019 Aug; 54(4):e207–e212.
- Zhang W, Margines JB, Jacobs DS, Rabinowitz YS, Hanser EM, Chauhan T, Chung D, Bykhovskaya Y, Gaster RN, **Aldave AJ**. Corneal Perforation After Corneal Cross-Linking in Keratoconus Associated With Potentially Pathogenic ZNF469 Mutations. *Cornea*. 2019 Aug; 38(8):1033–1039.
- Au A, Hou K, Dávila JP, Gunnemann F, Fragiotta S, Arya M, Sacconi R, Pauleikhoff D, Querques G, Waheed N, Freund KB, **Sadda S, Sarraf D**. Volumetric Analysis of Vascularized Serous Pigment Epithelial Detachment Progression in Neovascular Age-Related Macular Degeneration Using Optical Coherence Tomography Angiography. *Invest Ophthalmol Vis Sci*. 2019 Aug 1; 60(10):3310–3319. *Clinical Trial*.
- Strauss RW, Kong X, Ho A, Jha A, West S, Ip M, Bernstein PS, Birch DG, Cideciyan AV, Michaelides M, Sahel JA, Sunness JS, Traboulsi EI, Zrenner E, Pitetta S, Jenkins D, Hariri AH, **Sadda S**, Scholl HPN; ProgStar Study Group. Progression of Stargardt Disease as Determined by Fundus Autofluorescence Over a 12-Month Period: ProgStar Report No. 11. *JAMA Ophthalmol*. 2019 Aug 1.
- Cao S, Shao J, Xia Y, Che H, Zhong Z, Meng F, van Hest JCM, Abdelmohsen LKEA, **Williams DS**. Molecular Programming of Biodegradable Nanoworms via Ionically Induced Morphology Switch toward Asymmetric Therapeutic Carriers. *Small*. 2019 Sep; 15(38):e1901849. Epub 2019 Aug 5.
- Bhaskaranand M, Ramachandra C, Bhat S, Cuadros J, Nittala MG, **Sadda SR**, Solanki K. The Value of Automated Diabetic Retinopathy Screening with the EyeArt System: A Study of More Than 100,000 Consecutive Encounters from People with Diabetes. *Diabetes Technol Ther*. 2019 Nov;21(11):635–643. Epub 2019 Aug 7.
- Karlin JN, **Rootman DB**. Brow height asymmetry before and after eyelid ptosis surgery. *J Plast Reconstr Aesthet Surg*. 2020 Feb;73(2):357–362. Epub 2019 Aug 8.
- Iovino C, Au A, **Sarraf D**. Fundus autofluorescence of bilateral ora serrata pearls. *Can J Ophthalmol*. 2020 Feb; 55(1):e20–e22. Epub 2019 Aug 9.
- Warmack RA, Shawa H, Liu K, Lopez K, Loo JA, **Horwitz J**, Clarke SG. The l-isoaspartate modification within protein fragments in the aging lens can promote protein aggregation. *J Biol Chem*. 2019 Aug 9;294(32):12203–12219.
- Tsui I**. The Glass Ceiling in Ophthalmology—Next Comes How to Change This. *JAMA Ophthalmol*. 2019 Aug 15.

Bogarín T, Saraswathy S, Akiyama G, Xie X, Weinreb RN, **Zheng J, Huang AS**. Cellular and cytoskeletal alterations of scleral fibroblasts in response to glucocorticoid steroids. *Exp Eye Res*. 2019 Oct;187:107774. Epub 2019 Aug 23.

Pflugfelder SC, Massaro-Giordano M, Perez VL, Hamrah P, **Deng SX**, Espandar L, Foster CS, Affeldt J, Seedor JA, Afshari NA, Chao W, Allegretti M, Mantelli F, Dana R. Topical Recombinant Human Nerve Growth Factor (Cenegermin) for Neurotrophic Keratopathy: A Multicenter Randomized Vehicle-Controlled Pivotal Trial. *Ophthalmology*. 2020 Jan;127(1):14–26. Epub 2019 Aug 26. Clinical Trial.

Fan W, Nittala MG, Fleming A, Robertson G, Uji A, Wykoff CC, Brown DM, van Hemert J, **Ip M**, Wang K, Falavarjani KG, Singer M, Sagong M, **Sadda SR**. Relationship Between Retinal Fractal Dimension and Non-perfusion in Diabetic Retinopathy on Ultrawide-Field Fluorescein Angiography. *Am J Ophthalmol*. 2020 Jan;209:99–106. Epub 2019 Aug 29. Clinical Trial.

Le A, Chen J, Lesgart M, Gawargious BA, **Suh SY, Demer JL**. Age-dependent Deformation of the Optic Nerve Head and Peripapillary Retina by Horizontal Duction. *Am J Ophthalmol*. 2020 Jan;209:107–116. Epub 2019 Aug 29.

Ugradar S, Bonelli L, Rootman D. Facial numbness in the ophthalmology clinic. A portentous sign. *Eye (Lond)*. 2020 Apr;34(4):663–668. Epub 2019 Aug 30.

Williams DS, Mouradov D, Browne C, Palmieri M, Elliott MJ, Nightingale R, Fang CG, Li R, Mariadason JM, Faragher I, Jones IT, Churilov L, Tebbutt NC, Gibbs P, Sieber OM. Overexpression of TP53 protein is associated with the lack of adjuvant chemotherapy benefit in patients with stage III colorectal cancer. *Mod Pathol*. 2020 Mar;33(3):483–495. Epub 2019 Aug 30.

September 2019 (Fall)

Bennett L, **Hsu HY**, Tai S, Ernst B, Schmidt EJ, Parihar R, Horwood C, Edelstein SL. Contact-lens versus non-contact lens-related corneal ulcers at an academic center. *Eye Contact Lens*. 2019 Sep;45(5):301–305.

Lee OL, Shi Y, Brown T, Maram J. Quantifying the Size of the Pterygium Head by Evaluating the Fibrous Area or the Vascularized Area. *Cornea*. 2020 Sep;39(9):1069–1072.

Murthy R, Roos JCP, **Goldberg RA**. Periocular hyaluronic acid fillers: applications, implications, complications. *Curr Opin Ophthalmol*. 2019 Sep;30(5):395–400.

Snyder KC, Oikawa K, Williams J, Kiland JA, Gehrke S, Teixeira LBC, **Huang AS**, McLellan GJ. Imaging Distal Aqueous Outflow Pathways in a Spontaneous Model of Congenital Glaucoma. *Transl Vis Sci Technol*. 2019 Sep;8(5):22. eCollection 2019 Sep.

Tran TM, Duong H, Bonnet C, Kashanchi A, Buckshey A, **Aldave AJ**. Corneal Blindness in Asia: A Systematic Review and Meta-Analysis to Identify Challenges and Opportunities. *Cornea*. 2020 Sep;39(9):1196–1205.

Nittala MG, Velaga SB, Hariri A, Pfau M, Birch DG, Haines J, Pericak-Vance MA, Stambolian D, **Sadda SR**. Retinal Sensitivity Using Microperimetry in Age-Related Macular Degeneration in an Amish Population. *Ophthalmic Surg Lasers Imaging Retina*. 2019 Sep 1;50(9):e236–e241.

Thanos A, Todorich B, Pasadhika S, Khundkar T, Xu D, Jain A, Ung C, Faia LJ, Capone A Jr, Williams GA, Yonekawa Y, **Sarraf D**, Wolfe JD. Degenerative Peripheral Retinoschisis: Observations From Ultra-Widefield Fundus Imaging. *Ophthalmic Surg Lasers Imaging Retina*. 2019 Sep 1;50(9):557–564. Clinical Trial.

Francis BA, Flowers B, Dastiridou A, Yelenskiy A, **Chopra V**, Alvarado JA. Endoscopic Cyclophotocoagulation and Other Cyclodestructive Methods: Histopathologic Comparison of In Vivo Treatment in Humans and Monkeys. *Ophthalmol Glaucoma*. 2019 Nov–Dec;2(6):413–421. Epub 2019 Sep 4.

Byon I, Nassisi M, Borrelli E, **Sadda SR**. Impact of Slab Selection on Quantification of Choriocapillaris Flow Deficits by Optical Coherence Tomography Angiography. *Am J Ophthalmol*. 2019 Dec;208:397–405. Epub 2019 Sep 5.

Heuzé ML, Sankara Narayana GHN, D'Alessandro J, Cellerin V, Dang T, **Williams DS**, Van Hest JC, Marcq P, Mège RM, Ladoux B. Myosin II isoforms play distinct roles in adherens junction biogenesis. *Elife*. 2019 Sep 5;8:e46599.

Piccolo P, Sabatino V, Mithbaokar P, Polishchuck E, **Law SK**, Magraner-Pardo L, Pons T, Polishchuck R, Brunetti-Pierri N. Geleophysic dysplasia: novel missense variants and insights into ADAMTSL2 intracellular trafficking. *Mol Genet Metab Rep*. 2019 Sep 5;21:100504. eCollection 2019 Dec.

Singh MS, Park SS, Albin TA, Canto-Soler MV, Klassen H, MacLaren RE, Takahashi M, Nagiel A, **Schwartz SD**, Bharti K. Retinal stem cell transplantation: Balancing safety and potential. *Prog Retin Eye Res*. 2020 Mar;75:100779. Epub 2019 Sep 5. Review.

Francone A, Essilfie J, **Sarraf D**, Preti RC, Monteiro MLR, **Hubschman JP**. Effect of laser photocoagulation on macular edema associated with macular holes. *Retin Cases Brief Rep*. 2019 Sep 10.

Garcia GA, Nguyen CV, Yelenskiy A, Akiyama G, McKnight B, **Chopra V, Lu K, Huang A, Tan JCH, Francis BA**. Micropulse Transscleral Diode Laser Cyclophotocoagulation in Refractory Glaucoma: Short-Term Efficacy, Safety, and Impact of Surgical History on Outcomes. *Ophthalmol Glaucoma*. 2019 Nov–Dec;2(6):402–412. Epub 2019 Sep 10.

Rabiolo A, Morales E, Mohamed L, Capistrano V, Kim JH, Afifi A, Yu F, **Coleman AL, Nouri-Mahdavi K, Caprioli J**. Comparison of Methods to Detect and Measure Glaucomatous Visual Field Progression. *Transl Vis Sci Technol*. 2019 Sep 11;8(5):2. eCollection 2019 Sep.

Ramesh S, **Goldberg RA**, Wulc AE, Brackup AB. Objective Comparison of Nasojugal Fold Depth and Lower Eyelid Length After Fat Excision Versus Fat Transpositional Lower Blepharoplasty. *Aesthet Surg J*. 2019 Sep 13;39(10):1048–1054.

Goseki T, **Suh SY**, Robbins L, **Pineles SL**, Velez FG, **Demer JL**. Prevalence of Sagging Eye Syndrome in Adults with Binocular Diplopia. *Am J Ophthalmol*. 2020 Jan;209:55–61. Epub 2019 Sep 14.

Asanad S, Lo C, **Ugradar S**, **Rootman DB**. Invasive cavernous sinus aspergillosis: an orbitocranial approach for diagnosis and management. *Can J Ophthalmol*. 2020 Feb;55(1):e33–e36. Epub 2019 Sep 16.

Mao X, An Q, Xi H, **Yang XJ**, Zhang X, Yuan S, Wang J, Hu Y, Liu Q, Fan G. Single-Cell RNA Sequencing of hESC-Derived 3D Retinal Organoids Reveals Novel Genes Regulating RPC Commitment in Early Human Retinogenesis. *Stem Cell Reports*. 2019 Oct 8;13(4):747–760. Epub 2019 Sep 19.

Dagi LR, Velez FG, Archer SM, Atalay HT, Campolattaro BN, Holmes JM, Kerr NC, Kushner BJ, Mackinnon SE, Paysse EA, Pihlblad MS, **Pineles SL**, Strominger MB, Stager DR Sr, Stager D Jr, Capo H. Adult Strabismus Preferred Practice Pattern®. *Ophthalmology*. 2020 Jan;127(1):P182–P298. Epub 2019 Sep 25.

Gune S, Abdelfattah NS, Karamat A, Balasubramanian S, Marion KM, Morgenthien E, **Sadda SR**. Spectral-Domain OCT-Based Prevalence and Progression of Macular Atrophy in the HARBOR Study for Neovascular Age-Related Macular Degeneration. *Ophthalmology*. 2020 Apr;127(4):523–532. Epub 2019 Sep 27. *Clinical Trial*.

Ingram NT, **Sampath AP**, **Fain GL**. Voltage-clamp recordings of light responses from wild-type and mutant mouse cone photoreceptors. *J Gen Physiol*. 2019 Nov 4;151(11):1287–1299. Epub 2019 Sep 27.

Su F, Spee C, Araujo E, Barron E, Wang M, Ghione C, Hinton DR, **Nusinowitz S**, **Kannan R**, Reddy ST, Farias-Eisner R. A Novel HDL-Mimetic Peptide HM-10/10 Protects RPE and Photoreceptors in Murine Models of Retinal Degeneration. *Int J Mol Sci*. 2019 Sep 27;20(19):4807.

