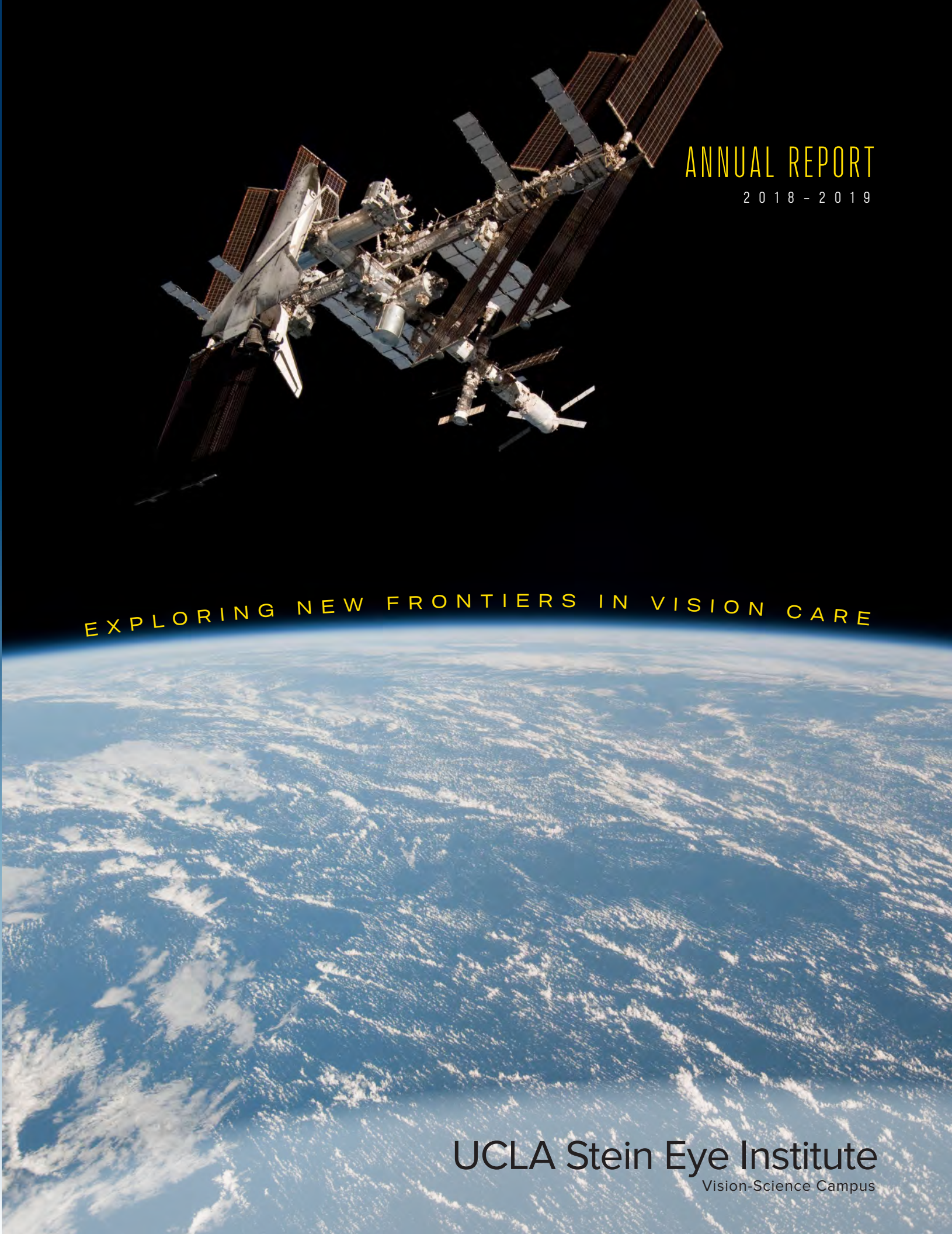


ANNUAL REPORT

2018 - 2019

EXPLORING NEW FRONTIERS IN VISION CARE

UCLA Stein Eye Institute

Vision-Science Campus

UCLA Stein Eye Institute

ANNUAL REPORT

July 1, 2018–June 30, 2019

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
M. Gail Summers

CONTRIBUTING EDITORS

Teresa Closson
Susan Ito
Sarah Johnson
Peter J. López
Ellen Pascual

CONTRIBUTING WRITERS

Dan Gordon
Harlan Lebo

PHOTOGRAPHY

Reed Hutchinson
Robin Weisz

DESIGN

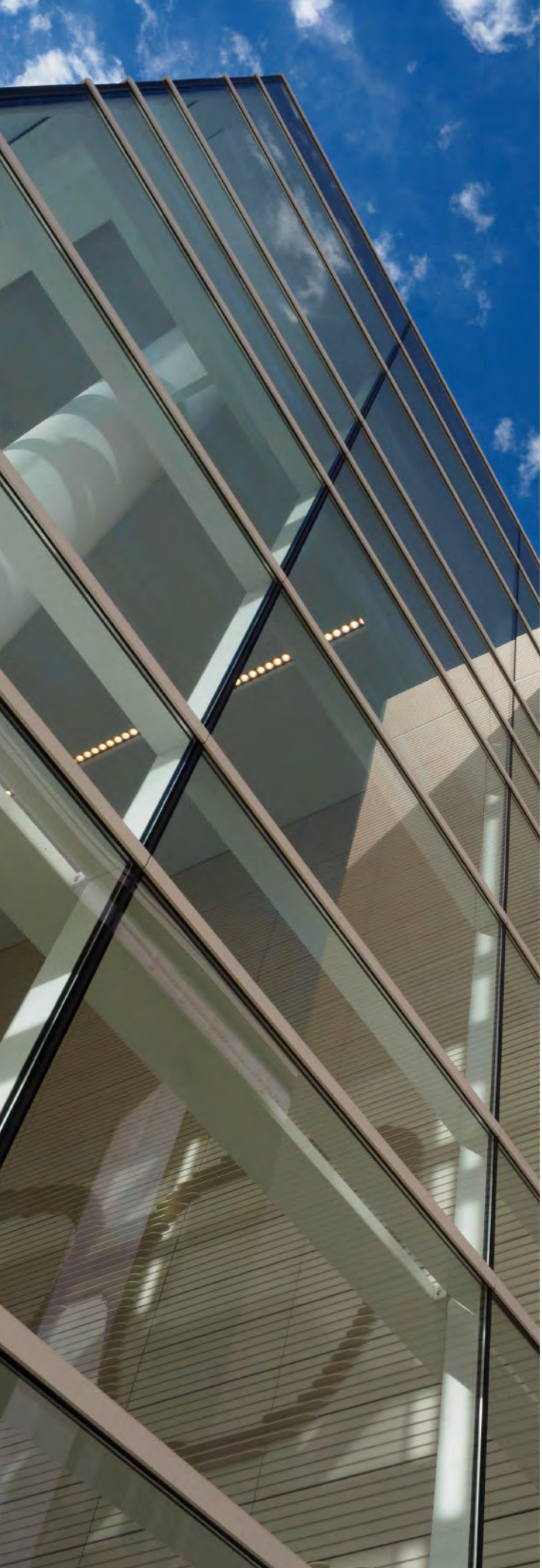
Robin Weisz/Graphic Design

PRINTING

Marina Graphic Center

To view the Annual Report online, visit:
www.uclahealth.org/Eye/annual-report

For more information about the
UCLA Department of Ophthalmology, see:
www.uclahealth.org/eye/



LETTER FROM THE CHAIR

This academic year, the Stein Eye Institute and the Doheny Eye Institute marked the five-year anniversary of our historic affiliation. In addition to broadening patient care and aligning the strengths of two world-renowned institutions, the partnership is also taking the UCLA Department of Ophthalmology to new heights—literally.

As you'll read in our feature article, Alex Huang, MD, PhD, and Department colleagues are working with NASA to counteract spaceflight-associated neuro-ocular syndrome, a visual issue that is hindering efforts to send astronauts on long-duration space missions.

Closer to home, we welcomed six new faculty members to the UCLA Department of Ophthalmology. Three are researchers who will be advancing our knowledge of vision science and technology at the Doheny Eye Institute, and three are clinicians who will be providing patient care at the Stein Eye Institute, as well as training the next generation of ophthalmologists at Stein Eye and at UCLA-affiliated teaching hospitals.

Private funding is critical to our ability to advance science and medicine in order to preserve and restore vision. Our generous donors and friends recognize this need and provide support for our sight-saving endeavors.

I hope you enjoy reading this Annual Report and learning more about our activities from this year.

Sincerely,

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

EXPLORING NEW FRONTIERS IN VISION CARE

NASA Collaboration Aims to Counteract Potential Vision Complication in Long Spaceflights

BECAUSE OF THEIR PROLONGED EXPOSURE TO A WEIGHTLESS ENVIRONMENT, A SIGNIFICANT PROPORTION OF ASTRONAUTS WITH THE INTERNATIONAL SPACE STATION HAVE EXPERIENCED VISUAL COMPLICATIONS.

Photos courtesy of NASA

NASA astronaut Nick Hague floats inside Europe's Columbus laboratory module.

A UCLA Department of Ophthalmology faculty member is collaborating with NASA—the National Aeronautics and Space Administration—to develop a countermeasure to a vision-related problem that is currently hindering the effort to send astronauts on a mission to Mars, or on other extended journeys into space.

Because of their prolonged exposure to a weightless environment, a significant proportion of astronauts with the International Space Station have experienced visual complications. Many of these effects—including bleeding, folds in the back of the eye, and changes in the glasses prescription—are short-term and can be resolved when the astronauts return to Earth. But the most concerning change involves disc edema, or swelling in the nerves of the eye, a cornerstone of a condition referred to as spaceflight-associated neuro-ocular syndrome (SANS).

"A change in eyeglass prescription or a tiny bleed in the retina can be recovered, but a swollen disc can potentially lead to permanent damage," explains **Alex Huang, MD, PhD**, Doheny Eye Center UCLA clinician and scientist. "This is one of the main reasons we don't have long-haul spaceflight right now. We need to learn how to address this problem, either through a treatment or a countermeasure that prevents it."

Dr. Huang is a glaucoma specialist whose research has focused on fluid flow in the eye. In collaboration with an industry partner, Heidelberg Engineering, he developed a device modification, called a FLEX, which situates necessary imaging equipment for real-time ocular fluid flow assessment in patients with and without glaucoma, in a variety of positions. That attracted the interest of NASA, which asked Dr. Huang to take the lead in developing and studying a countermeasure for SANS, which is believed to be caused by the redistribution of fluid to the head.

"If fluid is redistributing to the astronaut's head in space, the best way to model that on Earth is to lay people with their feet up and head down—the so-called head-down tilt—but standard imaging equipment is designed for people sitting upright," Dr. Huang says. "When the scientists at NASA realized that we not only have this equipment but are vision scientists at the Doheny Image Reading Center—a center

known for its strong imaging—they were very interested in collaborating."