Guymer RH, Rosenfeld PJ, Curcio CA, Holz FG, Staurenghi G, Freund KB, Schmitz-Valckenberg S, Sparrow J, Spaide RF, Tufail A, Chakravarthy U, Jaffe GJ, Csaky K, **Sarraf D**, Monés JM, Tadayoni R, Grunwald J, Bottoni F, Liakopoulos S, Pauleikhoff D, Pagliarini S, Chew EY, Viola F, Fleckenstein M, Blodi BA, Lim TH, Chong V, Luty J, Bird AC, **Sadda SR**. Incomplete Retinal Pigment Epithelial and Outer Retinal Atrophy in Age-Related Macular Degeneration: Classification of Atrophy Meeting Report 4. *Ophthalmology*. 2020 Mar;127(3):394–409. Epub 2019 Sep 30.

October 2019

McCannel CA, **McCannel TA**. A Brachytherapy Plaque Quick Removal Solution: The McCannel Plaque Stitch. *Retina*. 2019 Oct;39 Suppl 1:S201–S202.

Ugradar S, **Rootman DB**. Quantification of optic nerve length and tortuosity in thyroid eye disease. *Can J Ophthalmol*. 2019 Oct;54(5):611–614.

Chattopadhyay C, Oba J, Roszik J, Marszalek JR, Chen K, Qi Y, Eterovic K, Robertson AG, Burks JK, **McCannel TA**, Grimm EA, Woodman SE. Elevated Endogenous SDHA Drives Pathological Metabolism in Highly Metastatic Uveal Melanoma. *Invest Ophthalmol Vis Sci*. 2019 Oct 1;60(13):4187–4195.

Chen JY, Le A, De Andrade LM, Goseki T, **Demer JL**. Compression of the Choroid by Horizontal Duction. *Invest Ophthalmol Vis Sci*. 2019 Oct 1;60(13):4285–4291.

Corradetti G, Au A, Borrelli E, Xu X, Freund KB, **Sarraf D**. Analysis of Hyperreflective Dots Within the Central Fovea in Healthy Eyes Using En Face Optical Coherence Tomography. *Invest Ophthalmol Vis Sci*. 2019 Oct 1;60(13):4451–4461.

Lin BR, Pluym ID, **Tsui I**. Characterization of Retinal Lesions Secondary to Hemophagocytic Lymphohistiocytosis With OCTA. *Ophthalmic Surg Lasers Imaging Retina*. 2019 Oct 1;50(10):653–655.

Daniele LL, Caughey J, Volland S, Sharp RC, Dhingra A, **Williams DS**, Philp NJ, Boesze-Battaglia K. Peroxisome turnover and diurnal modulation of antioxidant activity in retinal pigment epithelia utilizes microtubule-associated protein 1 light chain 3B (LC3B). *Am J Physiol Cell Physiol*. 2019 Dec 1;317(6):C1194–C1204. Epub 2019 Oct 2.

Yang U, Gentleman S, Gai X, **Gorin MB**, Borchert MS, Lee TC, Villanueva A, Koenekoop R, Maguire AM, Bennett J, Redmond TM, Nagiel A. Utility of In Vitro Mutagenesis of RPE65 Protein for Verification of Mutational Pathogenicity Before Gene Therapy. *JAMA Ophthalmol*. 2019 Oct 3;137(12):1–9.

Chen AC, Velez FG, **Pineles SL**. Severe Acquired Restrictive Strabismus Fixus in Patients with Trisomy 21. *J Binocul Vis Ocul Motil*. 2019 Oct–Dec;69(4):153–156. Epub 2019 Oct 4.

Scott IU, Oden NL, VanVeldhuisen PC, **Ip MS**, Blodi BA, Chan CK; SCORE2 Investigator Group. Month 24 Outcomes After Treatment Initiation With Anti-Vascular Endothelial Growth Factor Therapy for Macular Edema Due to Central Retinal or Hemiretinal Vein Occlusion: SCORE2 Report 10: A Secondary Analysis of the SCORE2 Randomized Clinical Trial. *JAMA Ophthalmol*. 2019 Oct 10;137(12):1389–98.

Velaga SB, Nittala MG, Vupparaboina KK, Jana S, Chhablani J, Haines J, Pericak-Vance MA, Stambolian D, **Sadda SR**. Choroidal Vascularity Index and Choroidal Thickness in Eyes With Reticular Pseudodrusen. *Retina*. 2019 Oct 11.

Pineles SL, Aakalu VK, Hutchinson AK, Galvin JA, Heidary G, Binenbaum G, VanderVeen DK, Lambert SR. Binocular Treatment of Amblyopia: A Report by the American Academy of Ophthalmology. *Ophthalmology*. 2020 Feb;127(2):261–272. Epub 2019 Oct 13.

Moghimi S, Fatehi N, Nguyen AH, Romero P, **Caprioli J**, **Nouri-Mahdavi K**. Relationship of the Macular Ganglion Cell and Inner Plexiform Layers in Healthy and Glaucoma Eyes. *Transl Vis Sci Technol*. 2019 Oct 17;8(5):27. eCollection 2019 Sep.

- Rabiolo A, Morales E, Afifi AA, Yu F, **Nouri-Mahdavi K, Caprioli J**. Quantification of Visual Field Variability in Glaucoma: Implications for Visual Field Prediction and Modeling. *Transl Vis Sci Technol*. 2019 Oct 17;8(5):25. eCollection 2019 Sep.
- Margines JB, Huang C, Young A, Mehravaran S, Yu F, **Mondino BJ, Coleman AL**. Refractive Errors and Amblyopia Among Children Screened by the UCLA Preschool Vision Program in Los Angeles County. *Am J Ophthalmol*. 2020 Feb;210:78–85. Epub 2019 Oct 21.
- Toms M, Dubis AM, Lim WS, Webster AR, **Gorin MB**, Moosajee M. Missense variants in the conserved transmembrane M2 protein domain of KCNJ13 associated with retinovascular changes in humans and zebrafish. *Exp Eye Res*. 2019 Dec;189:107852. Epub 2019 Oct 21.
- Tsui E**, Gonzales JA, Shantha JG, Acharya N, Doan T. Letemovir for the Management of Cytomegalovirus-associated Uveitis. *Ocul Immunol Inflamm*. 2019 Oct 22:1–6.
- Li Z, Sreekumar PG, Peddi S, Hinton DR, **Kannan R**, MacKay JA. The humanin peptide mediates ELP nano-assembly and protects human retinal pigment epithelial cells from oxidative stress. *Nanomedicine*. 2020 Feb;24:102111. Epub 2019 Oct 23.
- Wei Y, Chen S, **Sun D**, Li X, Wei R, Li X, Nian H. miR-223-3p promotes autoreactive T_H17 cell responses in experimental autoimmune uveitis (EAU) by inhibiting transcription factor FOXO3 expression. *FASEB J*. 2019 Dec;33(12):13951–13965. Epub 2019 Oct 23.
- Swamy R, **Francis BA**, Akil H, Yelenskiy A, **Francis BA, Chopra V, Huang A**. Clinical results of ab interno trabectomy using the trabectome in patients with uveitic glaucoma. *Clin Exp Ophthalmol*. 2020 Jan;48(1):31–36. Epub 2019 Oct 27.
- Lau DK, Mouradov D, Wasenang W, Luk IY, Scott CM, **Williams DS**, Yeung YH, Limpaboon T, Iatropoulos GF, Jenkins LJ, Reehorst CM, Chionh F, Nikfarjam M, Croagh D, Dhillon AS, Weickhardt AJ, Muramatsu T, Saito Y, Tebbutt NC, Sieber OM, Mariadason JM. Genomic Profiling of Biliary Tract Cancer Cell Lines Reveals Molecular Subtypes and Actionable Drug Targets. *iScience*. 2019 Nov 22;21:624–637. Epub 2019 Oct 31.
- Ramesh S, Le A, Katsev B, **Ugradar S**. The Force Required to Inject a Column of Filler Through Facial Arteries. *Dermatol Surg*. 2019 Oct 31.
- Zhang Y**, Wang X, **Sadda SR**, Clark ME, Witherspoon CD, Spaide RF, Owsley C, Curcio CA. Lifecycles of Individual Subretinal Drusenoid Deposits and Evolution of Outer Retinal Atrophy in Age-Related Macular Degeneration. *Ophthalmol Retina*. 2020 Mar;4(3):274–283. Epub 2019 Oct 31.
- Zhao R, Qiao J, Zhang X, Zhao Y, Meng X, **Sun D**, Peng X. Toll-Like Receptor-Mediated Activation of CD39 Internalization in BMDCs Leads to Extracellular ATP Accumulation and Facilitates P2X7 Receptor Activation. *Front Immunol*. 2019 Oct 31;10:2524. eCollection 2019.
- November 2019**
- Chen CW, Francone AA, Gerber MJ, Lee YH, Govetto A, Tsao TC, **Hubschman JP**. Semiautomated optical coherence tomography-guided robotic surgery for porcine lens removal. *J Cataract Refract Surg*. 2019 Nov;45(11):1665–1669.
- Luong PM, **Tsui E**, Batra NN, Zegans ME. Endogenous endophthalmitis and other ocular manifestations of injection drug use. *Curr Opin Ophthalmol*. 2019 Nov;30(6):506–512. Review.
- Falavarjani KG, Au A, Anvari P, Molaei S, Ghasemizadeh S, Verma A, **Tsui I, Sadda S, Sarraf D**. En Face OCT of Type 2 Neovascularization: A Reappraisal of the Pitchfork Sign. *Ophthalmic Surg Lasers Imaging Retina*. 2019 Nov 1;50(11):719–725.
- Asanad S, Ross-Cisneros FN, Barron E, Nassisi M, Sultan W, Karanjia R, **Sadun AA**. The retinal choroid as an oculo-vascular biomarker for Alzheimer's dementia: A histopathological study in severe disease. *Alzheimers Dement (Amst)*. 2019 Nov 9;11:775–783. eCollection 2019 Dec.
- Ahmad TR, Doan T, Gonzales JA, Acharya NR, **Tsui E**. Clinical Course of Preexisting Uveitis during Treatment of Lung Cancer with Durvalumab. *Ocul Immunol Inflamm*. 2020 May 18;28(4):566–570. Epub 2019 Nov 11.
- Tsui E**, Takhar JS, Joye A, Ahmad TR, Acharya NR, Gonzales JA. High Resolution DNA Typing of Human Leukocyte Antigen A29 in Familial Birdshot Chorioretinopathy. *Ocul Immunol Inflamm*. 2019 Nov 13:1–4.
- Zhang W, Kassels AC, Barrington A, Khan S, Tomatsu S, Alkadi T, **Aldave A**. Macular corneal dystrophy with isolated peripheral Descemet membrane deposits. *Am J Ophthalmol Case Rep*. 2019 Nov 13;16:100571.
- Holland GN**, Barton K. Iridotomies on eyes with uveitis: indications and technique. *Br J Ophthalmol*. 2020 Jan;104(1):1. Epub 2019 Nov 14.
- Spaide RF, Jaffe GJ, **Sarraf D**, Freund KB, **Sadda SR**, Staurengi G, Waheed NK, Chakravarthy U, Rosenfeld PJ, Holz FG, Souied EH, Cohen SY, Querques G, Ohno-Matsui K, Boyer D, Gaudric A, Blodi B, Baurnal CR, Li X, Coscas GJ, Brucker A, Singerman L, Luthert P, Schmitz-Valckenberg S, Schmidt-Erfurth U, Grossniklaus HE, Wilson DJ, Guymer R, Yannuzzi LA, Chew EY, Csaky K, Monés JM, Pauleikhoff D, Tadayoni R, Fujimoto J. Consensus Nomenclature for Reporting Neovascular Age-Related Macular Degeneration Data: Consensus on Neovascular Age-Related Macular Degeneration Nomenclature Study Group. *Ophthalmology*. 2020 May;127(5):616–636. Epub 2019 Nov 14.
- Hyttinen JMT, **Kannan R**, Felszeghy S, Niittykoski M, Salminen A, Kaarniranta K. The Regulation of NFE2L2 (NRF2) Signalling and Epithelial-to-Mesenchymal Transition in Age-Related Macular Degeneration Pathology. *Int J Mol Sci*. 2019 Nov 18;20(22):5800. Review.

- Verma A, Maram J, Alagorie AR, Gupta Nittala M, van Hemert J, Keane D, Carnevale J, Bell D, Singer M, **Sadda SR**. Distribution and Location of Vortex Vein Ampullae in Healthy Human Eyes as Assessed by Ultra-Widefield Indocyanine Green Angiography. *Ophthalmol Retina*. 2020 May;4(5):530–534. Epub 2019 Nov 18.
- Sarao V, Veritti D, Borrelli E, **Sadda SR**, Poletti E, Lanzetta PBM. A comparison between a white LED confocal imaging system and a conventional flash fundus camera using chromaticity analysis. *Ophthalmol*. 2019 Nov 19; 19(1):231.
- Srinivas S, Verma A, Nittala MG, Alagorie AR, Nassisi M, Gasperini J, **Sadda SR**. Effect of Intravitreal Ranibizumab on Intraretinal Hard Exudates in Eyes with Diabetic Macular Edema. *Am J Ophthalmol*. 2020 Mar;211:183–190. Epub 2019 Nov 20.
- Gawargious BA, Le A, Lesgart M, **Ugradar S, Demer JL**. Differential Regional Stiffening of Sclera by Collagen Cross-linking. *Curr Eye Res*. 2020 Jun;45(6):718–725. Epub 2019 Nov 21.
- Govetto A, **Sarraf D**, Scialdone A. “Hide and seek” neurosensory retinal detachments in peripapillary pachycho-roid syndrome associated with pulmonary arterial hypertension. *Retin Cases Brief Rep*. 2019 Nov 21.
- Dávalos-Salas M, Montgomery MK, Reehorst CM, Nightingale R, Ng I, Anderton H, Al-Obaidi S, Lesmana A, Scott CM, Ioannidis P, Kalra H, Keerthikumar S, Tögel L, Rigopoulos A, Gong SJ, **Williams DS**, Yoganantharaja P, Bell-Anderson K, Mathivanan S, Gibert Y, Hiebert S, Scott AM, Watt MJ, Mariadason JM. Deletion of intestinal Hdac3 remodels the lipidome of enterocytes and protects mice from diet-induced obesity. *Nat Commun*. 2019 Nov 22;10(1):5291.
- Sadda SR**, Guymier R, Monés JM, Tufail A, Jaffe GJ. Anti-Vascular Endothelial Growth Factor Use and Atrophy in Neovascular Age-Related Macular Degeneration: Systematic Literature Review and Expert Opinion. *Ophthalmology*. 2020 May;127(5):648–659. Epub 2019 Nov 22. Review.
- Ramesh S, **Goldberg RA**, Wulc AE, Brackup AB. Observations on the Tear Trough. *Aesthet Surg J*. 2019 Nov 24:sjz345.
- Alió Del Barrio JL, Chung DD, Al-Shymali O, Barrington A, Jatavallabhula K, Swamy VS, Yévana P, Angélica Henríquez-Recine M, Boto-de-Los-Bueis A, Alió JL, **Aldave AJ**. Punctiform and Polychromatic Pre-Descemet Corneal Dystrophy: Clinical Evaluation and Identification of the Genetic Basis. *Am J Ophthalmol*. 2020 Apr;212:88–97. Epub 2019 Nov 27. Clinical Trial.
- Derveniz N, Harris A, **Coleman AL**, Wilson MR, Founti P, Yu F, Siesky B, Anastasopoulos E, Pappas T, Koskosas A, Kilintzis V, Topouzis F. Factors associated with non-active retinal capillary density as measured with Confocal Scanning Laser Doppler Flowmetry in an elderly population: the Thessaloniki Eye Study (TES). *Br J Ophthalmol*. 2019 Nov 29:bjophthalmol-2019-315212.
- December 2019 (Winter)**
- Aronow ME, Wiley HE, Gaudric A, Krivosic V, **Gorin MB**, Shields CL, Shields JA, Jonasch EW, Singh AD, Chew EY. Von Hippel-Lindau Disease: Update on Pathogenesis and Systemic Aspects. *Retina*. 2019 Dec;39(12): 2243–2253.
- Pashaei-Marandi A, Assam JH, **Arnold A**, Lee AG, **Bonelli L**. Reversible anisocoria due to inadvertent ocular exposure to topical anticholinergic treatment for primary axillary hyperhidrosis. *Can J Ophthalmol*. 2019 Dec; 54(6):e300–e302.
- Stenger MB, Laurie SS, **Sadda SR**, **Sadun AA**, Macias BR, **Huang AS**. Focus on the Optic Nerve Head in Spaceflight-Associated Neuro-ocular Syndrome. *Ophthalmology*. 2019 Dec;126(12):1604–1606.
- Wiley HE, Krivosic V, Gaudric A, **Gorin MB**, Shields C, Shields J, Aronow ME, Chew EY. Management of retinal hemangioblastoma in von Hippel-Lindau disease. *Retina*. 2019 Dec; 39(12):2254–2263.
- Tsui I**, Neves LM, Adachi K, Gaw SL, Pereira JP Jr, Brasil P, Nielsen-Saines K, Moreira MEL, Zin AA. Overlapping Spectrum of Retinochoroidal Scarring in Congenital Zika Virus and Toxoplasmosis Infections. *Ophthalmic Surg Lasers Imaging Retina*. 2019 Dec 1; 50(12):779–784.
- Demer JL**, Clark RA, **Suh SY**, **Giaconi JA**, **Nouri-Mahdavi K**, **Law SK**, **Bonelli L**, **Coleman AL**, **Caprioli J**. Optic Nerve Traction During Adduction in Open Angle Glaucoma with Normal versus Elevated Intraocular Pressure. *Curr Eye Res*. 2020 Feb;45(2):199–210. Epub 2019 Dec 2.
- Iovino C, Au A, Hilely A, Violanti S, Peiretti E, **Gorin MB**, **Sarraf D**. Evaluation of the Choroid in Eyes With Retinitis Pigmentosa and Cystoid Macular Edema. *Invest Ophthalmol Vis Sci*. 2019 Dec 2;60(15):5000–5006.
- Russell JF, Pichi F, Scott NL, Hartley MJ, Bell D, Agarwal A, Leong B, **Holland GN**, Freund KB, **Sarraf D**. Masqueraders of multiple evanescent white dot syndrome (MEWDS). *Int Ophthalmol*. 2020 Mar;40(3):627–638. Epub 2019 Dec 2.
- Peng YR**, James RE, Yan W, Kay JN, Kolodkin AL, Sanes JR. Binary Fate Choice between Closely Related Inter-neuronal Types Is Determined by a Fezf1-Dependent Postmitotic Transcriptional Switch. *Neuron*. 2020 Feb 5; 105(3):464–474. Epub 2019 Dec 4.
- Bittner AK**, Ferraz MC. Reliability of Mesopic Measures of Visual Acuity and Contrast Sensitivity and Their Correlation with Rod and Cone Function in Retinitis Pigmentosa. *Ophthalmic Res*. 2020;63(2):133–140. Epub 2019 Dec 5.
- Darvizeh F, Asanad S, Falavarjani KG, Wu J, Tian JJ, Bandello F, Ross-Cisneros FN, Barboni P, Borrelli E, **Sadun AA**. Choroidal thickness and the retinal ganglion cell complex in chronic Leber’s hereditary optic neuropathy: a prospective study using swept-source optical coherence tomography. *Eye (Lond)*. 2019 Dec 5.
- Rabiolo A, Morales E, Kim JH, Afifi AA, Yu F, **Nouri-Mahdavi K**, **Caprioli J**. Predictors of Long-Term Visual Field Fluctuation in Glaucoma Patients. *Ophthalmology*. 2020 Jun;127(6):739–747. Epub 2019 Dec 5.

- Sarraf D, Sadda S.** Pearls and Pitfalls of Optical Coherence Tomography Angiography Image Interpretation. *JAMA Ophthalmol.* 2019 Dec 5.
- Ugradar S, Le A, Lesgart M, Goldberg RA, Rootman D, Demer JL.** Biomechanical and Morphologic Effects of Collagen Cross-Linking in Human Tarsus. *Transl Vis Sci Technol.* 2019 Dec 5; 8(6):25. eCollection 2019 Nov.
- Putthirangsiwong B, Yang M, **Rootman DB.** Surgical outcomes following Muller Muscle-Conjunctival Resection in patients with glaucoma filtering surgery. *Orbit.* 2019 Dec 6:1–5.
- Tan O, Greenfield DS, **Francis BA, Varma R, Schuman JS, Huang D.** Estimating Visual Field Mean Deviation using Optical Coherence Tomographic Nerve Fiber Layer Measurements in Glaucoma Patients. *Sci Rep.* 2019 Dec 6;9(1):18528.
- Oh AJ, Amore G, Sultan W, Asanad S, Park JC, Romagnoli M, La Morgia C, Karanjia R, Harrington MG, **Sadun AA.** Pupillometry evaluation of melanopsin retinal ganglion cell function and sleep-wake activity in pre-symptomatic Alzheimer's disease. *PLoS One.* 2019 Dec 10;14(12):e0226197. eCollection 2019.
- Corradetti G, Violanti S, Au A, **Sarraf D.** Wide field retinal imaging and the detection of drug associated retinal toxicity. *Int J Retina Vitreous.* 2019 Dec 12;5(Suppl 1):26. eCollection 2019. Review.
- Kothari N, **Pineles S, Sarraf D, Velez F, Heilweil G, Holland G, McCannel CA, Onclinx T, McCannel TA, Sadda SR, Schwartz SD, Tsui I.** Clinic-based ultra-wide field retinal imaging in a pediatric population. *Int J Retina Vitreous.* 2019 Dec 12;5(Suppl 1):21. eCollection 2019.
- Tan CS, Li KZ, **Sadda SR.** Wide-field angiography in retinal vein occlusions. *Int J Retina Vitreous.* 2019 Dec 12; 5(Suppl 1):18. eCollection 2019. Review.
- Pineles SL, Davila-Gonzalez JP, Gorin M, Lee H, Sarraf D, Velez FG.** Optical coherence tomography and optical coherence tomography angiography findings and visual prognosis in two patients with posterior microphthalmos. *Retin Cases Brief Rep.* 2019 Dec 13.
- Gorin MB, daSilva MJ.** Predictive genetics for AMD: Hype and hopes for genetics-based strategies for treatment and prevention. *Exp Eye Res.* 2020 Feb;191:107894. Epub 2019 Dec 17. Review.
- Govetto A, **Sarraf D, Hubschman JP, Tadayoni R, Couturier A, Chehaibou I, Au A, Grondin C, Virgili G, Romano MR.** Distinctive Mechanisms and Patterns of Exudative Versus Tractional Intra-retinal Cystoid Spaces as Seen With Multimodal Imaging. *Am J Ophthalmol.* 2020 Apr;212:43–56. Epub 2019 Dec 17. Clinical Trial.
- Shin A, Park J, Le A, Poukens V, **Demer JL.** Bilaminar Mechanics of the Human Optic Nerve Sheath. *Curr Eye Res.* 2020 Jul;45(7):854–863. Epub 2019 Dec 17.
- Prager AJ, Jampol LM, **Ip MS.** Diagnostic and Therapeutic Challenges. *Retina.* 2019 Dec 27.
- Lu X, Li N, Zhao L, Guo D, Yi H, Yang L, Liu X, **Sun D, Nian H, Wei R.** Human umbilical cord mesenchymal stem cells alleviate ongoing autoimmune dacryoadenitis in rabbits via polarizing macrophages into an anti-inflammatory phenotype. *Exp Eye Res.* 2020 Feb; 191:107905. Epub 2019 Dec 28.
- Lin F, Oh SK, **Gordon LK, Pineles SL, Rosenberg JB, Tsui I.** Gender-based differences in letters of recommendation written for ophthalmology residency applicants. *BMC Med Educ.* 2019 Dec 30;19(1):476.
- January 2020**
- Alhajraf K, **Lin SR, Jacobs DS.** A corneal ring ulcer. *American Journal of Ophthalmology Case Reports* 2020. <https://www.sciencedirect.com/science/article/pii/S2451993620301717>
- Bakshi SK, **Lin SR, Ting DSW, Chiang MF, Chodosh J.** The era of artificial intelligence and virtual reality: transforming surgical education in ophthalmology. *British Journal of Ophthalmology* 2020. <https://bjoo.bmj.com/content/early/2020/08/13/bjophthalmol-2020-316845>.
- Chen L, Messinger JD, **Zhang Y, Spaide RF, Freund KB, Curcio CA.** Subretinal drusenoid deposit in age-related macular degeneration: Histologic insights into initiation, progression to atrophy, and imaging. *Retina.* 2020; 40(4):618–631.
- Truong DT, **Miller KM.** Chapter 9, Iris Prosthesis Devices. In Agarwal A, Agarwal A, and Narang P. *Mastering Iris Repair: A Video Textbook of Iris Repair and Pupilloplasty Techniques.* Thorofare, NJ: SLACK Inc, 2020.
- Kim EA, Salazar D, **McCannel CA, Kamrava M, Demanes DJ, Lamb J, Caprioli J, McCannel TA.** Glaucoma After Iodine-125 Brachytherapy for Uveal Melanoma: Incidence and Risk Factors. *J Glaucoma.* 2020 Jan;29(1): 1–10.
- Malkin AG, Ross NC, Chan TL, Protosow K, **Bittner AK.** U. S. Optometrists' Reported Practices and Perceived Barriers for Low Vision Care for Mild Visual Loss. *Optom Vis Sci.* 2020 Jan;97(1):45–51.
- Manta A, **Goldberg RA.** Pembrolizumab-Related Enophthalmos. *Ophthalmology.* 2020 Jan;127(1):121.
- Sun Y, Dos Santos A, Balayan A, **Deng SX.** Evaluation of Cryopreservation Media for the Preservation of Human Corneal Stromal Stem Cells. *Tissue Eng Part C Methods.* 2020 Jan;26(1):37–43.
- Eslahi AV, Badri M, Khorshidi A, Majidiani H, Hooshmand E, **Hosseini H, Taghipour A, Foroutan M, Pestehchian N, Firoozeh F, Riahi SM, Zibaei M.** Prevalence of Toxocara and Toxascaris infection among human and animals in Iran with meta-analysis approach. *BMC Infect Dis.* 2020 Jan 7;20(1):20.
- Tay C, Kanellakis P, **Hosseini H, Cao A, Toh BH, Bobik A, Kyaw T.** B Cell and CD4 T Cell Interactions Promote Development of Atherosclerosis. *Front Immunol.* 2020 Jan 10;10:3046. eCollection 2019.
- Choudhary M, Ismail EN, Yao PL, Tayyari F, **Radu RA, Nusinowitz S, Boulton ME, Apte RS, Ruberti JW, Handa JT, Tontonoz P, Malek G.** LXR_s regulate features of age-related macular degeneration and may be a potential therapeutic target. *JCI Insight.* 2020 Jan 16;5(1):e131928.