Although several SANS causes have been hypothesized, the headward fluid shift that occurs in the weightlessness environment is currently seen as the most likely culprit for the ocular-related changes during long-duration spaceflight. "On Earth, where there is gravity, fluid is always pulled to our feet," Dr. Huang explains. "In the weightless environment of space, it's been estimated that there is a two-liter shift of fluid to the head. Given that this headward shift is the leading hypothesis for the cause of the problems we see in the eyes of astronauts after long-duration flights, our focus in developing a countermeasure is to manipulate this fluid shift."

The potentially mitigating countermeasure Dr. Huang's team has studied involves the use of venoconstrictive thigh cuffs (VTCs). The Russian space agency developed a type of VTC called a braslet to keep fluid in the limbs, with some demonstrated success. But the braslet is limiting physically in that it requires tying the legs together tightly to compress the fluid and prevent it from shifting; moreover, it was not known how VTCs, including braslets, would affect headward fluid shift as it relates to ocular physiology.

Dr. Huang and his colleagues have investigated the ocular implications of using single-leg mobility-enabling thigh cuffs as a SANS countermeasure. "The idea is to pump up the cuff on the leg at a level that maintains the flow of blood but slows the movement of the fluid from the feet to the head to prevent the redistribution," Dr. Huang says.

At the Doheny Eye Center UCLA–Pasadena, Dr. Huang's team tested 40 healthy research subjects without known ocular disease for 10 minutes each under four conditions: sitting posture, supine posture (lying on one's back), head-down tilt posture—meant to simulate the headward fluid shift that occurs in microgravity conditions—and head-down tilt posture with the thigh cuffs. In the study, intraocular pressure (IOP) increased significantly when subjects went from the sitting to the supine position, and further increased when they went from supine to head-down tilt position. Wearing the thigh cuffs during the head-down tilt posture resulted in a significantly lower

> **"On Earth, where there is gravity, fluid is always pulled to our feet. In the weightless environment of space, it's been estimated that there is a two-liter shift of fluid to the head. Given that this headward shift is the leading hypothesis for the cause of the problems we see in the eyes of astronauts after long-duration flights, our focus in developing a countermeasure is to manipulate this fluid shift."**
>
> ALEX HUANG, MD, PHD
> Assistant Professor of Ophthalmology
> UCLA Department of Ophthalmology

Flight Engineer Christina Koch of NASA playfully demonstrates how fluids behave in the weightless environment of microgravity aboard the International Space Station.

IOP compared to not wearing the cuffs in that position, though it was higher than when in the seated position. Using the FLEX, the researchers found that subfoveal choroidal thickness—also known to elevate during the head-down tilt position—was significantly reduced when the research subjects were wearing the thigh cuffs.

"It's important to note that we weren't recreating SANS on Earth—no one was going to get a swollen nerve from lying on their back with their feet upright for 10–20 minutes," Dr. Huang says. "But it is encouraging that in this acute model, where eye pressure and choroid thickness were indicators of fluid shift, the countermeasure seemed to reverse those changes." The next step, Dr. Huang says, is to test the thigh cuffs over a much longer period of time, and ultimately to study them in space.

As part of a seven-year grant from NASA, Dr. Huang and his colleagues are investigating SANS countermeasures at the same time they are conducting studies to ensure that the hypothesis for the SANS cause is correct. Although headward fluid shift is the leading hypothesis, other causes have been proposed, such as radiation from the sun and elevated carbon dioxide levels. "Typically, research first aims to understand what's happening, and then to develop a treatment or countermeasure," Dr. Huang says. "But in this case, there is such an urgency to address this issue that we are doing both at the same time. Whether our goal is going to Mars, which would be about an 18-month commitment, or pursuing a lunar station, we have to solve this problem. For any future manned missions beyond low Earth orbit, we need countermeasures to reverse or prevent SANS."

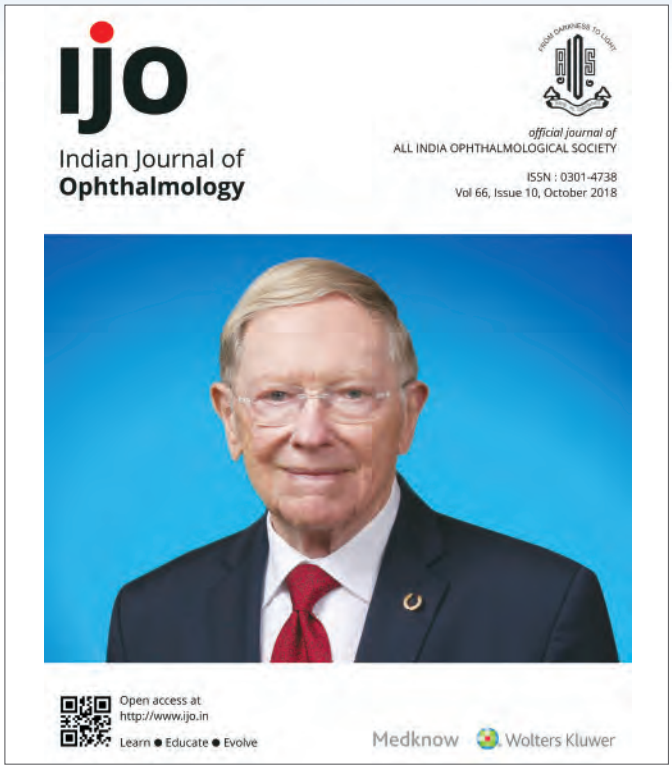
The Doheny Eye Institute signed a historic partnership with UCLA in 2013—joining forces with the Stein Eye Institute and creating the nation's largest academic affiliation. Forming the UCLA Department of Ophthalmology, the combined strengths of the two Institutes are expanding the care of patients and broadening efforts in vision science and technology.

Dr. Alex Huang (center, pink tie) and Dr. SriniVas Sadda, president and chief scientific officer of the Doheny Eye Institute (center, dark blue suit), are shown with Dr. Brandon Macias (immediate left of Dr. Huang)—one of the lead NASA scientists on the collaborative project—and his team.

A Year in Review

JULY 1, 2018–JUNE 30, 2019

Institute News



Dr. Bradley Straatsma Honored as a Living Legend

Founding Chair of the UCLA Department of Ophthalmology and Founding Director of the Stein Eye Institute, **Bradley R. Straatsma, MD, JD**, was celebrated as a "Living Legend in Ophthalmology" in the October 2018 issue of the *Indian Journal of Ophthalmology*.

The cover article highlights Dr. Straatsma's academic achievements and contributions to the field. The issue also includes Dr. Straatsma's guest editorial "Precision Medicine and Clinical Ophthalmology" and republication of the article "Mortality After Deferral of Treatment or No Treatment for Choroidal Melanoma" by Dr. Straatsma and co-authors for the Collaborative Ocular Melanoma Study Group, published in the July 2003 issue of the *American Journal of Ophthalmology*.

Drs. Anne Coleman and Lynn Gordon Setting the Agenda for Ophthalmology

Anne L. Coleman, MD, PhD, and **Lynn K. Gordon, MD, PhD**, have been announced as leading officers for the American Academy of Ophthalmology (AAO)—Dr. Coleman as president-elect of the AAO and Dr. Gordon as chair of the AAO Council.

"It is a wonderful opportunity to serve our patients, society, and profession by promoting our mission of preserving sight, especially in the auspicious year 2020," says Dr. Coleman, The Fran and Ray Stark Foundation Chair in Ophthalmology, of being nominated president-elect of the AAO in 2019 and president in 2020.

"The Academy and the Council are in the best position to protect our patients and ensure that their care represents the greatest in skill, utmost compassion, and visionary innovations," says Dr. Gordon, Vernon O. Underwood Family Chair in Ophthalmology.

"Having these influential positions held by faculty from one department is a distinction of the highest order," says Chair **Bartly J. Mondino, MD**. "I am proud the UCLA Department of Ophthalmology is represented by the leadership advanced by Drs. Coleman and Gordon."

Dr. Anne Coleman, AAO President-Elect

Dr. Lynn Gordon, Chair of the AAO Council

Creating Policies to Benefit Ophthalmology's Future

JoAnn A. Giaconi, MD, and **Stacy L. Pineles, MD**, have been appointed to leadership positions with the Association of University Professors of Ophthalmology (AUPO), an organization dedicated to ensuring the best possible vision for the public. Dr. Giaconi, health sciences associate clinical professor of ophthalmology, is president of the AUPO Medical Student Educators Council, and Dr. Pineles, Jerome and Joan Snyder Chair in Ophthalmology, is member-at-large of the AUPO Program Directors Council.

Drs. Giaconi and Pineles follow in the footsteps of Stein Eye Director **Bartly J. Mondino, MD**, who served as executive vice president of the AUPO for 10 years and was honored for taking the organization to a new level of performance and relevance.

Awards and Honors

American Academy of Ophthalmology Awards

UCLA Department of Ophthalmology faculty and alumni were honored for their contributions to the profession at the October 27–30, 2018, American Academy of Ophthalmology (AAO) annual meeting in Chicago, Illinois.

LIFE ACHIEVEMENT HONOR AWARD

Tamara R. Fountain, MD

Gary N. Holland, MD

SENIOR ACHIEVEMENT AWARD

Craig H. Kliger, MD

Lawrence S. Morse, MD, PhD

Peter A. Quiros, MD

Kenneth David Steinsapir, MD

ACHIEVEMENT AWARD

Olivia L. Lee, MD

Eric H. Souied, MD, PhD

Federico G. Valez, MD

SECRETARIAT AWARD

Anthony J. Aldave, MD

Joseph Caprioli, MD

Roy S. Chuck, MD, PhD

Gary N. Holland, MD

Don O. Kikkawa, MD

Ralph D. Levinson, MD

Stephen D. McLeod, MD

Steven Nusinowitz, PhD

Faculty Honors

Anthony C. Arnold, MD, Mary Oakley Foundation Chair in Neurodegenerative Diseases, was chair of the 2018 Sally Letson Symposium in Neuro-Ophthalmology in Ottawa, Canada, and presented the symposium's keynote address, the A. Gardner Watson Lecture, on September 14, 2018.

Ava K. Bittner, OD, PhD, associate professor of ophthalmology, was appointed as the Smotrich Family Optometric Clinician-Scientist Chair on February 4, 2019. Dr. Bittner also received the 2019 Clinical Research Award for $100,000 from the American Academy of Optometry to conduct a multicenter, randomized controlled trial of tele-rehabilitation for low vision.

Nicholas C. Brecha, PhD, Distinguished Professor of Neurobiology, Ophthalmology, and Medicine, received the Boycott Prize in recognition of career achievement in retinal neurobiology at the Federation of American Societies of Experimental Biology (FASEB) meeting on Retinal Neurobiology and Visual Processing on June 28, 2018, in Olean, New York.