Wang D, Au A, Gunnemann F, Hilely A, Scharf J, Tran K, Sun M, Kim JH, **Sarraf D**. Pentosan-associated maculopathy: prevalence, screening guidelines, and spectrum of findings based on prospective multimodal analysis. *Can J Ophthalmol*. 2020 Apr;55(2):116–125. Epub 2020 Jan 20.

Gordon LK, Danesh-Meyer H. Neuro-Ophthalmic Manifestations of HIV Infection. *Ocul Immunol Inflamm*. 2020 Jan 21:1–9.

Parravano M, Costanzo E, Borrelli E, Sacconi R, Virgili G, **Sadda SR**, Scarinci F, Varano M, Bandello F, Querques G. Appearance of cysts and capillary non perfusion areas in diabetic macular edema using two different OCTA devices. *Sci Rep*. 2020 Jan 21;10(1):800.

Mohammadzadeh V, Rabiolo A, Fu Q, Morales E, **Coleman AL**, **Law SK**, **Caprioli J**, **Nouri-Mahdavi K**. Longitudinal Macular Structure–Function Relationships in Glaucoma. *Ophthalmology*. 2020 Jul;127(7):888–900. Epub 2020 Jan 22.

Patel SH, Truong T, **Tsui I**, Moon JY, Rosenberg JB. Gender of Presenters at Ophthalmology Conferences Between 2015 and 2017. *Am J Ophthalmol*. 2020 May;213:120–124. Epub 2020 Jan 23.

Patel KS, Kejriwal S, Sun MM, Thammachantha S, Duong C, Chan A, Cherian N, Romiyo P, **Gordon LK**, Yong W, Wadehra M, Yang I. Identification of epithelial membrane protein 2 (EMP2) as a molecular marker and correlate for angiogenesis in meningioma. *J Neurooncol*. 2020 Mar;147(1):15–24. Epub 2020 Jan 24.

Fang Y, Tschulakow A, Taubitz T, Illing B, Biesemeier A, Julien-Schraermeyer S, **Radu RA**, Jiang Z, Schraermeyer U. Fundus autofluorescence, spectral-domain optical coherence tomography, and histology correlations in a Stargardt disease mouse model. *FASEB J*. 2020 Mar;34(3):3693–3714. Epub 2020 Jan 27.

Verma A, Alagorie AR, Ramasamy K, van Hemert J, Yadav NK, Pappuru RR, Tufail A, Nittala MG, **Sadda SR**, Raman R; Indian Retina Research Associates (IRRA). Distribution of peripheral lesions identified by mydriatic ultra-wide field fundus imaging in diabetic retinopathy. *Graefes Arch Clin Exp Ophthalmol*. 2020 Apr;258(4):725–733. Epub 2020 Jan 27.

Azhdam AM, **Goldberg RA**, **Ugradar S**. In Vivo Measurement of the Human Vitreous Chamber Volume Using Computed Tomography Imaging of 100 Eyes. *Transl Vis Sci Technol*. 2020 Jan 29;9(1):2. eCollection 2020 Jan.

Saravanan VR, Manayath GJ, Balan R, Ranjan R, Freund KB, **Sarraf D**. Diagnostic and Therapeutic Challenges. *Retina*. 2020 Jan 30.

Strunz T, Lauwen S, Kiel C; International AMD Genomics Consortium (**Gorin MB**), Hollander AD, Weber BHF. A transcriptome-wide association study based on 27 tissues identifies 106 genes potentially relevant for disease pathology in age-related macular degeneration. *Sci Rep*. 2020 Jan 31;10(1):1584.

Sung Y, **Goldberg RA**, Lew H. Periorbital Injection of Hyaluronic Acid Gel in Patients With Deep Superior Sulcus. *J Craniofac Surg*. 2020 Jan/Feb;31(1):271–273.

February 2020

Sadda SR. A path to the development of screening guidelines for pentosan maculopathy. *Can J Ophthalmol*. 2020 Feb;55(1):1–2.

Liu K, Mehta N, Alibhai AY, Arya M, Sorour O, Ishibazawa A, Byon I, Baumal CR, Witkin AJ, Duker JS, **Sadda SR**, Waheed NK. Effects of enhanced depth imaging and en face averaging on optical coherence tomography angiography image quantification. *Graefes Arch Clin Exp Ophthalmol*. 2020 May;258(5):979–986. Epub 2020 Feb 4.

Gundlach BS, **Tsui I**. Optical coherence tomography in pediatric patients: a clinical review. *Ther Adv Ophthalmol*. 2020 Feb 5;12:2515841420904612. eCollection 2020 Jan–Dec. Review.

Rowlands MA, Patel P, Dubovy SR, Chiu B, **Tsui E**, Solomon J, Modi YS. Ectopic Retinal Pseudocysts: A Clinicopathologic Correlation. *Ophthalmol Retina*. 2019 Jul;3(7):616–617. Epub 2019 Feb 5.

Scharf JM, Hilely A, Freund KB, **Sarraf D**. Autofluorescent timeline of spots and dots in multiple evanescent white dot syndrome. *Retin Cases Brief Rep*. 2020 Feb 5.

Williams DS. Hepatic Adenoma. *J Insur Med*. 2020 Feb 5.

Law SK, Wang L, Li T. Acupuncture for glaucoma. *Cochrane Database Syst Rev*. 2020 Feb 7;2(2):CD006030.

Xiong YZ, Kwon M, **Bittner AK**, Virgili G, Giacomelli G, Legge GE. Relationship Between Acuity and Contrast Sensitivity: Differences Due to Eye Disease. *Invest Ophthalmol Vis Sci*. 2020 Feb 7;61(2):40.

Milstein ML, Cavanaugh BL, Roussey NM, Volland S, **Williams DS**, Goldberg AFX. Multistep peripherin-2/rds self-assembly drives membrane curvature for outer segment disk architecture and photoreceptor viability. *Proc Natl Acad Sci U S A*. 2020 Feb 25;117(8):4400–4410. Epub 2020 Feb 10.

Sadda SR. Lack of efficacy of eplerenone for treatment of active central serous chorioretinopathy. *Eye (Lond)*. 2020 Feb 10.

Ugradar S, Isse N, **Goldberg RA**, Fodor P. A novel variation of the suture suspension facelift. *J Cosmet Dermatol*. 2020 Feb 10.

Alagorie AR, Nassisi M, Verma A, Nittala M, Corradetti G, Velaga S, **Sadda SR**. Relationship between proximity of choriocapillaris flow deficits and enlargement rate of geographic atrophy. *Graefes Arch Clin Exp Ophthalmol*. 2020 May;258(5):995–1003. Epub 2020 Feb 11.

- Williams DS**, Mouradov D, Newman MR, Amini E, Nickless DK, Fang CG, Palmieri M, Sakthianandeswaren A, Li S, Ward RL, Hawkins NJ, Skinner I, Jones I, Gibbs P, Sieber OM. Tumour infiltrating lymphocyte status is superior to histological grade, DNA mismatch repair and BRAF mutation for prognosis of colorectal adenocarcinomas with mucinous differentiation. *Mod Pathol*. 2020 Jul;33(7):1420–1432. Epub 2020 Feb 11.
- Kothari N, Chu A, Huang JM, Lin F, Lin BR, Manoharan N, Gui W, **Huang AS**, **Tsui I**. Arm-mounted optical coherence tomography angiography in extremely low birth weight neonates with retinopathy of prematurity. *Am J Ophthalmol Case Rep*. 2020 Feb 24;18:100624. eCollection 2020 Jun.
- Lakkaraju A, Umopathy A, Tan LX, Daniele L, Philp NJ, Boesze-Battaglia K, **Williams DS**. The cell biology of the retinal pigment epithelium. *Prog Retin Eye Res*. 2020 Feb 24:100846. Review.
- Ugradar S**, Joshi S, **Goldberg RA**, **Demer JL**. The Adnexal Phenotype of Sagging Eye Syndrome. *Ophthalmic Plast Reconstr Surg*. 2020 Feb 24.
- Arnold AC**, Lee AG. Dilation of the Periocular Subarachnoid Space Anterior to Optic Nerve Sheath Meningioma. *J Neuroophthalmol*. 2020 Feb 26.
- Bittner AK**, Yoshinaga PD, Wykstra SL, Li T. Telerehabilitation for people with low vision. *Cochrane Database Syst Rev*. 2020 Feb 27;2(2):CD011019.
- Hubschman JP**, Govetto A, Spaide RF, Schumann R, Steel D, Figueroa MS, Sebag J, Gaudric A, Staurengi G, Haritoglou C, Kadonosono K, Thompson JT, Chang S, Bottoni F, Tadayoni R. Optical coherence tomography-based consensus definition for lamellar macular hole. *Br J Ophthalmol*. 2020 Feb 27: vbjophthalmol-2019-315432.
- Oh AJ, Amore G, Sultan W, Asanad S, Park JC, Romagnoli M, La Morgia C, Karanjia R, Harrington MG, **Sadun AA**. Correction: Pupillometry evaluation of melanopsin retinal ganglion cell function and sleep-wake activity in pre-symptomatic Alzheimer's disease. *PLoS One*. 2020 Feb 27;15(2): e0230061.
- Zupancic JAF, Ying GS, de Alba Campomanes, Tomlinson LA, Binenbaum G, G-ROP Study Group (**Khitri MR**). Evaluation of the economic impact of modified screening criteria for retinopathy of prematurity from the Postnatal Growth and ROP (G-ROP) study. *J Perinatol*. 2020 Jul;40(7):1100–1108. Epub 2020 Feb 28.
- March 2020 (Spring)**
- Moss HE, Cao J, **Pineles SL**. Randomized Controlled Trials: A Primer for Neuro-Ophthalmologists. *J Neuro-ophthalmol*. 2020 Mar;40(1):3–7.
- Ingram NT, **Sampath AP**, **Fain GL**. Membrane conductances of mouse cone photoreceptors. *J Gen Physiol*. 2020 Mar 2;152(3):e201912520.
- Falardeau JM, **Pineles SL**, Van Stavern GP, Lee AG. Should Patients With Optic Disc Drusen Be Treated With Intraocular Pressure-Lowering Medications? *J Neuroophthalmol*. 2020 Mar 4.
- Rimoin AW, **Holland GN**. Further Considerations About the Ophthalmic Sequelae of Ebola. *JAMA Ophthalmol*. 2020 Mar 5.
- Ali MH, **Pineles SL**, Velez FG, Tandon AK, **Glasgow BJ**. Pathologic Study of Supernumerary Orbital Band in Type I Duane Syndrome. *Ocul Oncol Pathol*. 2019 Aug;5(5):305–311. Epub 2019 Mar 6.
- Su L, Ji YS, Tong N, **Sarraf D**, He X, Sun X, Xu X, **Sadda SR**. Quantitative assessment of the retinal microvasculature and choriocapillaris in myopic patients using swept-source optical coherence tomography angiography. *Graefes Arch Clin Exp Ophthalmol*. 2020 Jun;258(6):1173–1180. Epub 2020 Mar 6.
- Gerber MJ, Pettenkofer M, **Hubschman JP**. Advanced robotic surgical systems in ophthalmology. *Eye (Lond)*. 2020 Mar 9. Review.
- Sreekumar PG, Hinton DR, **Kannan R**. The Emerging Role of Senescence in Ocular Disease. *Oxid Med Cell Longev*. 2020 Mar 9;2020:2583601. eCollection 2020. Review.
- Le A, Shin A, Park J, Poukens V, **Demer JL**. Bilaminar Structure of the Human Optic Nerve Sheath. *Curr Eye Res*. 2020 Jul;45(7):864–872. Epub 2020 Mar 16.
- Dong PN, Cung LX, Sam TK, Hang DTT, Chung DD, Alkadi TA, Buckshey A, Zhang J, Kassels A, **Aldave AJ**. Identification of a Novel Missense *KRT12* Mutation in a Vietnamese Family with Meesmann Corneal Dystrophy. *Case Rep Ophthalmol*. 2020 Mar 17;11(1):120–126. eCollection 2020 Jan–Apr.
- Peng YR**, **Sampath AP**. LRR-ning the Rules: Synapse Organization in the Primary Rod Pathway. *Neuron*. 2020 Mar 18;105(6):949–951.
- Law SK**. Virtual Reality Simulation to Identify Vision-Associated Disability in Patients With Glaucoma. *JAMA Ophthalmol*. 2020 Mar 19.
- Mohammadzadeh V, Fatehi N, Yarmohammadi A, Lee JW, Sharifipour F, Daneshvar R, **Caprioli J**, **Nouri-Mahdavi K**. Macular imaging with optical coherence tomography in glaucoma. *Surv Ophthalmol*. 2020 Nov–Dec;65(6):597–638. Epub 2020 Mar 19. Review.
- Tran K, Wang D, Scharf J, **Sadda S**, **Sarraf D**. Inner choroidal ischaemia and CNV due to handheld laser-induced maculopathy: a case report and review. *Eye (Lond)*. 2020 Mar 19. Review.
- Egan RA, **Arnold AC**, Lee AG, Van Stavern GP. Should Aspirin Be Prescribed to Prevent Recurrence in Nonarteritic Anterior Ischemic Optic Neuropathy? *J Neuroophthalmol*. 2020 Mar 23.
- Schönbach EM, Strauss RW, Ibrahim MA, Janes JL, Birch DG, Cideciyan AV, Sunness JS, Muñoz B, **Ip MS**, **Sadda SR**, Scholl HPN; ProgStar study group. Faster Sensitivity Loss around Dense Scotomas than for Overall Macular Sensitivity in Stargardt Disease: ProgStar Report No. 14. *Am J Ophthalmol*. 2020 Mar 25:S0002-9394(20)30120-3.
- Ugradar S**, Karlin J, Le A, Park J, **Goldberg RA**. Photochemical Collagen Cross-Linking Reverses Elastase-Induced Mechanical Degradation of Upper Eyelid Tarsus. *Ophthalmic Plast Reconstr Surg*. 2020 Mar 25.

Lenis TL, Gunzenhauser RC, **Fung SSM**, Dhindsa YK, **Sarraf D**, **Pineles SL**, **Tsui I**. Myopia and anterior segment optical coherence tomography findings in laser-treated retinopathy of prematurity eyes. *J AAPOS*. 2020 Apr; 24(2):86. e1–86. e7. Epub 2020 Mar 26.

Pan X, Maram J, Nittala MG, **Francis BA**, **Chopra V**, **Sadda SR**. Reproducibility and agreement of four anterior segment-optical coherence tomography devices for anterior chamber angle measurements. *Graefes Arch Clin Exp Ophthalmol*. 2020 Jul;258(7):1475–1481. Epub 2020 Mar 26.

Ballard Z, Bazargan S, Jung D, Sathianathan S, Clemens A, Shir D, **Al-Hashimi S**, Ozcan A. Contact lens-based lysozyme detection in tear using a mobile sensor. *Lab Chip*. 2020 Apr 21;20(8):1493–1502. Epub 2020 Mar 30.

Olivia Li JP, Shantha J, Wong TY, Wong EY, Mehta J, Lin H, Lin X, Strouthidis NG, Park KH, Fung AT, McLeod SD, Busin M, Parke DW 2nd, **Holland GN**, Chodosh J, Yeh S, Ting DSW. Preparedness among Ophthalmologists: During and Beyond the COVID-19 Pandemic. *Ophthalmology*. 2020 May;127(5):569–572. Epub 2020 Mar 31.

Rootman DB, Bokman CL, Katsev B, Rafaelof M, **Ip M**, Manoukian N, Esfandiari M, Webb NM. Crowdsourcing Morphology Assessments in Oculoplastic Surgery: Reliability and Validity of Lay People Relative to Professional Image Analysts and Experts. *Ophthalmic Plast Reconstr Surg*. 2020 Mar/Apr;36(2):178–181.

April 2020

Bonnet C, **Aldave AJ**. Atypical Corneal Deposits after Deep Anterior Lamellar Keratoplasty. *Ophthalmology*. 2020 Apr;127(4):466.

Sadda SR. Assessing the Severity of Diabetic Retinopathy: Early Treatment Diabetic Retinopathy Study Report Number 10. *Ophthalmology*. 2020 Apr; 127(4S):S97–S98.

Shi Y, Huang J, Conrick P, Hoover C, **Lee OL**. Discrepancies in Endothelial Cell Density Values of Human Donor Corneas Resulting From Comparison Between Specular Microscopes and Endothelial Analysis Methods. *Cornea*. 2020 Apr;39(4):495–500.

Velaga SB, Nittala MG, Vupparaboina KK, Jana S, Chhablani J, Haines J, Pericak-Vance MA, Stambolian D, **Sadda SR**. Choroidal vascularity index and choroidal thickness in eyes with reticular pseudodrusen. *Retina*. 2020 Apr;40(4):612–617.

Pineles SL, Lewis RA, Khanlou N, Velez FG. Vertical asymmetric mitochondrial ophthalmoplegia. *Can J Ophthalmol*. 2019 Oct;54(5):e230–e232. Epub 2019 Apr 1.

Pole C, Freund KB, **Sarraf D**. Arterio-arterial collaterals due to a prepapillary vascular loop. *Can J Ophthalmol*. 2020 Jun;55(3):277–278. Epub 2020 Apr 1.

Tsui E, Patel P. Calculated Decisions: Visual acuity testing (Snellen chart). *Emerg Med Pract*. 2020 Apr 1;22(4): CD1–CD2.

Ward R, Kaylor JJ, Cobice DF, Pepe DA, McGarrigle EM, Brockerhoff SE, Hurley JB, **Travis GH**, Kennedy BN. Non-photopic and photopic visual cycles differentially regulate immediate, early, and late phases of cone photoreceptor-mediated vision. *J Biol Chem*. 2020 May 8;295(19):6482–6497. Epub 2020 Apr 1.

Clark RA, **Demer JL**. The Effect of Axial Length on Extraocular Muscle Leverage. *Am J Ophthalmol*. 2020 Apr 2:S0002-9394(20)30144-6.

Sadda SR, Abdelfattah NS, Lei J, Shi Y, Marion KM, Morgenthien E, Gune S, Balasubramanian S. Ophthalmology. Spectral-Domain OCT Analysis of Risk Factors for Macular Atrophy Development in the HARBOR Study for Neovascular Age-Related Macular Degeneration. 2020 Apr 2: S0161-6420(20)30315-8.

Salazar D, Morales E, Rabiolo A, Capistrano V, Lin M, Afifi AA, Yu F, **Nouri-Mahdavi K**, **Caprioli J**. Pointwise Methods to Measure Long-term Visual Field Progression in Glaucoma. *JAMA Ophthalmol*. 2020 Apr 2;138(5):1–9.

Ugradar S, **Rootman DB**. Quantification of optic nerve length and tortuosity in thyroid eye disease. *Can J Ophthalmol*. 2019 Oct;54(5):611–614. Epub 2019 Apr 2.

Karlin JN, Mustak H, Gupta A, Ramos R, **Rootman DB**. Cone Beam Computerized Tomography Dacryocystography (CBCT DCG) for the Evaluation of Lacrimal Drainage System Dysfunction. *Ophthalmic Plast Reconstr Surg*. 2020 Apr 3.

Lenis TL, Au A, Hou K, Govetto A, **Sarraf D**. Alterations of the foveal central bouquet associated with cystoid macular edema. *Can J Ophthalmol*. 2020 Aug;55(4):301–309. Epub 2020 Apr 7.

Muqit MMK, **Hubschman JP**, Picaud S, McCreery DB, van Meurs JC, Hornig R, Buc G, Deterre M, Nouvel-Jaillard C, Bouillet E, Fovet CM, Hantraye P, Sahel J, Martel JN, Le Mer Y. PRIMA subretinal wireless photovoltaic microchip implantation in non-human primate and feline models. *PLoS One*. 2020 Apr 8; 15(4):e0230713. eCollection 2020.

Ridolfo R, Arends JJ, van Hest JCM, **Williams DS**. Wormlike Nanovector with Enhanced Drug Loading Using Blends of Biodegradable Block Copolymers. *Biomacromolecules*. 2020 Jun 8;21(6):2199–2207. Epub 2020 Apr 8.

Chen NS, Ingram NT, Frederiksen R, **Sampath AP**, Chen J, **Fain GL**. Diminished Cone Sensitivity in cpfl3 Mice Is Caused by Defective Transducin Signaling. *Invest Ophthalmol Vis Sci*. 2020 Apr 9;61(4):26.

Scharf JM, Hilely A, Preti RC, Grondin C, Chehaibou I, Greaves G, Tran K, Wang D, **Ip MS**, **Hubschman JP**, Gaudric A, **Sarraf D**. Hyperreflective Stress Lines and Macular Holes. *Invest Ophthalmol Vis Sci*. 2020 Apr 9; 61(4):50.

Wang H, Jung J, **Lin SR**, Olson MD, **Miller KM**. Safety and Efficacy of Colored Iris Reconstruction Lens Implantation. *Am J Ophthalmol*. 2020 Aug;216:174–185. Epub 2020 Apr 9.

Ausayakhun S, Lu LJ, Ausayakhun S, Nanegrungsunk O, Apivatthakakul A, Luewattananont D, Photcharapongsakul C, Liu Y, **Holland GN**, Margolis TP, Heiden D, Keenan JD. Contralateral Eye Involvement and Retinal Detachment in Patients with Cytomegalovirus Retinitis Treated with Intravitreal Ganciclovir. *Ocul Immunol Inflamm*. 2020 Apr 10:1–6.

- Liang Q, Le Q, Cordova DW, Tseng CH, **Deng SX**. Corneal Epithelial Thickness Measured Using AS-OCT as a Diagnostic Parameter for Limbal Stem Cell Deficiency. *Am J Ophthalmol*. 2020 Apr 10:S0002-9394(20)30173-2.
- Tran J, **Tsui E**. Assessment of the Readability, Availability, and Quality of Online Patient Education Materials Regarding Uveitis Medications. *Ocul Immunol Inflamm*. 2020 Apr 10:1–6.
- Kaarniranta K, Uusitalo H, Blasiak J, Felszeghy S, **Kannan R**, Kauppinen A, Salminen A, Sinha D, Ferrington D. Mechanisms of mitochondrial dysfunction and their impact on age-related macular degeneration. *Prog Retin Eye Res*. 2020 Apr 13:100858.
- Wang YX, Yang H, Luo H, Hong SW, Gardiner SK, Jeoung JW, Hardin C, Sharpe GP, **Nouri-Mahdavi K**, **Caprioli J**, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, Fortune B, Chauhan BC, Burgoyne CF. Peripapillary Scleral Bowing Increases with Age and is Inversely Associated with Peripapillary Choroidal Thickness in Healthy Eyes. *Am J Ophthalmol*. 2020 Apr 13:S0002-9394(20)30162-8.
- Mejia-Vergara AJ, Seleme N, **Sadun AA**, Karanjia R. Pathophysiology of Conversion to Symptomatic Leber Hereditary Optic Neuropathy and Therapeutic Implications: a Review. *Curr Neurol Neurosci Rep*. 2020 Apr 15;20(5):11.
- Hu J, Qu J, Li M, Sun G, Piao Z, Liang Z, Yao Y, **Sadda S**, Zhao M. Optical Coherence Tomography Angiography-Guided Photodynamic Therapy for Acute Central Serous Chorioretinopathy. *Retina*. 2020 Apr 16.
- Zhong M, Kawaguchi R, Costabile B, Tang Y, Hu J, Cheng G, Kassai M, Ribalet B, Mancina F, **Bok D**, **Sun H**. Regulatory mechanism for the transmembrane receptor that mediates bidirectional vitamin A transport. *Proc Natl Acad Sci U S A*. 2020 May 5; 117(18):9857–9864. Epub 2020 Apr 16.
- Wilson LB, Melia M, Kraker RT, VanderVeen DK, Hutchinson AK, **Pineles SL**, Galvin JA, Lambert SR. Accuracy of Autorefractometry in Children: A Report by the American Academy of Ophthalmology. *Ophthalmology*. 2020 Apr 18:S0161-6420(20)30231-1.
- Zhang C, Mei H, Robertson SYT, Lee HJ, **Deng SX**, **Zheng JJ**. A Small-Molecule Wnt Mimic Improves Human Limbal Stem Cell Ex Vivo Expansion. *iScience*. 2020 May 22;23(5):101075. Epub 2020 Apr 18.
- Khan M, Cornelis SS, Pozo-Valero MD, Whelan L, Runhart EH, Mishra K, Bults F, AISwaiti Y, AITalbishi A, De Baere E, Banfi S, Banin E, Bauwens M, Ben-Yosef T, Boon CJF, van den Born LJ, Defoort S, Devos A, Dockery A, Dudakova L, Fakin A, Farrar GJ, Sallum JMF, Fujinami K, Gilissen C, Glavač D, **Gorin MB**, Greenberg J, Hayashi T, Hettinga YM, Hoischen A, Hoyng CB, Hufendiek K, Jägle H, Kamakari S, Karali M, Kellner U, Klaver CCW, Kousal B, Lamey TM, MacDonald IM, Matynia A, McLaren TL, Mena MD, Meunier I, Miller R, Newman H, Ntozini B, Oldak M, Pieterse M, Podhajcer OL, Puech B, Ramesar R, Rütger K, Salameh M, Salles MV, Sharon D, Simonelli F, Spital G, Steehouwer M, Szaflik JP, Thompson JA, Thuillier C, Tracewska AM, van Zweeden M, Vincent AL, Zanlonghi X, Liskova P, Stöhr H, Roach JN, Ayuso C, Roberts L, Weber BHF, Dhaenens CM, Cremers FPM. Resolving the dark matter of ABCA4 for 1054 Stargardt disease probands through integrated genomics and transcriptomics. *Genet Med*. 2020 Jul;22(7):1235–1246. Epub 2020 Apr 20.
- Wang Y, Rhee KD, Pellegrini M, **Yang XJ**. Impacts of ciliary neurotrophic factor on the retinal transcriptome in a mouse model of photoreceptor degeneration. *Sci Rep*. 2020 Apr 20; 10(1):6593.
- Fung AT, Waldstein SM, Gal-Or O, Pellegrini M, Preziosa C, Shields JA, Welch RJ, Dolz-Marco R, **Sarraf D**, Nagiel A, Lalane R, Jung JJ, Ghazi NG, Ramtohul P, Arnold JJ, Sakurada Y, Choudhry N, Balaratnasingam C, Freund KB, Shields CL. Focal Scleral Nodule: A New Name for Solitary Idiopathic Choroiditis and Unifocal Helioid Choroiditis. *Ophthalmology*. 2020 Apr 22:S0161-6420(20)30396-1.
- Le Q, Chauhan T, Yung M, Tseng CH, **Deng SX**. Outcomes of Limbal Stem Cell Transplant: A Meta-analysis. *JAMA Ophthalmol*. 2020 Apr 23;138(6):1–11.
- Yu HJ, Kaier PK, Zamora D, Bocanegra M, Cone C, Brown DM, **Sadda SR**, Wycoff CC. Visual Acuity Variability: Comparing Discrepancies Between Snellen and ETDRS Measurements Among Subjects Entering Prospective Trials. *Ophthalmol Retina*. 2020 Apr 23; S2468-6530(20)30154-8.
- van Zyl T, Yan W, McAdams A, **Peng YR**, Shekhar K, Regev A, Juric D, Sanes JR. Cell atlas of aqueous humor outflow pathways in eyes of humans and four model species provides insight into glaucoma pathogenesis. *Proc Natl Acad Sci U S A*. 2020 May 12; 117(19):10339–10349. Epub 2020 Apr 27.
- Iovino C, Au A, Chhablani J, Parameswarappa DC, Rasheed MA, Cennamo G, Cennamo G, Montorio D, Ho AC, Xu D, Querques G, Borrelli E, Sacconi R, Pichi F, Woodstock E, **Sadda SR**, Corradetti G, Boon CJF, van Dijk EHC, Loewenstein A, Zur D, Yoshimi S, Bailey Freund K, Peiretti E, **Sarraf D**. Choroidal anatomical alterations following photodynamic therapy for chronic central serous chorioretinopathy: a multicenter study. *Am J Ophthalmol*. 2020 Apr 28:S0002-9394(20)30190-2.
- Nassisi M, Tepelus T, Corradetti G, **Sadda SR**. Relationship between choriocapillaris flow and scotopic microperimetry in early and intermediate age related macular degeneration. *Am J Ophthalmol*. 2020 Apr 28; S0002-9394(20)30186-0.
- Sacconi R, Borrelli E, **Sadda S**, Corradetti G, Freund KB, Yannuzzi LA, Souied E, Capuano V, **Sarraf D**, Querques L, Bandello F, Querques G. Non-Exudative Perifoveal Vascular Anomalous Complex: the sub-clinical stage of Perifoveal Exudative Vascular Anomalous Complex? *Am J Ophthalmol*. 2020 Apr 28; S0002-9394(20)30193-8.
- Etheridge T, Dobson ETA, Wiedenmann M, Papudesu C, Scott IU, **Ip MS**, Eliceiri KW, Blodi BA, Domalpally A. A semi-automated machine-learning based workflow for ellipsoid zone analysis in eyes with macular edema: SCORE2 pilot study. *PLoS One*. 2020 Apr 30; 15(4):e0232494. eCollection 2020. Clinical Trial.