Anne L. Coleman, MD, PhD, The Fran and Ray Stark Foundation Chair in Ophthalmology, was named an Association for Research in Vision and Ophthalmology (ARVO) Gold Fellow. The distinction honors Dr. Coleman's exemplary contributions to the organization and was received on April 28, 2019, in Vancouver, Canada.

Sophie X. Deng, MD, PhD, professor of ophthalmology, received an Achievement Award from Asian-Pacific Academy of Ophthalmology at their March 8, 2019, annual meeting in Bangkok, Thailand.

Brian A. Francis, MD, MS, health sciences clinical professor, gave The Moses Carl Wilensky Lecture at the 54th Annual C.S. O'Brien Professor and 41st Annual Tulane Eye Alumni Day meeting on June 8, 2019, at Tulane University in New Orleans, Louisiana.

Gary N. Holland, MD, Jack H. Skirball Chair in Ocular Inflammatory Diseases, presented the 35th G. Richard O'Connor Lecture "Ocular Toxoplasmosis: 35 Years of Discovery (1984–2019)" at the annual meeting of the H. Bruce Ostler Association of Proctor Fellows on June 15, 2019, in San Francisco, California.

Jean-Pierre Hubschman, MD, associate professor of ophthalmology, was awarded a $2.5 million R01 grant from the National Eye Institute of the United States National Institutes of Health effective February 1, 2019, for his project "Vitreoretinal Surgery via Robotic Microsurgical System with Image Guidance, Force Feedback, Virtual Fixture, and Augmented Reality."

Michael S. Ip, MD, professor of ophthalmology, was appointed as the Gavin S. Herbert Endowed Chair, on March 22, 2019.

Ralph D. Levinson, MD, health sciences clinical professor of ophthalmology, was honored with the S. Rodman Irvine Prize at the UCLA Department of Ophthalmology Clinical and Research Seminar on June 7, 2019, in Los Angeles, California. The award recognizes demonstrated excellence in professional actions and exemplary dedication to teaching future generations of ophthalmologists.

Tara A. McCannel, MD, PhD, director of the Ophthalmic Oncology Center and health sciences associate clinical professor of ophthalmology, was the keynote speaker for the Canadian Ophthalmological Society Annual Meeting and Exhibition on June 16, 2019, in Quebec, Canada.

Bartly J. Mondino, MD, Bradley R. Straatsma, MD, Endowed Chair in Ophthalmology, and chair of the UCLA Department of Ophthalmology, presented the keynote Steven M. Podos, MD, Lecture "Ocular Cicatricial Pemphigoid" at the Icahn School of Medicine at Mount Sinai on May 30, 2019, in New York, New York.

Kouros Nouri-Mahdavi, MD, MS, associate professor of ophthalmology, and his co-principal investigators, received a 2019 UCLA Innovation Fund Award of $200,000 for their development of chip-scale MHz optical coherence tomography.

Stacy L. Pineles, MD, Jerome and Joan Snyder Chair in Ophthalmology, received the University of California OptumLabs Research Credit Award from the UC Regents in June 2018.

Dr. Pineles was further honored with the American Association for Pediatric Ophthalmology and Strabismus (AAPOS) Young Investigator Award at the AAPOS meeting on March 29, 2019, in San Diego, California.

Srinivas R. Sadda, MD, president and chief scientific officer of the Doheny Eye Institute, presented the keynote address "How Will Ocular Imaging Evolve in the Next 20 Years" at the inaugural Asia-Pacific Ocular Imaging Society symposium on March 7, 2019, in Bangkok, Thailand.

David Sarraf, MD, health sciences clinical professor of ophthalmology, presented the keynote lecture "RAP: Advanced Retinal Imaging of Type 3 NV" at the 6th International OCT Angiography and Advances in OCT Congress on December 14, 2018, in Rome, Italy.

Dr. Sarraf also presented both the keynote lecture "PAMM, OHMM and the Ischemic Cascade: Understanding the Organization of the Retinal Capillary Plexus" and the EVRS award lecture "OCT Angiography: Navigating the Traps and Pitfalls of Image Interpretation" at the European VitreoRetinal Society annual meeting on June 28, 2019, in Lisbon, Portugal.

Steven D, Schwartz, MD, The Ahmanson Chair in Ophthalmology, presented the APEC 100 Year Anniversary Lecture "The Truth About Stem Cells" at the APEC Hospital Centennial on August 9, 2018, in Mexico City, Mexico.

Dr. Schwartz also presented the FloRetina Lecture "Stem Cell Therapy for Maculopathies" on June 7, 2019, in Florence, Italy.

Bradley R. Straatsma, MD, JD, founding chair of the UCLA Department of Ophthalmology and founding director of the Stein Eye Institute, was the recipient of the 2018 Albert Nelson Marquis Lifetime Achievement Award from Marquis Who's Who, Berkeley Heights, New Jersey.

Dr. Straatsma was also elected as an honorary member of the International Society of Ocular Oncology during the society's meeting March 22–26, 2019, in Los Angeles, California.

David S. Williams, PhD, professor of ophthalmology and neurobiology, received the Foundation Fighting Blindness Visionary Award on November 17, 2018, in Los Angeles, California.

Dr. Williams was also identified as the top-rated expert in deaf-blind disorders in the world by Expertscape, a website dedicated to objective rankings of medical expertise. The June 2019 ranking is based on 606 articles published since 2009.

New Faculty Appointments

The UCLA Department of Ophthalmology is pleased to welcome three researchers who will be advancing our knowledge of vision science and technology at the Doheny Eye Institute:

- **Steven A. Barnes, PhD**, Professor of Ophthalmology
- **Ram Kannan, PhD**, Adjunct Professor of Ophthalmology
- **Yuhua Zhang, PhD**, Associate Professor of Ophthalmology

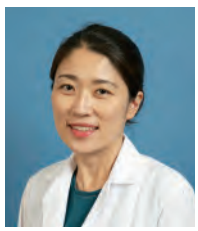
The Department also welcomes three clinician-researchers who will be providing patient care at the UCLA Stein Eye Institute and/or related teaching hospitals:

- **Ava K. Bittner, OD, PhD**, Smotrich Optometric Clinician-Scientist Chair, Associate Professor of Ophthalmology
- **Soh Youn Suh, MD**, Health Sciences Clinical Instructor
- **Soheab Ugradar, MD**, Health Sciences Clinical Instructor


Steven A. Barnes, PhD


Ava K. Bittner, OD, PhD


Ram Kannan, PhD


Soh Youn Suh, MD


Yuhua Zhang, PhD


Soheab Ugradar, MD

Milestones

Stein and Doheny Celebrate Five-Year Anniversary

It was a first of its kind—and this year, the historic affiliation between the Stein Eye Institute and the Doheny Eye Institute marked its five-year anniversary.

The affiliation aligned each Institute's strengths under the banner of the UCLA Department of Ophthalmology and achieved immediate benefits for patients, with the opening of Doheny Eye Center UCLA locations across the Southland.

Unstoppable in their combined abilities, the work of Doheny and Stein Eye vision scientists and basic researchers is already leading to impactful discoveries and development of innovative eye care therapies.

Dr. Bartly Mondino (left) and Dr. Bradley Straatsma (right) honor the achievements of their colleagues, Drs. Ralph Levinson (center left) and Sherwin Isenberg (center right).

Reception Honors Drs. Sherwin Isenberg and Ralph Levinson

Celebrating more than 60 combined years as UCLA Department of Ophthalmology faculty, **Sherwin J. Isenberg, MD**, and **Ralph D. Levinson, MD**, were honored at a retirement reception at the Stein Eye Institute on May 8, 2019.

Preventing neonatal and childhood blindness has been a mission of Dr. Isenberg's for decades. The Laraine and David Gerber Chair in Ophthalmology and Distinguished Professor of Ophthalmology has developed methods to prevent pediatric vision loss from debilitating eye infections that impact more than 10,000 children a year in low-resource countries.

Dr. Levinson, health sciences clinical professor of ophthalmology, has investigated the clinical aspects of uveitis and the immunogenetics of ocular inflammation. His research has resulted in identification of new genetic markers and deeper understanding of the interrelationship of disease factors, as well as the course of disease and its response to treatment.

Devoted clinicians, researchers, teachers, and mentors, Drs. Isenberg and Levinson have left an indelible mark on the Institute's history and its future.

IN MEMORIAM

Patricia E. Bath, MD

Dr. Patricia Bath, the first female faculty member in the UCLA Department of Ophthalmology, died May 30, 2019, following complications from cancer. She was 76.

Dr. Bath held a faculty appointment from 1974 to 1987, and she was chief of the Ophthalmology Division of what is now the Charles R. Drew University of Medicine and Science. She was director of the school's ophthalmology residency training program.

Dr. Bath is credited with inventing the Laserphaco probe, a device she patented in 1988 to improve cataract surgery. She also co-founded the non-profit American Institute for the Prevention of Blindness. The National Institute of Medicine recognized Dr. Bath's contributions in their biography, *Changing the Face of Medicine*.

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 7, 2019:

Senior Honor Awards
Betsy E. Blechman, MD
Bryant J. Lum, MD
Laurence N. Roer, MD

Resident Research Award
Victoria L. Tseng, MD, PhD

Clinical Fellow Research Award
Wei "Wayne" Gui, MD

Research Fellow Research Award
Wenlin Zhang, MD, PhD

Predoctoral Fellow Research Award
Joseph Park, MS

Postdoctoral Fellow Research Award
Michel Sun, MD, PhD

ARVO Young Investigator Travel Award
Qing Wang, MD, PhD

Resident Weekly Quiz Award
Cameron Pole, MD

Faculty Teaching Award
Peter A. Quiros, MD

Fellowship Faculty Teaching Award
Saba Al-Hashimi, MD

Fellow Teaching Award
Justin Karlin, MD

Resident Teaching Award
Kirk K. Hou, MD, PhD

Resident Award for Medical Student Teaching
Judd Cahoon, MD
Elisha C. Garg, MD

Members of the 2019 Graduating Class

24th Vision-Science Conference

The Vision-Science Conference, jointly sponsored by the UCLA Stein Eye Institute and the National Eye Institute Vision Science Training Grant, celebrated its twenty-fourth year October 12–14, 2018, at the UCLA Lake Arrowhead Conference Center.

Eighty attendees participated in discussions and educational activities. **Marie Burns, PhD**, professor of ophthalmology and vision science, professor of cell biology and human anatomy at the Center for Neuroscience, University of California, Davis, presented the keynote address.

Awards were also presented for best oral presentations and best posters:

Best Oral Presentations
Ala Morshedian, PhD
Adrian Au, PhD
Anna Matynia, PhD

Best Posters
Alejandra Young, PhD
Rikard Frederiksen, PhD
Nermin Kady, PhD

Attendees at the 2018 Vision-Science Conference in Lake Arrowhead

Aesthetic Eyelid and Facial Rejuvenation Course

Practicing ophthalmologists and surgical specialists from across the world attended the two-day Aesthetic Eyelid and Facial Rejuvenation Course at the UCLA Stein Eye Institute July 20–21, 2018.

A dissection workshop on the first day provided participants with hands-on experience performing eyelid and facial procedures that utilized the most advanced techniques. A symposium on the second day covered a wide range of aesthetic surgery topics and included live demonstrations. Also presented was the Robert Axelrod, MD, Memorial Lecture by **George C. Charonis, MD, PhD**, director, Department of Orbital Surgery, Athens Vision Eye Institute, Athens, Greece.

Robert Alan Goldberg, MD, chief of the Orbital and Ophthalmic Plastic Surgery Division, was the program chair. Course directors were **Drs. Daniel Rootman, Norman Shorr**, and **Jonathan Hoenig**.

From left to right: Drs. Raymond Douglas, Daniel Rootman, Robert Goldberg, George Charonis, Norman Shorr, and Steven Leibowitz at the Aesthetic Eyelid and Facial Rejuvenation Course.

Students learn each step of cataract surgery through hands-on courses.

Training in Basic and Advanced Cataract Surgery

Kevin M. Miller, MD, chief of the Cataract and Refractive Surgery Division, organized two cataract surgery courses for Southern California ophthalmology trainees, which included instruction by many members of the UCLA faculty.

The Alcon Laboratories Basic Cataract Surgery Course on November 17, 2018, included all 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 Johnson & Johnson Vision Advanced Cataract Surgery course on June 1, 2019, provided instruction in anterior and pars plana vitrectomy, femtosecond laser-assisted astigmatism management, toric lens implantation, phaco machine settings, B scan ultrasonography, secondary lens implantation, glaucoma micro-stent implantation, small pupil management, Meibomian gland imaging, and extracapsular cataract extraction. Also included was a challenging cases video workshop.

UCLA Department of Ophthalmology Clinical and Research Seminar

The Institute's most prestigious educational event, the UCLA Department of Ophthalmology Clinical and Research Seminar, was held June 7–8, 2019, at the UCLA Stein Eye Institute.

The seminar covered current clinical and research aspects of each of the ophthalmic subspecialties, and included the full-time faculties of the Stein Eye and Doheny Eye Institutes, along with nationally prominent speakers who presented the following keynote lectures:

50th JULES STEIN LECTURE

David J. Wilson, MD
Paul H. Casey Chair
Department of Ophthalmology
Director, Casey Eye Institute
Oregon Health & Science University

50th DOHENY MEMORIAL LECTURE

Paul P. Lee, MD, JD
F. Bruce Fralick Professor & Chair
Department of Ophthalmology & Visual Sciences
University of Michigan
Director, W.K. Kellogg Eye Center

17th BRADLEY R. STRAATSMA LECTURE

Jeffrey L. Goldberg, MD, PhD
Professor & Chair of Ophthalmology
Byers Eye Institute at Stanford University

17th THOMAS H. PETTIT LECTURE

Yvonne Ou, MD
Associate Professor of Ophthalmology
Vice Chair for Postgraduate Education
Co-Director, Glaucoma Service
Department of Ophthalmology
University of California, San Francisco

Glaucoma Division Joint Retreat

Stein and Doheny glaucoma faculty shared their clinical and basic-science research projects with their colleagues and identified opportunities for collaboration at a Glaucoma Division retreat on February 15, 2019, at the UCLA Faculty Center.

Joint platforms, like this retreat, combine the strengths of each organization—leading to novel research, discovery, and vision-protecting therapies.

Annual Comprehensive Ophthalmology Review Course

The Comprehensive Ophthalmology Review Course on February 21–14, 2019, at the UCLA Stein Eye Institute, reviewed the clinical essentials of each subspecialty in ophthalmology. The course was clinically oriented, with review concentrating on the epidemiology, clinical presentation, diagnosis, and management of ophthalmologic disease to prepare attendees for upcoming ophthalmology examinations and required continuing medical education recertification.

Directed by **Drs. John A. Irvine** and **Sherwin J. Isenberg**, the four-day intensive review course is held annually by the UCLA Stein Eye and Doheny Eye Institutes. UCLA course faculty contributing to the 2019 program were **Drs. Saba Al-Hashimi, Bruce B. Becker, Benjamin B. Bert, Hugo Y. Hsu, Michael S. Ip, Monica R. Khitri, Olivia L. Lee, Colin A. McCannel, Tara A. McCannel, Kevin M. Miller, Daniel B. Rootman, SriniVas R. Sadda, David Sarraf, James C. H. Tan,** and **Federico G. Velez**.

Charting a Path Toward Better Measures for New Uveitis Treatments

At the March 22–23, 2019, UCLA/American Uveitis Society workshop, approximately 100 participants from 14 countries created a foundation for optimizing the emergence of optical coherence tomography, other imaging techniques, and artificial intelligence to obtain more precise measurements of the inflammation that characterizes uveitis.

Participants agreed that use of more objective measures of inflammation is a goal to pursue, and that working groups should move forward with the ideas that came out of the meeting. Organizers were **Gary N. Holland, MD**, Jack H. Skirball Chair in Ocular Inflammatory Diseases, and director of the Institute's Ocular Inflammatory Disease Center, **SriniVas R. Sadda, MD**, president and chief scientific officer of the Doheny Eye Institute and a leading authority on imaging research, and **Russell N. Van Gelder, MD, PhD**, trustee of the American Uveitis Society. The event was co-sponsored by the UCLA Stein Eye Institute, the Doheny Eye Institute, and the American Uveitis Society.

Inherited Retinal Dystrophies: A Comprehensive Summit

The UCLA Department of Ophthalmology collaborated with the Scientific Office of the Embassy of France in the USA and the Institut de la Vision in Paris, France, and organized a Comprehensive Summit on Inherited Retinal Dystrophies (IRDs) at the Stein Eye Institute on May 6, 2019.

Vision scientists from the Stein Eye and Doheny Eye Institutes participated in sessions with researchers from France and the USA, and start-up companies from both countries.

The one-of-a-kind meeting presented a comprehensive approach to IRDs, from their epidemiology to innovative treatments, with the goal of increasing collaboration and facilitating the translation of basic research into application.

Pacific Retina Club

The Pacific Retina Club presented its 7th annual meeting on March 15, 2019, at the California NanoSystems Institute at UCLA. Participants presented their most interesting case of the year, which was then followed by lively and insightful group discussion. Course directors were **Drs. H. Richard McDonald**, **SriniVas R. Sadda**, and **David Sarraf**.

International Retinal Imaging Symposium

The International Retinal Imaging Symposium (IntRIS) was held on March 16, 2019, at the California NanoSystems Institute at UCLA. More than 55 world-renowned experts discussed new technologies and applications of retinal imaging, providing insight and understanding in retinal imaging and showcasing the integral importance of innovative retinal imaging in the evaluation and management of retinal disease. Course directors were **Drs. K. Bailey Freund**, **SriniVas R. Sadda**, and **David Sarraf**.

Gaining Subspecialty Knowledge

Study group meetings were held throughout the academic year and are an integral part of the UCLA Department of Ophthalmology residency and clinical fellowship training programs. The study groups also serve as an informal resource for practicing ophthalmologists in the community.

Conference topics include: cornea, glaucoma, neuro-ophthalmology, ophthalmic pathology, pediatric ophthalmology and strabismus, pediatric rheumatology and uveitis, and retinal imaging.

Community Outreach

Access to a Cure is Access to Care

The Stein Eye Institute's UCLA Mobile Eye Clinic (UMEC) program, directed by **Anne L. Coleman, MD, PhD**, served **9,675** children and adults this year, diagnosed **1,403** ocular abnormalities, and made **410** trips throughout Los Angeles County to bring access to eye care for those who need it the most. In addition, the new partnership with UCLA Health and the LA Dodgers resulted in UMEC providing free eye health screenings for patrons at seven LA Dodgers RBI community events and home games this season. Other Stein Eye Institute's community outreach activities included the following:

Adult Vision Program

Through the Adult Vision Program, **705** free eye exams were given to individuals lacking access to adequate vision care due to reasons such as cost, transportation, and insurance.

The program provided **104** adult community-outreach events at homeless shelters, libraries, federally qualified health centers, and other nonprofits in the Los Angeles County area.

UCLA MOBILE EYE CLINIC

Attended
19
HEALTH FAIRS

served
907
PATIENTS

and gave
223
REFERRALS TO INDIVIDUALS WHO NEEDED FOLLOW-UP CARE

This year UMEC added a second bus to its fleet. The 40-foot-long bus runs on environmentally friendly natural gas and contains one pre-examination room, two examination rooms, a computer-networking infrastructure, and a security camera system.

Care Harbor 2018

Continuing its annual tradition, UMEC participated in Care Harbor Los Angeles, October 13–15, 2018, where thousands of the community's most vulnerable patients received free medical, dental, vision, and preventive care conservatively valued at $2,110,000.

At the three-day event, **14** ophthalmologists and over **20** nurses, technicians, and support staff volunteered their time and evaluated **196** patients. Comprehensive dilated exams were given to patients at risk for eye disease, which would include a history of diabetes or hypertension, a family history of glaucoma, or decreased vision not corrected with eyeglasses, and **99** patients were referred to community eye specialists for further evaluation and treatment, which is often given free of charge.

UCLA Undergraduate Student Clubs

Dr. Coleman is also the faculty advisor for the UCLA undergraduate club, Bruin Vision Project (BVP). Since 2008, BVP has been dedicated to providing access to eye care for uninsured communities and vulnerable populations in Los Angeles. As one of the only organizations at UCLA that focuses on providing vision care services for the underserved, BVP works in partnership with the UCLA Stein Eye Institute and UMEC to provide vision-screening services and additional resources at health fairs across Los Angeles County.

We are also proud to announce the new UMEC Student Leadership Club (UMEC SLC) founded by UMEC undergraduate volunteers in fall 2018 to assist UMEC with providing free vision care to underserved Angelinos. The club aims to shape members into future leaders through clinical exposure and professional development. In less than a year of existence, the club won the prestigious UCLA Mongelli Award for Excellence in Civic Engagement and over $2,700 in UCLA grants to fund clinical supplies and much needed transportation of volunteers to UMEC clinics. Volunteers are now able to participate in more clinics across Los Angeles County—from Pomona to Palmdale—so they can assist with set-up, check-ins, and patient flow. Through their work with UMEC, the UMEC SLC has had a significant impact on the community. To learn more about UMEC SLC, go to https://uclahs.fyi/SLC

Learn More at the UMEC Website

Privately funded, UMEC has been providing free eye care services and glasses for underserved communities in Los Angeles County for over 40 years and has been honored for exemplary leadership in shaping the future of health care.

Find more information and/or how to get involved by volunteering or donating at: www.uclahealth.org/umec.

UCLA HEALTH GOES DODGER BLUE!
As part of the new 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.