May 2020

Francone A, Kothari N, Farajzadeh M, **Hosseini H, Prasad P, Schwartz S, Hubschman JP**. Detection of neurosensory retinal detachment complicating degenerative retinoschisis by ultra-widefield fundus autofluorescence imaging. *Retina*. 2020 May; 40(5):819–824.

Silkiss RZ, Paap MK, **Ugradar S**, Milman T. Discussion: Assessing Retrobulbar Hyaluronidase as a Treatment for Filler-Induced Blindness in a Cadaver Model and Video Discussion: Treatment for Filler-Induced Blindness. *Plast Reconstr Surg*. 2020 May; 145(5):999e–1001e.

Sun Y, Yung M, Huang L, Tseng C, **Deng SX**. Limbal Stem Cell Deficiency After Glaucoma Surgery. *Cornea*. 2020 May;39(5):566–572.

Lee YH, Maniglia M, Velez F, **Demer JL, Seitz AR, Pineles S**. Short-term Perceptual Learning Game Does Not Improve Patching-Resistant Amblyopia in Older Children. *J Pediatr Ophthalmol Strabismus*. 2020 May 1;57(3):176–184.

Hall V, Trubiano JA, Kwong JC, **Williams DS**, Holmes NE. Immunosuppressed Returned Traveler With Ulcerating Skin Lesion and Fever. *Clin Infect Dis*. 2019 May 2;68(10):1747–1749.

Uji A, **Sadda SR**, Muraoka Y, Kadomoto S, Ooto S, Murakami T, Akagi T, Miyata M, Tsujikawa A. Effect of image averaging on optical coherence tomography angiography data in eyes with branch retinal vein occlusion. *Graefes Arch Clin Exp Ophthalmol*. 2020 Aug; 258(8):1639–1648. Epub 2020 May 2.

Frausto RF, Swamy VS, Peh GSL, Boere PM, Hanser EM, Chung DD, George BL, Morselli M, Kao L, Azimov R, Wu J, Pellegrini M, Kurtz I, Mehta JS, **Aldave AJ**. Phenotypic and functional characterization of corneal endothelial cells during in vitro expansion. *Sci Rep*. 2020 May 4;10(1):7402.

Chang MY, Binenbaum G, Heidary G, Morrison DG, Galvin JA, Trivedi RH, **Pineles SL**. Imaging Methods for Differentiating Pediatric Papilledema from Pseudopapilledema: A Report by the American Academy of Ophthalmology. *Ophthalmology*. 2020 May 5: S0161-6420(20)30276-1.

Akiyama G, Saraswathy S, Bogarin T, Pan X, Barron E, Wong TT, Kaneko MK, Kato Y, Hong Y, **Huang AS**. Functional, structural, and molecular identification of lymphatic outflow from subconjunctival blebs. *Exp Eye Res*. 2020 Jul; 196:108049. Epub 2020 May 6.

Baumal CR, **Sarraf D**, Bryant T, Gui W, Muakkassa N, Pichi F, Querques G, Choudhry N, Teke MY, Govetto A, Invernizzi A, Elliott D, Gaudric A, Cunha de Souza E, Naysan J, Lembo A, Lee GC, Freund KB. Henle fibre layer haemorrhage: clinical features and pathogenesis. *Br J Ophthalmol*. 2020 May 6: bjophthalmol-2019-315443.

Burger CA, Alevy J, Casasent AK, Jiang D, Albrecht NE, Liang JH, Hirano AA, **Brecha NC**, Samuel MA. LKB₁ coordinates neurite remodeling to drive synapse layer emergence in the outer retina. *Elife*. 2020 May 7;9:e56931.

Echols BS, Clark ME, Swain TA, Chen L, Kar D, **Zhang Y**, Sloan KR, McGwin G Jr, Singireddy R, Mays C, Kilpatrick D, Crosson JN, Owsley C, Curcio CA. Hyperreflective foci and specks are associated with delayed rod-mediated dark adaptation in non-neovascular age-related macular degeneration. *Ophthalmology Retina*. 2020 May 7.

Jung JJ, Yu DJG, Zeng A, Chen MH, Shi Y, Nassisi M, Marion KM, **Sadda SR**, Hoang QV. Correlation of Quantitative Measurements with Diabetic Disease Severity Using Multiple En Face OCT Angiography Image Averaging. *Ophthalmol Retina*. 2020 May 7: S2468-6530(20)30192-5.

Schönbach EM, Strauss RW, Ahmed MI, Janes JL, Cideciyan AV, Birch DG, Sunness JS, Zrenner E, **Ip MS**, Kong X, **Sadda SR**, Scholl HPN; ProgStar study group. The Effect of Attention on Fixation Stability during Dynamic Fixation Testing in Stargardt Disease. *Am J Ophthalmol*. 2020 May 10: S0002-9394(20)30230-0.

Au A, Hilely A, Scharf J, Gunnemann F, Wang D, Chehaibou I, Iovino C, Grondin C, Farecki ML, Falavarjani KG, Phasukkijwatana N, Battista M, Borrelli E, Sacconi R, Powell B, Hom G, Greenlee TE, Conti TF, Ledesma-Gil G, Teke MY, Choudhry N, Fung AT, Krivosic V, Baek J, Lee MY, Sugiura Y, Querques G, Peiretti E, Rosen R, Lee WK, Yannuzzi LA, Zur D, Loewenstein A, Pauleikhoff D, Singh R, Modi Y, **Hubschman JP, Ip M, Sadda S, Freund KB, Sarraf D**. Relationship Between Nerve Fiber Layer Hemorrhages and Outcomes in Central Retinal Vein Occlusion. *Invest Ophthalmol Vis Sci*. 2020 May 11;61(5):54.

Chen JY, Le A, **Caprioli J, Giaconi JA, Nouri-Mahdavi K, Law SK, Bonelli L, Coleman AL, Demer JL**. Orbital Fat Volume After Treatment with Topical Prostaglandin Agonists. *Invest Ophthalmol Vis Sci*. 2020 May 11;61(5):46.

Moxon NR, Goyal A, **Giaconi JA**, Rosenberg JB, Graubart EB, Waxman EL, Knoch D, Forster SH, Sankar PS, Mirza RG. The State of Ophthalmology Medical Student Education in the United States: An Update. *Ophthalmology*. 2020 May 11: S0161-6420(20)30425-5.

Sobhani NC, Avvad-Portari E, Nascimento ACM, Machado HN, Lobato DSS, Pereira JP, Esquivel MS, Vasconcelos ZC, Zin AA, **Tsui I**, Adachi K, Brickley EB, Fisher SJ, Nielsen-Saines K, Brasil P, Moreira ME, Gaw SL. Discordant Zika Virus Findings in Twin Pregnancies Complicated by Antenatal Zika Virus Exposure: A Prospective Cohort. *J Infect Dis*. 2020 May 11;221(11):1838–1845.

Sreekumar PG, Wang M, Spee C, **Sadda SR, Kannan R**. Transporter-Mediated Mitochondrial GSH Depletion Leading to Mitochondrial Dysfunction and Rescue with α B Crystallin Peptide in RPE Cells. *Antioxidants (Basel)*. 2020 May 12;9(5):411.

Choudhry N, Duker JS, Freund KB, Kiss S, Querques G, Rosen R, **Sarraf D**, Souied EH, Stanga PE, Staurenghi G, **Sadda SR**. Classification and Guidelines for Widefield Imaging: Recommendations from the International Widefield Imaging Study Group. *Ophthalmol Retina*. 2019 Oct;3(10):843–849. Epub 2019 May 13.