PRESCHOOL VISION PROGRAM

The UCLA Preschool Vision Program offers no-cost services for underserved preschoolers in the Los Angeles area. This year the program provided:

7,305
VISION SCREENINGS

774
FULLY DILATED EYE EXAMS

782
PAIRS OF GLASSES

and provided

129
REFERRALS TO PARTNER SPECIALISTS FOR PRESCHOOL STUDENTS NEEDING SPECIALIZED MEDICAL OR SURGICAL TREATMENTS

Alumni News

Dr. David Aizuss President of the California Medical Association

David H. Aizuss, MD, UCLA Department of Ophthalmology resident and fellow alumnus (1981–1985) and assistant clinical professor of ophthalmology, was installed as the 151st president of the California Medical Association (CMA) during the organization's annual House of Delegates (HOD) meeting on October 13, 2018, in Sacramento, California.

Dr. Aizuss is the first ophthalmologist-only president of the CMA in more than 50 years. He has been a CMA and Los Angeles County Medical Association (LACMA) member for 37 years. He has been a member of the CMA Board of Trustees since 2010—serving as vice-chair and chair of the board before being named president-elect at the 2017 HOD. Dr. Aizuss has also represented the physicians of California as a delegate to the American Medical Association (AMA), and he is currently serving on the AMA Council on Legislation. Dr. Aizuss is a former president of LACMA and the California Academy of Eye Physicians and Surgeons. He is a partner at Ophthalmology Associates of the Valley.

Drs. Bateman and Straatsma Honored for Global Leadership

J. Bronwyn Bateman, MD, UCLA Department of Ophthalmology clinical professor and alumna, and **Bradley R. Straatsma, MD, JD**, founding chair of the Department and founding director of the Stein Eye Institute, were jointly honored with the A. Edward Maumenee Medal for Distinguished Service at the 34th Pan-American Association of Ophthalmology (PAAO) Congress on May 25, 2019, in Cancún, Mexico.

Both Drs. Bateman and Straatsma have served as president of the PAAO, and the award honors their exemplary service for continuing education for ophthalmologists, the prevention of blindness, and the promotion of scientific and cultural exchange among ophthalmologists in the Western Hemisphere.

Valentina Franco-Cardenas, MD, has been named to the Pan-American Association of Ophthalmology (PAAO) 2019–2021 Executive Committee, where she will serve as Associate Secretary, Spanish Language Region. Dr. Cardenas was an international research and clinical fellow in retina at the Stein Eye Institute in 2010–2011. She is currently in private practice and associated with top medical institutions in Mexico City, Mexico.

Stein and Doheny Host Joint Alumni Reception

Alumni from the Stein and Doheny Eye Institutes gathered at the Westin Chicago River North in Chicago, Illinois, on October 28, 2018, for a fun evening reconnecting with friends, colleagues, and mentors.

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. Find photos and information at: www.facebook.com/JSEIAlumni.

Dr. J. Fernando Arevalo (left), president of the Pan-American Association of Ophthalmology, presents the A. Edward Maumenee Medal for Distinguished Service to co-recipients Dr. J. Bronwyn Bateman and Dr. Bradley Straatsma at the PAAO Congress in Cancún, Mexico.

Dr. Bartly Mondino (center), chair of the UCLA Department of Ophthalmology and director of the Stein Eye Institute, with Ms. Marissa Goldberg, executive director and chief financial officer of the Doheny Eye Institute, and Dr. SriniVas Sadda, president and chief scientific officer of the Doheny Eye Institute.

Dr. Bartly Mondino (center) visits with Department faculty members Dr. Sophie Deng (left) and Dr. Anne Coleman (right).

Drs. Federico Badalà, JoAnn Giaconi, Alessandro Rabiolo, and Joseph Caprioli reconnect at the alumni event.

(L to R): Drs. Julian Perry, Tina Rutar, and Catherine Hwang join Dr. Bradley Straatsma, founding chair of the UCLA Department of Ophthalmology and founding director of the Stein Eye Institute.

Enjoying the reception are (L to R) Drs. Simon Law, Frank La Rosa, Mark Kramar, Annette Giangiacomo, Joseph Caprioli, and Lucy Shen.

(L to R): Drs. Robert Goldberg, Bartly Mondino, Sophie Deng, and Tara McCannel welcome alumnus resident Dr. Shawn Lin (center).

Jules and Doris Stein UCLA Support Group

Volunteer Committee Shares the Gift of Sight

The **Jules and Doris Stein UCLA Support Group Volunteer Committee**, the volunteer arm of the Stein Eye Institute established in 1990, accomplished impressive community outreach results this fiscal year—results that would not have been possible without the commitment of generous members and donors and the dedication of over **126** volunteers.

The Vision IN-School (VIS) education program is offered free of charge to fourth- through seventh-grade public school students in Los Angeles. Students are taught about the anatomy of the eye, eye safety, and injury prevention. The highlight of each in-class presentation is a hands-on dissection of a bovine eye. **Thirty-three** VIS volunteers visited **34** classrooms this past year, presenting the curriculum to **1,082** elementary students.

A successful year-end sponsorship drive was held for the *Make Surgery Bearable* program, an initiative that provides Dr. Teddy bears to each pediatric patient undergoing eye surgery at Stein Eye. Pediatric patients also receive an informational children's book, *Making Eye Surgery Bearable*, that helps young patients and their caregivers prepare for surgery. Offered in both Spanish and English, the book was written at the suggestion of the Pediatric Ophthalmology and Strabismus Division.

Both the book and the cuddly teddy bear, dressed in green scrubs and tagged with the name of the donor, help children feel comforted and secure during what could otherwise be a frightening time. UCLA Bruin Belle volunteers joined forces with the Volunteer Committee to help tag the bears and books.

The MagniVision program provides financial support for the UCLA Vision Rehabilitation Center (VRC), which enables the purchase of low-vision tools for the VRC lending library. This year, under the direction of Volunteer Committee Advisory Board Member Robin Carnesale, the Committee purchased additional Kindle Fire devices to add to the lending library. Low-vision patients may borrow the voice-activated assistive devices for an indefinite period of time.

The Preschool Vision Screening program began 20 years ago under the supervision of the late Dr. Leonard Apt, founding chief of the Division of Pediatric Ophthalmology and Strabismus. During the 2018 school year, **24** Volunteer Committee volunteers visited **17** classrooms to screen **374** children between three and five years of age.

The Shared Vision program collected and recycled approximately **3,500** donated eyeglasses for those in need. Recycled eyeglasses were cleaned, tagged with the vision correction, and distributed to Los Angeles homeless shelters, as well as clinic missions conducted by nonprofit groups in Southeast Asia, Central America, and other low-resource regions.

Team Stein Eye participated in the twelfth annual Los Angeles Foundation Fighting Blindness Vision Walk, which was held at Crescent Bay Park on October 27, 2018. The event, supported by both Stein Eye employees and volunteers from the Jules and Doris Stein UCLA Support Group's Volunteer Committee, raised funds for retinal eye disease research.

VISION IN SCHOOLS

33
VOLUNTEERS
visited
34
CLASSROOMS
and taught
1,082
STUDENTS ABOUT THE EYE

SHARED VISION

Collected and recycled
3,500
PAIRS OF GLASSES FOR THOSE IN NEED

PRESCHOOL SCREENING

24
VOLUNTEERS
visited
17
CLASSROOMS
and screened
374
CHILDREN FOR VISION ISSUES

Philanthropy

Endowed Chairs Pay Tribute to Both Donor and Holder

This academic year, the Stein Eye Institute celebrated the inaugural appointments of three faculty members to endowed chairs that were established by donors to further support Stein Eye's research, patient care, education, and outreach activities. Each chair pays tribute to both the distinguished faculty member who holds the chair and the generous donor who has embraced the vision of a clear and brighter tomorrow for countless patients. "We are indebted and gratified by our supporters' tremendous commitment to and belief in Stein Eye and the work we do," says **Bartly J. Mondino, MD**, director of the Stein Eye Institute, chairman of the UCLA Department of Ophthalmology, and affiliation chairman of the Doheny Eye Institute.

Dr. William Stivelman, chief executive officer and medical director of the Mary Oakley Foundation (left) and Dr. Bartly Mondino (center) join Dr. Anthony Arnold, the recipient of the Mary Oakley Chair, at a reception at the Stein Eye Institute on October 17, 2018.

Mary Oakley Foundation Chair in Neurodegenerative Diseases

Anthony C. Arnold, MD, chief of the Neuro-Ophthalmology Division at Stein Eye, was celebrated as the inaugural recipient of the Mary Oakley Foundation Chair in Neurodegenerative Diseases at a reception at the Stein Eye Institute on October 17, 2018. **William C. Stivelman, MD**, chief executive officer and medical director of the Mary Oakley Foundation, facilitated the chair's endowment, which will support academic research activities in the area of neurodegeneration. Neurodegenerative diseases represent a large group of neurological disorders, with Alzheimer's Disease being one of the most common. The most consistent risk factor for developing a neurodegenerative disease is increasing age, and with an expanding population of people over the age of 65, research in this field is critical.

Smotrich Family Optometric Clinician-Scientist Chair

Ava K. Bittner, OD, PhD, was appointed the inaugural chair holder of the Smotrich Family Optometric Clinician-Scientist Chair at a reception on May 15, 2019. Dedicated optometrists and ophthalmologists helped raise funds for the chair, named in honor of **Marvin Smotrich, OD**, a UCLA alumnus and an accomplished optometrist who served on the original chair campaign committee and played an integral role in bringing the chair to fruition. Dedicated exclusively to an optometrist, the chair will help bridge the gap between optometrists and ophthalmologists, and therefore be unique in academic ophthalmology. Funding will help further the development of broad-based research among the two professions and encourage the continuation of many of the advances in bilateral professional cooperation in research, education, and public service.

Attendees of the May 15 reception included (left to right) Drs. Bradley Straatsma, Bartly Mondino, Marvin Smotrich, Jule Lamm, and Ava Bittner.

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

Robert Alan Goldberg, MD, chief of the Orbital and Ophthalmic Plastic Surgery Division, was appointed as the inaugural chair holder of the Bert O. Levy Endowed Chair in Orbital and Ophthalmic Plastic Surgery. The reception on June 18, 2019, also celebrated philanthropist and longtime friend of Stein Eye **Mr. Bert O. Levy**, whose gift will fund Dr. Goldberg's efforts to advance research, patient care, and education. Within his subspecialty, Dr. Goldberg is the primary faculty mentor for medical students, residents, physicians, and clinical and international fellows, and is unstinting in his efforts to provide superior instruction and guidance. Dr. Goldberg has authored more than 250 peer-reviewed papers, 64 books and book chapters, and is on the editorial board for prestigious journals.

Dr. Bartly Mondino (left) presented Mr. Bert Levy (center) and Dr. Robert Goldberg with commemorative chair trophies.

With Gratitude

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.