- Mahmoudinezhad G, Lin M, Rabiolo A, Morales E, Hirunpatravong P, Sharifipour F, **Caprioli J**. Rate of visual field decay in glaucomatous eyes with acquired pits of the optic nerve. *Br J Ophthalmol*. 2020 May 13: bjophthalmol-2020-315980.
- Cohen LM, Campbell BC, Esfandiari M, **Goldberg RA, Rootman DB**. Ophthalmic Surgeries and Systemic Medical Conditions Associated With the Development of Involutional Ptosis. *Ophthalmic Plast Reconstr Surg*. 2020 May 15.
- Gunzenhauser RC, **Tsui I**, Velez FG, Fung SS, **Demer JL, Suh SY, Sarraf D, Pineles SL**. Comparison of Pre-Treatment vs. Post-Treatment Retinal Vessel Density in Children with Amblyopia. *J Binocul Vis Ocul Motil*. 2020 Jul-Sep;70(3):79–85. Epub 2020 May 15.
- Corvi F, **Sadda SR**, Staurengi G, Pellegrini M. Thresholding strategies to measure vessel density by optical coherence tomography angiography. *Can J Ophthalmol*. 2020 Aug; 55(4):317–322. Epub 2020 May 18.
- Saraswathy S, Bogarin T, Barron E, **Francis BA, Tan JCH, Weinreb RN, Huang AS**. Segmental differences found in aqueous angiographic-determined high- and low-flow regions of human trabecular meshwork. *Exp Eye Res*. 2020 Jul;196:108064. Epub 2020 May 18.
- Curcio CA, McGwin G Jr, **Sadda SR**, Hu Z, Clark ME, Sloan KR, Swain T, Crosson JN, Owsley C. Functionally validated imaging endpoints in the Alabama study on early age-related macular degeneration 2 (ALSTAR2): design and methods. *BMC Ophthalmol*. 2020 May 19;20(1):196.
- Sadda SR**, Nittala Mphil MG, Taweebanjongsin W, Verma A, Velaga SB, Alagorie AR, Sears CM, Silva PS, Aiello LP. Quantitative assessment of the severity of diabetic retinopathy. *Am J Ophthalmol*. 2020 May 21: S0002-9394(20)30251-8.
- Pijpers IAB, Cao S, Llopis-Lorente A, Zhu J, Song S, Joosten RRM, Meng F, Friedrich H, **Williams DS**, Sánchez S, van Hest JCM, Abdelmohsen LKEA. Hybrid Biodegradable Nanomotors through Compartmentalized Synthesis. *Nano Lett*. 2020 Jun 10;20(6):4472–4480. Epub 2020 May 22.
- Byon I, Alagorie AR, Ji Y, Su L, **Sadda SR**. Am J Ophthalmol. Optimizing the Repeatability of Choriocapillaris Flow Deficit Measurement from Optical Coherence Tomography Angiography. 2020 May 23: S0002-9394(20)30266-X.
- Bonnet C, Debillon L, **Al-Hashimi S**, Hoogewoud F, Monnet D, Bourges JL, Brézina A. Anterior segment optical coherence tomography imaging in peripheral ulcerative keratitis, a corneal structural description. *BMC Ophthalmol*. 2020 May 25;20(1):205.
- Sarraf D**, Sarraf DR, **Sadda S**. Is virtual existence our new reality? *Graefes Arch Clin Exp Ophthalmol*. 2020 Jul; 258(7):1357–1358. Epub 2020 May 25.
- Pineles SL**, Chang MY, Velez FG. Compartmental Strabismus. *J Binocul Vis Ocul Motil*. 2020 Jul–Sep;70(3):71–78. Epub 2020 May 28.
- Schönbach EM, Strauss RW, Muñoz B, Wolfson Y, Ibrahim MA, Birch DG, Zrenner E, Sunness JS, **Ip MS, Sadda SR**, West SK, Scholl HPN; ProgStar Study Group. Longitudinal Microperimetric Changes of Macular Sensitivity in Stargardt Disease After 12 Months: ProgStar Report No. 13. *JAMA Ophthalmol*. 2020 May 28;138(7):1–8.
- Asanad S, Fantini M, Sultan W, Nassisi M, Felix CM, Wu J, Karanjia R, Ross-Cisneros FN, Sagare AP, Zlokovic BV, Chui HC, Pogoda JM, Arakaki X, Fonteh AN, **Sadun AA**, Harrington MG. Retinal nerve fiber layer thickness predicts CSF amyloid/tau before cognitive decline. *PLoS One*. 2020 May 29; 15(5):e0232785. eCollection 2020.
- Basilious A, **Fung SSM**, Ali A. Limbal Stem Cell Dysfunction in Ichthyosis Follicularis, Alopecia, and Photophobia Syndrome. *Cornea*. 2020 May 29.
- Corradetti G, Corvi F, Nguyen TV, **Sadda SR**. Management of Neovascular Age-Related Macular Degeneration during the COVID-19 Pandemic. *Ophthalmol Retina*. 2020 Aug;4(8):757–759. Epub 2020 May 29.
- Nassisi M, Lei J, Abdelfattah NS, Karamat A, Balasubramanian S, Fan W, Uji A, Marion KM, Baker K, Huang X, Morgenthien E, **Sadda SR**. OCT Risk Factors for Development of Late Age-Related Macular Degeneration in the Fellow Eyes of Patients Enrolled in the HARBOR Study. *Ophthalmology*. 2019 Dec;126(12):1667–1674. Epub 2019 May 29. *Clinical Trial*.
- Shayesteh Z, **Hosseini H**, Nasiri V, Haddadi Z, Moradi N, Beikzadeh L, Sezavar M, Heidari A, Zibaei M. Evaluating the preventive and curative effects of *Toxocara canis* larva in Freund's complete adjuvant-induced arthritis. *Parasite Immunol*. 2020 May 29:e12760.
- Paap MK, Milman T, **Ugradar S, Goldberg R**, Silkiss RZ. Examining the Role of Retrobulbar Hyaluronidase in Reversing Filler-Induced Blindness: A Systematic Review. *Ophthalmic Plast Reconstr Surg*. 2020 May/ Jun;36(3):231–238.
- Shi Y, Marion KM, Jenkins D, **Sadda S**, Le PV, **Chopra V**. Identification and Characterization of Imaging Technique Errors and Artifacts Using Anterior-Segment OCT for Irido-Corneal Angle Evaluations in Glaucoma. *Ophthalmol Glaucoma*. 2019 May–Jun;2(3):136–144.

June 2020

Arnold AC. Aspirin Should Not Be Recommended to Prevent Second Eye Involvement in Patients With Non-arteritic Anterior Ischemic Optic Neuropathy. *J Neuroophthalmol*. 2020 Jun; 40(2):271–273.

Blankshain KD, Joslin CE, **Pineles SL**, Moss HE. Evolution of the Journal of Neuro-Ophthalmology and the Clinical Ophthalmology Literature: A 20-Year Retrospective. *J Neuroophthalmol*. 2020 Jun;40(2):141–143.

Bonnet C, **Miller KM**. Safety and efficacy of custom foldable silicone artificial iris implantation: prospective compassionate-use case series. *J Cataract Refract Surg*. 2020 Jun;46(6):893–901.

- Fan W, Uji A, Wang K, Falavarjani KG, Wykoff CC, Brown DM, Van Hemert J, Sagong M, **Sadda SR, Ip M**. Severity of diabetic macular edema correlates with retinal vascular bed area on ultra-wide field fluorescein angiography: DAVE Study. *Retina*. 2020 Jun;40(6):1029–1037.
- Hamedani AG, **Pineles SL**, Moss HE. The Case-Control Study in Neuro-Ophthalmology. *J Neuroophthalmol*. 2020 Jun;40(2):144–147.
- Tepelus TC, Song S, Borrelli E, Nittala MG, Baghdasaryan E, **Sadda SR, Chopra V**. Quantitative Analysis of Retinal and Choroidal Vascular Parameters in Patients With Low Tension Glaucoma. *J Glaucoma*. 2019 Jun;28(6):557–562.
- Boere PM, Bonnet C, Frausto RF, **Fung SSM, Aldave AJ**. Multimodal Imaging of Pre-Descemet Corneal Dystrophy Associated With X-Linked Ichthyosis and Deletion of the STS Gene. *Cornea*. 2020 Jun 1.
- Tsui E**, Rao RC, Carey AR, Feng MT, Provencher LM. Using Social Media to Disseminate Ophthalmic Information during the #COVID19 Pandemic. *Ophthalmology*. 2020 Jun 2: S0161-6420(20)30514-5.
- Xu X, Wang X, **Sadda SR, Zhang Y**. Subtype-differentiated impacts of sub-retinal drusenoid deposits on photoreceptors revealed by adaptive optics scanning laser ophthalmoscopy. *Graefes Arch Clin Exp Ophthalmol*. 2020 Jun 2.
- Cabral D, Pereira T, Ledesma-Gil G, Rodrigues C, Coscas F, **Sarraf D**, Freund KB. Volume Rendering of Dense B-Scan Optical Coherence Tomography Angiography to Evaluate the Connectivity of Macular Blood Flow. *Invest Ophthalmol Vis Sci*. 2020 Jun 3;61(6):44.
- Cohen LM, Katsev B, Esfandiari M, **Rootman DB**. The Effect of Early Post-operative Swelling on Change in Upper Eyelid Position After External Levator Resection and Blepharoplasty. *Ophthalmic Plast Reconstr Surg*. 2020 Jun 4.
- Pashaei-Marandi A, Assam JH, **Arnold A**, Lee AG, **Bonelli L**. Can J Ophthalmol. Reversible anisocoria due to inadvertent ocular exposure to topical anticholinergic treatment for primary axillary hyperhidrosis. 2019 Dec; 54(6):e300–e302. Epub 2019 Jun 4.
- Segawa M, Wolf DM, Hultgren NW, **Williams DS**, van der Bliet AM, Shackelford DB, Liesa M, Shirihai OS. Quantification of cristae architecture reveals time-dependent characteristics of individual mitochondria. *Life Sci Alliance*. 2020 Jun 4;3(7):e201900620.
- Shen JF, **Deng S**, Hammersmith KM, Kuo AN, Li JY, Weikert MP, Shtein RM. Intraocular Lens Implantation in the Absence of Zonular Support: An Outcomes and Safety Update: A Report by the American Academy of Ophthalmology. *Ophthalmology*. 2020 Jun 4; S0161-6420(20)30232-3.
- Dow ER, **Tsui I, Sarraf D**. Macular Infarction in a Patient with Sickle Cell Trait. *Retin Cases Brief Rep*. 2020 Jun 5.
- Asanad S, Frousiakis S, Wang MY, Fantini M, Sultan W, Wood T, Nwako FU, Karanjia R, **Sadun AA**. Improving the visual outcome in Leber's hereditary optic neuropathy: Framework for the future. *J Curr Ophthalmol*. 2019 Jun 6;31(3):251–253. eCollection 2019 Sep.
- Fung SSM**, Mason M, Gore DM, Mireskandari K, Ali A. Technique for pediatric corneal crosslinking under general anesthesia. *J AAPOS*. 2020 Jun 6:S1091-8531(20)30104-X.
- Baxter SL, Gali HE, Mehta MC, et al [**Bartlett J**]. Multicenter Analysis of Electronic Health Record Use among Ophthalmologists [published online ahead of print, 2020 Jun 7]. *Ophthalmology*. 2020;S0161-6420(20)30523-6.
- Ellis EM, Frederiksen R, Morshedean A, **Fain GL, Sampath AP**. Separate ON and OFF pathways in vertebrate vision first arose during the Cambrian. *Curr Biol*. 2020 Jun 8;30(11):R633–R634.
- de Gainza A, Morales E, Salazar Vega DC, Mohammadzadeh V, Yu F, Affifi A, **Nouri-Mahdavi K, Caprioli J**. The Trajectory of Glaucoma Progression in 2-Dimensional Structural-Functional Space. *Ophthalmol Glaucoma*. 2020 Jun 9:S2589-4196(20)30161-7.
- Gupta K, **Deng SX**. Corneal Endothelial Decompensation. *Klin Monbl Augenheilkd*. 2020 Jun;237(6):745–753. Epub 2020 Jun 9.
- Kieval JZ, **Al-Hashimi S**, Davidson RS, Hamilton DR, Jackson MA, LaBorwit S, Patterson LE, Stonecipher KG, Donaldson K, For the ASCRS Refractive Cataract Surgery Subcommittee. Prevention and Management of Refractive Prediction Errors Following Cataract Surgery. *J Cataract Refract Surg*. 2020 Jun 9.
- Lin SR**, Ladas JG, **Bahadur GG, Al-Hashimi S**, Pineda R. A Review of Machine Learning Techniques for Keratoconus Detection and Refractive Surgery Screening. *Semin Ophthalmol*. 2019;34(4):317–326. Epub 2019 Jun 9. Review.
- Adachi K, Romero T, Nielsen-Saines K, Pone S, Aibe M, Barroso de Aguiar E, Sim M, Brasil P, Zin A, **Tsui I**, Gaw SL, Halai UA, Vasconcelos Z, Pereira JP, Salles TS, Barbosa CN, Portari E, Cherry JD, Pone M, Moreira ME. Early Clinical Infancy Outcomes for Microcephaly and/or Small for Gestational Age Zika-Exposed Infants. *Clin Infect Dis*. 2020 Jun 10;70(12):2663–2672.
- Fung SSM**, El Hamouly A, Sami H, Jiandani D, Williams S, Tehrani N, Mireskandari K, Ali A. Corneal endothelium in paediatric patients with uveitis: a prospective longitudinal study. *Br J Ophthalmol*. 2020 Jun 10: bjophthalmol-2020-316120.
- McCannel CA**, Mohny BG. Evolution of a Peripapillary Combined Hamartoma of the Retina and Retinal Pigment Epithelium in a Child. *JAMA Ophthalmol*. 2020 Jun 1;138(6):e192670. Epub 2020 Jun 11.
- Soh YQ, Kocaba V, Weiss JS, Jurkunas UV, Kinoshita S, **Aldave AJ**, Mehta JS. Corneal dystrophies. *Nat Rev Dis Primers*. 2020 Jun 11;6(1):46. Review.
- Mishra Z, Ganegoda A, Selicha J, Wang Z, **Sadda SR**, Hu Z. Automated Retinal Layer Segmentation Using Graph-based Algorithm Incorporating Deep-learning-derived Information. *Sci Rep*. 2020 Jun 12;10(1):9541.