Major Gifts $25,000 and Above:

Anonymous
Bert O. Levy
Bradley R. Straatsma, MD, JD
Bruce Ford and Anne Smith Bundy Foundation
Carmichael Family Trust
Carol and Timothy W. Hannemann
Dr. Tanuj Nakra and Mrs. Nidhi Nakra
Dr. Tomoyuki Kashima
Elaine L. Ellsworth Revocable Living Trust
Elaine Sarkaria
Estate of Jean Stein
Fairchild-Martindale Foundation
Hess Foundation, Inc.
Hongbin Peng
J. Bronwyn Bateman, MD
Jerome and Joan Snyder
Joan A. Payden and William R. Payden
John So Min S. Chang, MD
Karen and Franklin Dabby
Knights Templar Eye Foundation, Inc.
Lavery Foundation
Leonard Apt Trust
Lila Hartman Living Trust
Memorial Scholarship Foundation to Mr. Lin Hsiung-Chen
Mr. and Mrs. Robert Knutson
Mr. and Ms. Jacques Lejeune
Mr. and Ms. Thomas W. Austin
Muranaka Family
Peter and Helen Bing
Research to Prevent Blindness, Inc.
Ruth and George E. Moss
The Benjamin H. Williams Trust
The Carl and Roberta Deutsch Foundation
The Foundation Fighting Blindness
The Jules and Doris Stein UCLA Support Group
The Karl Kirchgessner Foundation
The Simms/Mann Family Foundation
The Vision of Children Foundation, Sam and Vivian Hardage
The William & Margaret Fern Holmes Family Foundation
Theo and Wendy Kolokotrones
Wilbur May Foundation

Individuals Recognized with a Tribute Gift

IN HONOR OF:

Allan E. Kreiger, MD
Arthur L. Rosenbaum, MD
Bradley R. Straatsma, MD, JD
Jean-Pierre Hubschman, MD
Joseph Caprioli, MD
Joseph L. Demer, MD, PhD
Jule D. Lamm, OD
Kamal A. Zakka, MD
Karrie and Jeff Fann
Kevin M. Miller, MD
L. Scott Feiler, MD
Laura E. Fox, MD
Marcia and Jeffrey Lloyd
Michael B. Gorin, MD, PhD
Patricia Tussing
Simon K. Law, MD, PharmD
Stacy Pineles, MD
Steven D. Schwartz, MD

IN MEMORY OF:

Anne M. Bodenheimer
Brother Leonard Reeson
David D. Porter
Donald M. Fetherolf
Dr. Stanley Capper
Elena Curris
Gordon Cunningham
Henry I. Baylis, MD
Herbert J. Grossman, MD
Howard D. Felsher
J. Patrick Busch
Jerome S. Field
Linda Lou Papaleo and Elaine L. Ellsworth
Manuel A. Sison, MD
Mary Ruth Chaney Skandera
Muriel L. Gach
Pamela Fumo
Peggy L. Giambrocco
Roland Davies
Russell W. Neuhaus, MD
Stanley K. Rothstein

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

Hillel 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

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

Kolokotrones Chair in Ophthalmology

Established in 2004 by Wendy and Theo Kolokotrones 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–Present

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, M.D. 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

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 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 Fund

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

**pending*

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 and at convenient neighborhood locales 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.

Stein Eye Institute

The **UCLA 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.

Stein Eye Institute, Westwood

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

Stein Eye Center

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.

Stein Eye Center Santa Monica

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

Doheny Eye Center 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.

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 Center is easily accessible from two freeways and provides free, on-site parking.

Doheny Eye Center UCLA Arcadia

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

A year after its opening, the Stein Eye Center–Santa Monica doubled in space to meet patient demand.

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 Center includes 12 exam rooms, dedicated diagnostic equipment, and comfortable patient areas.

Doheny Eye Center UCLA–Orange County

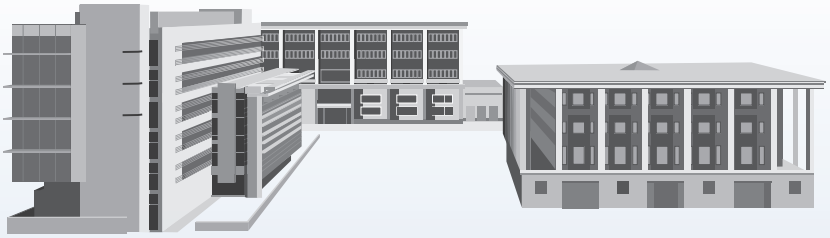
Orange Coast Memorial
Medical Center
18111 Brookhurst St., Suite 6400
Fountain Valley, CA 92708
Telephone: (714) 963-1444
Fax: (714) 963-1234

The **Doheny Eye Center UCLA–Pasadena** serves as the primary hub of the Doheny Eye Center 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 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.

Doheny Eye Center UCLA Pasadena

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



UCLA Department of Ophthalmology Summary of Patient Care Statistics

	2017–2018	2018–2019
FACULTY CONSULTATION SERVICE		
Patient visits	149,771	153,771
INPATIENT CONSULTATION SERVICE		
Patient evaluations	985	781
CLINICAL LABORATORIES		
Procedures	83,122	92,235
SURGERY SERVICES		
*Number of procedures[1]	21,970	16,651
Intravitreal Injections	12,476	12,748
MOBILE EYE CLINIC		
Number of patients seen	17,646	9,675
Ocular abnormalities	31%	33%
Number of trips	789	410

[1]Includes lasers

*Revised

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
- Ocular Motility 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.

The Stein Eye Institute has substantially increased its laboratory space, opening the door to recruitment of more vision scientists and further development of revolutionary programs to treat eye disease.

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.

A continuing theme of residency training is collaboration—creating partnerships in diagnosis, review of challenging patient problems, and learning new techniques.

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 Healthcare 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.

The UCLA Department of Ophthalmology is recognized the world over for its commitment to excellence in patient care, research, and education both locally and globally.

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 Department of Ophthalmology offers clinical fellowships at the Stein Eye Institute and/or the Doheny Eye Center UCLA 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 Bartlett, MD
Shawn Lin, MD
Kenneth Lu, MD
Kevin Miller, MD, Chief SEI
Mitra Nejad, MD

Optometrists

Tony Chan, OD
Carolyn Duong, OD
Linda Hwang, OD
Mark Landig, OD
Amanda Powers, OD

COMPREHENSIVE OPHTHALMOLOGY

Gavin Bahadur, MD
Rachel Feit-Leichman, MD
Tania Onclinx, MD
Susan Ransome, MD
Meryl Shapiro-Tuchin, MD
Ronald Smith, MD

Optometrists

Michael Baker, OD
Vivian Shibayama, OD

CORNEA AND UVEITIS

Anthony Aldave, MD, Chief SEI
Saba Al-Hashimi, MD
Benjamin Bert, MD
Sophie Deng, MD, PhD
Gary Holland, MD
Hugo Hsu, MD, Chief DEC
John Irvine, MD
Batool Jafri, MD
Olivia Lee, MD
Bartly Mondino, MD, Chairman

GLAUCOMA

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

NEURO-OPHTHALMOLOGY

Anthony Arnold, MD, Chief SEI
Laura Bonelli, MD
Lynn Gordon, MD, PhD
Stacy Pineles, MD
Peter Quiros, MD
Alfredo Sadun, MD, PhD, Chief DEC

OPHTHALMIC PATHOLOGY

Ben Glasgow, MD

ORBITAL AND OPHTHALMIC PLASTIC SURGERY

Robert Goldberg, MD, Chief SEI
Daniel Rootman, MD

PEDIATRIC OPHTHALMOLOGY AND STRABISMUS

Joseph Demer, MD, PhD, Chief SEI
Simon Fung, MD
Monica Khitri, MD
Stacy Pineles, MD
Federico Velez, MD

Optometrist

Laura Robbins, OD

RETINA

Gad Heilweil, MD
Hamid Hosseini, MD
Jean-Pierre Hubschman, MD
Michael Ip, MD, Chief DEC
M. Ali Khan, MD
Allan Kreiger, MD
Colin McCannel, MD
Tara McCannel, MD, PhD
Pradeep Prasad, MD
Steven Schwartz, MD, Chief SEI
Irena Tsui, MD

Optometrists

Melissa Chun, OD
Jennie Kageyama, OD

RETINAL DISEASES AND OPHTHALMIC GENETICS

Michael Gorin, MD, PhD, Chief SEI
Phillip Le, MD, PhD
Colin McCannel, MD
Steven Nusinowitz, PhD
SriniVas Sadda, MD
David Sarraf, MD

VISION SCIENCE

Steven Barnes, PhD
Suraj Bhat, PhD
Dean Bok, PhD
Nicholas Brecha, PhD
Gordon Fain, PhD
Debora Farber, PhD, DPhhc
Ben Glasgow, MD
Joseph Horwitz, PhD
Wayne Hubbell, PhD
Steven Nusinowitz, PhD
Natik Piri, PhD
Roxana Radu, MD
Alapakkam Sampath, PhD, Chief SEI
Deming Sun, MD
Hui Sun, PhD
Gabriel Travis, MD
David 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.

Bartly J. Mondino, MD

Bradley R. Straatsma, MD, Endowed Chair in Ophthalmology

Distinguished Professor of Ophthalmology

Chairman, UCLA Department of Ophthalmology

Director, Stein Eye Institute

Affiliation Chairman, 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 chairman 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 chairman, 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.

John D. Bartlett, MD

Health Sciences Assistant 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.

**pending*

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.

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

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. He focuses 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

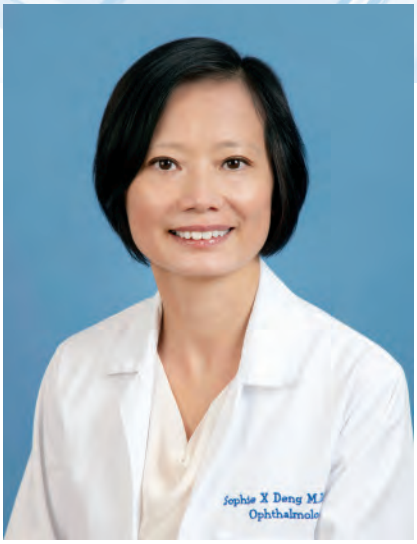
Director, Ocular Motility Laboratories

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.

**pending*

Debora B. Farber, PhD, DPhhc

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: b-*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 lack of the OA1 gene, and the components of the OA1 cascade controlling RPE melanosomes' biogenesis and 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 Ophthalmology and Cornea Specialist

Dr. Fung's clinical interests are childhood cornea and anterior segment diseases. His research focuses on evaluation of pediatric cornea conditions using novel imaging technologies.

After finishing his residency in 2015, Dr Fung undertook a fellowship in adult cornea and external disease at Moorfields Eye Hospital in London, England, followed by a second fellowship in pediatric cornea and anterior segment at The Hospital for Sick Children in Toronto, Canada. Dr. Fung became a UCLA Department of Ophthalmology faculty member in 2018.

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

JoAnn A. Giaconi, MD

Health Sciences Associate 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 Ophthalmic Plastic Reconstructive Surgery, California Academy of Eye Physicians and Surgeons, and the American Academy of Cosmetic Surgery.

Lynn K. Gordon, MD, PhD

Vernon O. Underwood Family Chair in Ophthalmology

Professor of Ophthalmology

Senior Associate Dean for Academic Diversity, 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

Hereditable 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

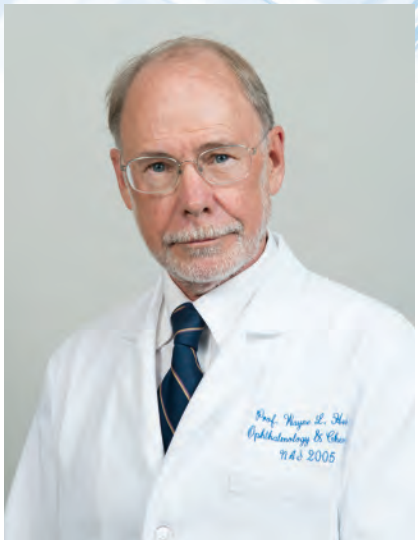
Assistant Professor of Ophthalmology

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

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.

Sherwin J. Isenberg, MD

Laraine and David Gerber Chair in Ophthalmology

Distinguished Professor of Ophthalmology

Professor of Pediatrics

Pediatric Ophthalmology, Amblyopia, and Ophthalmic Pharmacology

Dr. Isenberg is a pediatric surgical and medical disease specialist. His research has concentrated on decreasing the frequency of blindness in children worldwide and preventing pediatric vision loss from debilitating eye infections that impact more than 10,000 children a year in low-resource countries.

Dr. Isenberg has authored nearly 200 research papers, book chapters, and two editions of "The Eye in Infancy." Among his leadership positions, Dr. Isenberg has served as vice chair of the UCLA Department of Ophthalmology, chief of the Division of Ophthalmology at Harbor-UCLA Medical Center, and president of the American Association for Pediatric Ophthalmology and Strabismus.

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.

Ralph D. Levinson, MD

Health Sciences Clinical Professor
of Ophthalmology

Ocular Inflammatory Diseases

Dr. Levinson's research interest is in both the clinical aspects of uveitis and the basic mechanisms and immunogenetics of ocular inflammation. Current projects include a collaborative longitudinal study of a chronic inflammatory disease, birdshot chorioretinopathy, with investigators in France. The study focuses on the interrelationship of disease factors, as well as the course of disease and response to treatment. Dr. Levinson is also conducting laboratory research on cell-based therapies for uveitis and is a co-investigator for National Eye Institute-funded laboratory research on the effects of cancer immunotherapy on uveitis.

Colin A. McCannel, MD

Professor of Clinical Ophthalmology

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.

Tara A. McCannel, MD, PhD

Health Sciences Associate 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

Kolokotrones 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 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. He is also interested in the study of glaucoma treatment outcomes and their predictors, such as ethnicity. A recent publication compared long-term outcomes of trabeculectomy with adjunctive mitomycin C in patients of African descent to those of European descent.

Dr. Nouri-Mahdavi provides clinical care at the Stein Eye Institute in Westwood 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.

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 Assistant Clinical Professor

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 vitreoretinal 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 of the 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 Stein Eye Institute at UCLA and member of the Retinal Disorders and Ophthalmic Genetics Division. He has published over 200 research papers, reviews, and chapters and has delivered over 200 invited lectures at various meetings worldwide including several endowed and keynote lectures.

Dr. Sarraf's research interest centers on retinal disease, especially age-related macular degeneration. He is a world leader and pioneer in the field of advanced retinal imaging systems such as optical coherence tomography (OCT) imaging of the macula and OCT angiography for the evaluation and management of macular disease.

Steven D. Schwartz, MD

The Ahmanson Chair in Ophthalmology

Professor of Ophthalmology

Chief of the Retina Division

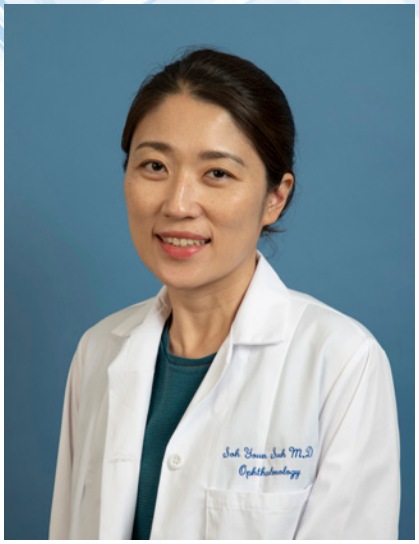
Director of the UCLA Diabetic Eye Disease and Retinal Vascular Center

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.

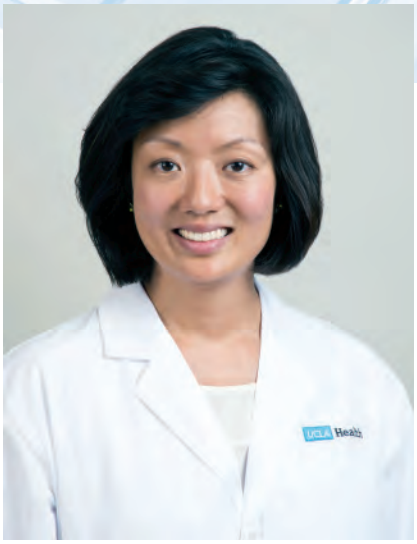
Gabriel H. Travis, MD

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.



Irena Tsui, MD

Assistant 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 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 sees patients at the Stein Eye Institute in Westwood.

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

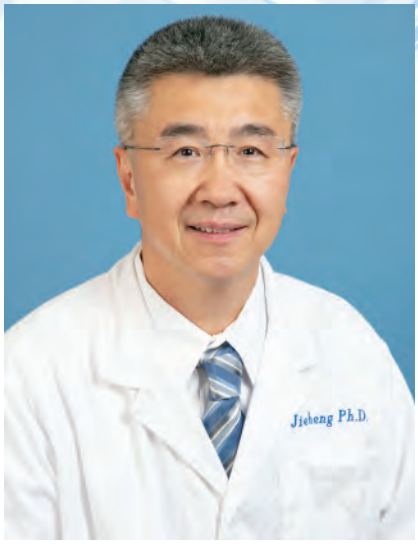
Professor of Ophthalmology

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 support by NIH grants and institutional support.

**pending*



Jie J. Zheng, PhD

Professor of Ophthalmology

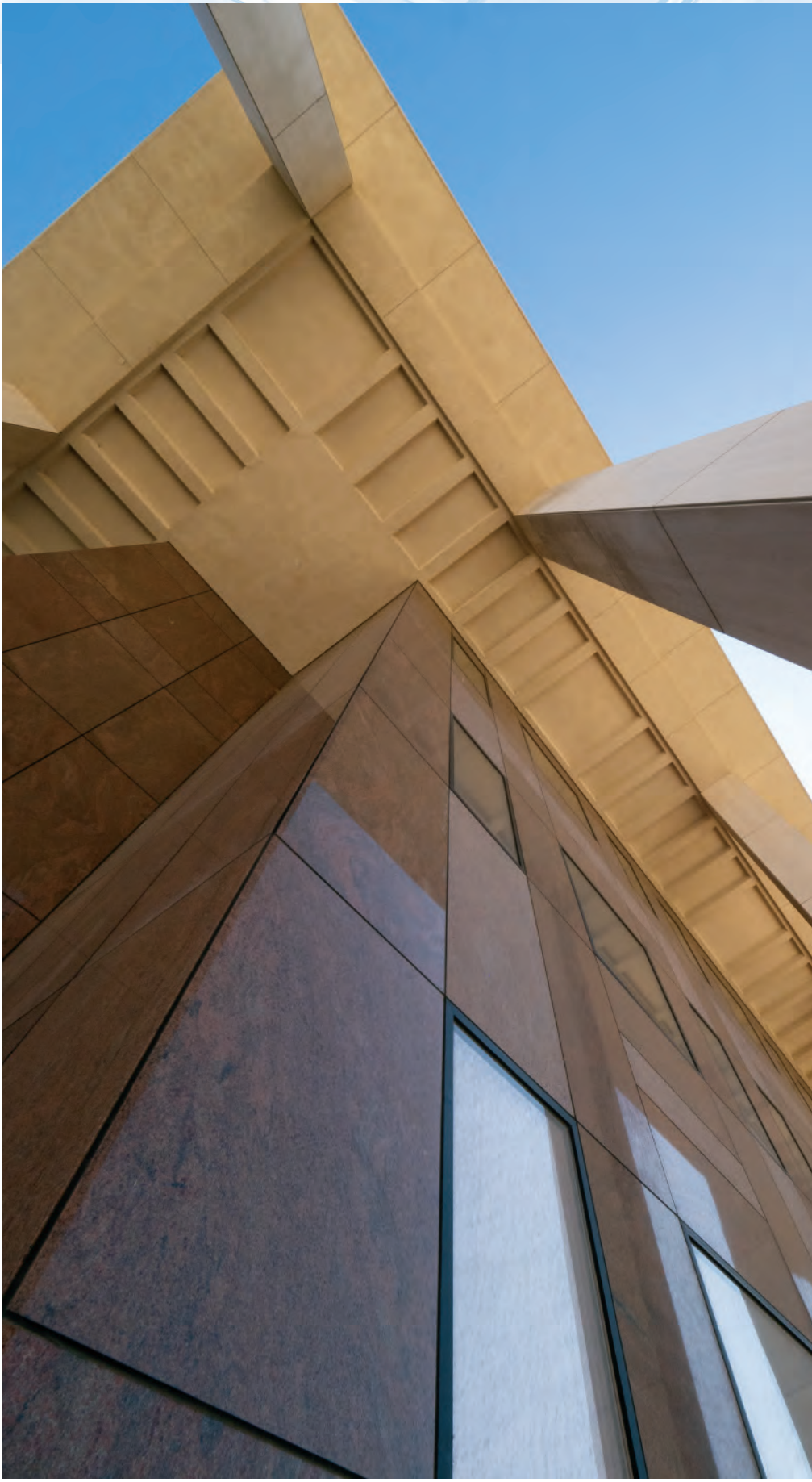
Member of the Molecular Biology Institute

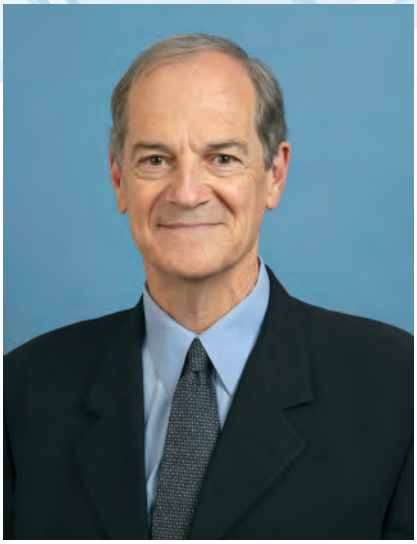
Member of the Jonsson Comprehensive Cancer Center

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.