- Tauber J, Ayoub S, Shah P, Wu M, **Tsui E**, Schuman JS, Rathi S. Assessing the Demand for Teleophthalmology in Florida Emergency Departments. *Telemed J E Health*. 2020 Jun 12.
- Zhang Y**, Wang X, Clark ME, Curcio CA, Owsley C. Imaging of age-related macular degeneration by adaptive optics scanning laser ophthalmoscopy in eyes with aged lenses or intraocular lenses. *Translational Vision Science & Technology*. June 12, 2020
- Shao J, Cao S, **Williams DS**, Abdelmohsen LKEA, van Hest JCM. Photoactivated Polymersome Nanomotors: Traversing Biological Barriers. *Angew Chem Int Ed Engl*. 2020 Jun 13.
- Nittala MG, Uji A, Velaga SB, Akihito U, Hariri AH, Naor J, Birch DG, Spencer R, Leng T, Capela A, Tsukamoto A, **Ip MS**, **Sadda SR**. Effect of Human Central Nervous System Stem Cell Subretinal Transplantation on Progression of Geographic Atrophy Secondary to Nonneovascular Age-Related Macular Degeneration. *Ophthalmol Retina*. 2020 Jun 17 2020;S2468-6530(20)30241-4.
- Yan W, **Peng YR**, van Zyl T, Regev A, Shekhar K, Juric D, Sanes JR. Cell Atlas of The Human Fovea and Peripheral Retina. *Sci Rep*. 2020 Jun 17;10(1):9802.
- Chanwimol K, Hirano T, Bedolla A, Tepelus T, Taweebanjongsin W, Marion KM, **Sadda S**. Evaluation of Retinal Vessel Quantity within Individual Retinal Structural Layers Using Optical Coherence Tomography Angiography. *Graefes Arch Clin Exp Ophthalmol*. 2020 Jun 18.
- Kothari N, Chu A, Huang JM, Lin F, Lin BR, Manoharan N, Gui W, **Huang AS**, **Tsui I**. Arm-mounted optical coherence tomography angiography in extremely low birth weight neonates with retinopathy of prematurity. *Am J Ophthalmol Case Rep*. 2020 Jun;18:100624. eCollection 2020 Jun.
- Zamora-de La Cruz D, Zúñiga-Posselt K, **Bartlett J**, Gutierrez M, Abariga SA. Trifocal intraocular lenses versus bifocal intraocular lenses after cataract extraction among participants with presbyopia. *Cochrane Database Syst Rev*. 2020;6(6):CD012648. Published 2020 Jun 18.
- Lee D, Chan CK, Abraham P, **Sarraf D**. Post-hoc analysis of single nucleotide polymorphism profile for eyes with vascularized pigment epithelial detachment due to ARMD. *Eur J Ophthalmol*. 2020 Jun 24:1120672120932829.
- Agrawal R, Testi I, Lee CS, **Tsui E**, Blazes M, Thorne JE, Okada AA, Smith JR, McCluskey PJ, Kempen JH, Tappeiner C, Agarwal M, Bodaghi B, Nguyen QD, Gupta V, De Smet MD, Zierhut M, Pavesio C; COVID-19 IMT Study Group. Evolving consensus for immunomodulatory therapy in non-infectious uveitis during the COVID-19 pandemic. *Br J Ophthalmol*. 2020 Jun 25:bjophthalmol-2020-316776.
- Alagorie AR, Nittala MG, Velaga S, Zhou B, Rusakevich AM, Wykoff CC, **Sadda SR**. Association of Intravitreal Aflibercept With Optical Coherence Tomography Angiography Vessel Density in Patients With Proliferative Diabetic Retinopathy: A Secondary Analysis of a Randomized Clinical Trial. *JAMA Ophthalmol*. 2020 Jun 25:e202130.
- Ridolfo R, Tavakoli S, Junnuthula V, **Williams DS**, Urtti A, van Hest JCM. Exploring the Impact of Morphology on the Properties of Biodegradable Nanoparticles and Their Diffusion in Complex Biological Medium. *Biomacromolecules*. 2020 Jun 26.
- Hou KK, Au A, Kashani AH, Freund KB, **Sadda SR**, **Sarraf D**. Pseudoflow with OCT Angiography in Eyes with Hard Exudates and Macular Drusen. *Transl Vis Sci Technol*. 2019 Jun 27;8(3):50. eCollection 2019 May.
- Rabiolo A, **Caprioli J**. Cataract Surgery and Rate of Visual Field Progression in Primary Open-Angle Glaucoma. *Am J Ophthalmol*. 2019 Aug;204:140–141. Epub 2019 Jun 27.
- Hu, Z, Wang Z, **Sadda S**. Automated Choroidal Segmentation in Spectral Optical Coherence Tomography Images with Geographic Atrophy Using Multimodal Complementary Information. *J. of Medical Imaging*, 6(2), 024009 (28 June 2019).
- Ahn J, Chiang J, **Gorin MB**. Novel mutation in *SLC4A7* gene causing autosomal recessive progressive rod-cone dystrophy. *Ophthalmic Genet*. 2020 Aug;41(4):386–389. Epub 2020 Jun 29.
- Bonnet C, Ghaffari R, Alkadi T, **Law SK**, **Caprioli J**, Yu F, **Deng SX**. Long-term outcomes of Descemet membrane endothelial keratoplasty in eyes with prior glaucoma surgery. *Am J Ophthalmol*. 2020 Jun 30: S0002-9394(20)30318-4.
- Lee Lenis T, Zhang W, **Shibayama V**, **Al-Hashimi S**, **Aldave AJ**, **Deng SX**, **Fung SSM**. Multimodal Corneal Imaging of Genetically Confirmed Keratitis-Ichthyosis-Deafness Syndrome. *Cornea*. 2020 Jun 30.





About the Institute

About the Institute



Established in 1966, the UCLA Stein Eye Institute vision-science campus is the fulfillment of a dream—an ambitious plan developed by **Jules Stein, MD**, to prevent blindness by transforming the quality of vision research, education, patient care, and community outreach.

The Institute exists because of Dr. Stein, one of the most influential executives in entertainment who returned to his roots as a medical doctor to become a national advocate for vision science; and **Bradley R. Straatsma, MD, JD**, founding director of the Stein Eye Institute and founding chair of the UCLA Department of Ophthalmology, who created a bold plan for building the scope of ophthalmology in the UCLA School of Medicine. Together Drs. Stein and Straatsma ensured the Institute would take a central role in transforming vision science as a powerful platform for discovery and patient care to eradicate one of the great scourges of human existence: blindness.

Under the leadership of **Bartly J. Mondino, MD**, director and chair since 1994, the Institute's core pillars have been increasingly developed and a broad agenda of program-building and expansion has been implemented.

The original dream for ophthalmology at UCLA has evolved into the Institute's bold transformation to a vision-science campus—an interconnected community of facilities and people that merge research, training for new ophthalmologists, premier patient care, community outreach programs, and ongoing education for doctors worldwide.

A historic partnership—a first of its kind—was forged with the Doheny Eye Institute in 2013, creating the nation's preeminent organization for ophthalmic care and vision research under the banner of the UCLA Department of Ophthalmology.

And today, patients across the Southland have access to the finest vision care at the Stein Eye Institute in Westwood; the UCLA Stein Eye Centers in Calabasas and Santa Monica; the Doheny Eye Centers UCLA in Arcadia, Orange County, and Pasadena; and UCLA-affiliated hospitals in Sylmar, Torrance, and West Los Angeles/Sepulveda.

Since its opening on November 3, 1966, the Institute's original mandate remains paramount: the relentless drive for excellence and the constant search for new possibilities in the treatment of the eye. The Institute's decades of accomplishments may have even exceeded the original soaring expectations of Dr. Stein who at the dedication ceremony defined his own prophecy for the Institute and the medical field he loved:

“The men and women who will occupy this building and use its resources will share in future achievements that will outstrip any that have been seen; for science today is moving ahead with fantastic speed, and we must be sure that eye research moves with it. The history of this Institute begins with this dedication. I am confident that it will be a proud history.”

“If I am remembered for anything, it will not be for anything I did in show business, but for what I did to prevent blindness.”

DR. JULES STEIN



Doris and Jules Stein

The legacy of Dr. and Mrs. Jules Stein arises from their role in the 20th century as visionaries. Through brilliance and beneficence, they created a multitude of programs aimed specifically at one goal: preserving and restoring eyesight. They approached this task dauntlessly, integrating the worlds of business, medicine, and philanthropy in such a way as to enhance each and leave in trust the promise of limitless accomplishment in the advancement of eye research and treatment. The Stein Eye Institute was established as a result of their philanthropy.

Board of Trustees

The Board of Trustees, established in 1977, ensures the Institute's orderly growth and development. The Board meets regularly during the year, with each trustee providing his/her unique counsel. Collectively, their invaluable contributions have included fiscal planning for the Institute, adoption of measures to facilitate recruitment of the world's finest vision scientists, allocation of funds for the purchase of vision research equipment, and recommendations for expansion programs.



Norman Abrams, Esq.
Distinguished Professor
of Law Emeritus
Acting Chancellor Emeritus
UCLA
2015–present



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President and
Chief Executive Officer
HAI Financial, Inc.
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Partner
Musick, Peeler & Garrett
2016–2019



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Director
Stein Eye Institute
1994–present



Ronald L. Olson, Esq.
Partner
Munger, Tolles & Olson
1995–present



Gerald H. Oppenheimer
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Gerald Oppenheimer
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1992–present



Nelson C. Rising, Esq.
Chair and
Chief Executive Officer
Rising Realty Partners
2011–present



Katrina vanden Heuvel
Publisher and Editor
The Nation
1984–present



Casey Wasserman
President and Chief Executive
Officer
The Wasserman Foundation
1998–present



Marissa Goldberg
OBSERVER
Executive Director and
Chief Financial Officer
Doheny Eye Institute
2015–present

Executive Committee

The Executive Committee of the Stein Eye Institute and UCLA Department of Ophthalmology meets regularly during the year, with each member providing their unique expertise. The Committee ensures the orderly growth and development of the Institute and Department. It is involved in fiscal planning, expansion, recruitment, program development, and resolution of interdivisional issues.

Bartly J. Mondino, MD

Director, Stein Eye Institute
Chair, UCLA Department of Ophthalmology
Affiliation Chair, Doheny Eye Institute

Anthony C. Arnold, MD

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Anne L. Coleman, MD, PhD

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Special Advisor

Mission Statement

The UCLA Stein Eye Institute is a vision-science campus dedicated to the preservation and restoration of vision through its global programs in innovative research, quality patient care, and multidisciplinary, integrative education, all with community outreach.

Giving Opportunities

For more than half a century, UCLA's vision scientists have extended the boundaries of current knowledge to reach the goal of a lifetime of good vision for everyone. This noble undertaking has been due in large part to a strong tradition of philanthropy from private sources.

Contributions from individuals, foundations, and corporations help underwrite priority needs, which uphold scientific innovation, patient care, training and education, and a strong commitment to community engagement. The Institute offers a variety of giving options to those who wish to promote and participate in this tradition of excellence.

Ways to Give

Direct Gifts

Direct gifts—whether by cash, check, or credit card—are critically important to Stein Eye because the gifts can be put to work immediately, increasing their impact and extending their reach.

Endowments

A gift of an endowment demonstrates a long-term commitment, since the fund is maintained in perpetuity. A portion of the annual investment income is used to support clinical, educational, and scientific initiatives and the remaining investment yield is returned to principal, thus, over the years, the fund can grow and provide continuous support.

An endowment serves as an enduring legacy as it can bear the donor's name or honor a loved one. Giving opportunities exist for endowed chairs, endowed fellowships, and endowed funds for research, education, and patient care. These funds can be made payable for up to five years.

Pledges

A pledge is a formal statement of intention to make a gift. Donors who seek to defer the bulk of their giving until a future date, or who want to give via installments over time, may use this giving strategy. A pledge may be followed by an immediate gift or may simply confirm your intention to make a gift in the future. Pledges are typically made in concert with a preliminary first installment and provide a source of consistent and dependable funding. This method often allows donors to give more generously than they may have originally considered.

Securities

Gifts of appreciated securities are tax deductible at their full market value. In most cases, appreciation in the value of the security benefits the University and is not taxable to the donor.

Matching Gifts

Many corporations have demonstrated their support by matching or multiplying their employees' gifts up to a set amount. Before making a gift, you may want to ask whether your employer participates in a matching gift program. Certain restrictions apply to matching gifts. Please consult your company's personnel office.

Real Estate

Real estate (your primary residence, vacation home, commercial property, or land) is an asset that you can leverage in a variety of ways to support the Institute while reducing taxes and eliminating the burden of maintaining or selling your property. You can also use real estate to fund gifts that provide you with an income stream for life.

Bequests

Making a gift through your will or living trust gives you the immediate satisfaction of creating a lasting and personal legacy that ensures Stein Eye's future and costs nothing now.

Charitable Gift Annuity

In exchange for a gift of cash or appreciated securities, you can receive fixed income for life and an immediate charitable income tax deduction. In addition, a portion of the annuity payments is tax-free.

Qualified Retirement Plans

Naming The UCLA Foundation as a beneficiary of some or all of your qualified retirement plan may help you minimize taxes and maximize your philanthropic impact, while leaving to your loved ones, assets that are less taxed.

Tribute Gifts

Contributions may be made in memory, honor, or celebration of a loved one, or to commemorate a special occasion. Donations can be used for unrestricted program support or be directed to any area of the Institute.

Your Gift Can Make a Difference

However you choose to support the Institute, you will be embarking on a partnership with one of the world's preeminent eye research centers. Such an investment will greatly expand our understanding of the causes of eye diseases, expose alternative treatment options, and ultimately prevent blindness.

For information on how to incorporate the UCLA Stein Eye Institute into your estate and retirement planning, or to make a gift of any kind, please contact:

Leiloni Breidert
UCLA Stein Eye Institute Development Office
100 Stein Plaza, Room 1-124
Los Angeles, California 90095-7000
Phone: (310) 206-6035
Fax: (310) 794-1665
giving@jsei.ucla.edu



UCLA

Stein Eye Institute



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UCLA DEPARTMENT OF OPHTHALMOLOGY
DAVID GEFLEN SCHOOL OF MEDICINE AT UCLA