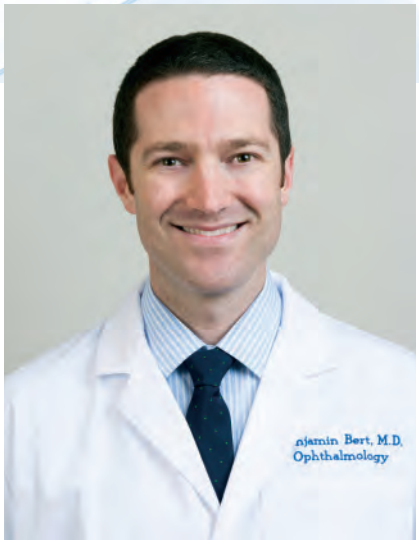


Steven A. Barnes, PhD

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

Health Sciences Associate Clinical Professor of Ophthalmology

Charles Stewart Warren and Hildegard Warren Endowed Research Chair

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

Health Sciences Clinical Professor of Ophthalmology

Rupert and Gertrude I. Stieger Vision Research Chair

Director of Glaucoma Services, Doheny Eye Center 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.

Gad Heilweil, MD

Health Sciences Assistant Clinical Professor

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, Dr. Heilweil also 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

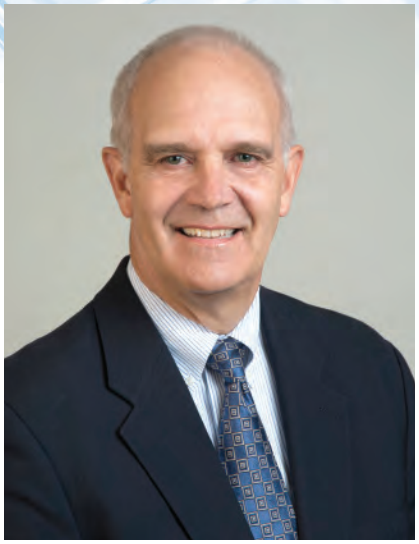
Gavin S. Herbert Endowed Chair

Professor of Ophthalmology

Vitreoretinal Disease

Dr. Ip is the chief of the Vitreoretinal Surgery Service at the Doheny Eye Center 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. In addition, Dr. Ip has served as the national director for numerous NIH-funded ophthalmic clinical trials.



John A. Irvine, MD

Health Sciences Clinical Professor of Ophthalmology

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

Medical Director,
Doheny Eye Center 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.

M. Ali Khan, MD

Assistant Professor of Ophthalmology

Vitreoretinal Disease

Dr. Khan's clinical interests include the medical and surgical treatment of retinal disease. He has a special interest in complex retinal surgery and the evaluation of novel surgical techniques and technology, including research aiming to improve outcomes of retinal detachment repair.

Dr. Khan provides clinical care at the Doheny Eye Center UCLA–Pasadena, the Doheny Eye Center UCLA–Arcadia, and the Stein Eye Center–Santa Monica.

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.

**pending*

SriniVas R. Sadda, MD

Professor of Ophthalmology

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

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 430 peer-reviewed publications and 20 book chapters, and has given over 400 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

Professor of Ophthalmology

Flora L. Thornton Endowed Chair in Vision Research

Vice Chair of Ophthalmology, Doheny Eye Center UCLA

Neuro-Ophthalmology

Clinical specialties of Dr. Sadun include neuro-ophthalmology, optic nerve, optic neuropathies (eg, posterior ischemic optic neuropathy, anterior ischemic optic neuropathy, and traumatic optic neuropathy), Leber hereditary optic neuropathy, toxic and nutritional optic neuropathies, vision in Alzheimer's, AIDS, and other central nervous system disorders. Dr. Sadun's research activities focus on human visual neuroanatomy; retinal ganglion cell degeneration and regeneration; axon populations in the human optic nerve in development, aging, and disease; and mitochondrial impairments as a cause of optic neuropathy and other forms of neurodegeneration.

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

Deming Sun, MD

Professor of Ophthalmology

Mary D. Allen Chair in Vision Research

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

Associate 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, and visual attention. Recent work has focused on how the responses of neurons in the posterior parietal cortex are involved in the allocation of visual attention to neurons in visual cortices 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

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 aB-crystallin in Health and Disease

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

Sheyla Gonzalez, 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.

Alberto C. Ruiz-Morales

Research Specialist

Visual Cycle

Mr. Ruiz, a molecular biologist, is directly involved in the cloning and characterization of enzymes critical for the proper functioning of the visual cycle. Currently, Mr. Ruiz is analyzing genes, such as *ARMS2* and *HTRA1*, which are thought to be involved in age-related macular degeneration.

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

Laura Bonelli, MD

Associate Physician Diplomate

Neuro-Ophthalmology

Dr. Bonelli provides clinical supervision to resident physicians at the University Ophthalmology Associates and teaches medical students during their ophthalmology surgical subspecialties clinical rotation. She is collaborating on a study to learn and better understand giant cell arteritis (GCA), an inflammation of the lining of the arteries. GCA frequently causes blurred or double vision, and if left untreated, may result in loss of vision. She is also a co-investigator for the National Eye Institute-sponsored study of idiopathic intracranial hypertension.

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 nearly two decades, and he has mentored more than 130 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 has been honored with the ophthalmology Faculty Teaching Award an unprecedented four times.

Rachel Feit-Leichman, MD

Associate Physician Diplomate

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 Diplomate

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. She also provides general ophthalmic care and offers cataract surgery with premium intraocular lens implants.

Monica R. Khitri, MD

Associate Physician Diplomate

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. Dr. Khitri sees patients at the Doheny Eye Center UCLA locations in Arcadia and Pasadena. She also teaches residents and fellows at Harbor-UCLA Medical Center, where she is chief of the pediatric ophthalmology service.

Phillip Le, MD, PhD

Associate Physician Diplomate

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 Diplomate

Clinical Instructor of Ophthalmology

Comprehensive Ophthalmology

Dr. Nejad practices comprehensive ophthalmology at the Stein Eye Institute and the Stein Eye Center–Santa Monica. Her practice involves general ophthalmic care, as well as cataract and refractive surgery. In addition, Dr. Nejad teaches UCLA medical students and residents at the Stein Eye Institute, as well as supervising resident cataract surgery at Harbor-UCLA Medical Center.

Tania Onclinx, MD

Associate Physician Diplomate

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 Diplomate

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 Diplomate

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 Diplomate

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 Diplomate

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

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
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
Thomas A. Hanscom, 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
Teresa O. Rosales, MD
Robert J. Schechter, MD (Senior Status)
Stephen Seiff, MD (Senior Status)
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
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
George M. Rajacich, 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
Robert E. Engstrom, 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
Batool 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
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

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
Satvinder Gujral, MD
Lawrence M. Hopp, MD, MS
Anisha J. Judge, MD
Ganesha Kandavel
Michael Kapamajian
Rajesh Khanna, MD
Julie A. King, MD
Mark H. Kramar, MD
Daniel Krivoy, MD
Laurie C. McCall, MD
Mitra Nejad, MD
Jayantkumar Patel, MD
Susan S. Ransome, MD
Steven H. Rauchman, MD
Richard H. Roe, MD
Louis M. Savar, MD
Vivian Shibayama, OD
Abraham Soroudi, MD
Sharon N. Spooner-Dailey, MD
Laura A. Syniuta, MD
Rosalind Vo, MD
Mark Volpicelli, MD
Mathew Wang, MD
Peter H. Win, MD

CONSULTING MEMBERS OF THE STEIN EYE INSTITUTE

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

STEIN EYE INSTITUTE EMERITUS FACULTY

Dean Bok, PhD

Dolly Green Chair of Ophthalmology

Professor of Ophthalmology Emeritus (Active Recall)

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 and 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 of the Neuro-Ophthalmology Division

Joseph Horwitz, PhD

Distinguished Professor of Ophthalmology
(Active Recall)

Allan E. Kreiger, MD

Professor of Ophthalmology Emeritus (Active Recall)

Founding Chief of the Retina Division

Bradley R. Straatsma, MD, JD

Professor of Ophthalmology Emeritus

Founding Chair of the Department of Ophthalmology

Founding Director of the Stein Eye Institute

Barry A. Weissman, OD, PhD

Professor of Ophthalmology Emeritus

Marc O. Yoshizumi, MD

Professor of Ophthalmology Emeritus

Residents

THIRD-YEAR RESIDENTS 2016–2019

Christine L. Bokman, MD
Benjamin C. Campbell, MD
Elisha C. Garg, MD
Kirk K. Hou, MD
Patrick J. Lee, MD
Xiongfei Lu, MD
Eric Shieh, MD
Victoria L. Tseng, MD, PhD (EyeSTAR)

SECOND-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

FIRST-YEAR RESIDENTS 2018–2021

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

EyeSTAR Trainees

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

Fellows

Cornea/External Ocular Diseases and Refractive Surgery

Nathan Abraham, MD
Amir Hossein Marvasti, MD
Anjali Tapadia, MD
(Doheny Eye Center UCLA)

Glaucoma

Christine Petersen, MD
Aleksandr Yelenskiy
(Doheny Eye Center UCLA)
Jonathan Young, MD

Medical Retina and Ophthalmic Genetics

Giovanni Greaves, MD
Terry Wood, MD

Neuro-Ophthalmology

None

Orbital and Ophthalmic Plastic Surgery

Justin Karlin, MD
Christopher Lo, MD

Pathology (Eye)

None

Pediatric Ophthalmology and Strabismus

Lindsay De Andrade, MD
Jennifer Pan, MD

Uveitis and Inflammatory Eye Disease

None

Vitreoretinal Diseases and Surgery

Wei Gui, MD
Jason "Mingyi" Huang, MD
Nikisha Kothari, MD
Niranjan Manoharan, MD

International Fellows

Cornea Research

Turad Alkadi, MD
Saudi Arabia
Clémence Bonnet, MD
France
Seyed Reza Ghaffari Dehkharghani, MD
Iran

Comprehensive Ophthalmology/ Cataract

None

Glaucoma

Qiang Fu, MD
China
Golnoush Mahmoudi Nezhad, MD
Iran
Vahid Mohammadzadeh, MD
Iran
Alessandro Rabiolo, MD
Italy
Diana Salazar Vega, MD
Colombia
Xiaobin Xie, MD
(Doheny Eye Center UCLA)
China

Medical Retina and Ophthalmic Genetics

M. Zubair Yameen Arain, MD
Pakistan
Giulia Corradetti, MD
Italy
Assaf Hilely, MD
Israel
Mee Yon Lee, MD
South Korea

Neuro-Ophthalmology

Stacey Marie Cohitmingao, MD
Philippines
Uchenna Francis Nwako, MD
Nigeria

Orbital and Ophthalmic Plastic Surgery

Bunyada Putthirangsiwong, MD
Thailand

Pediatric Ophthalmology

Toshiaki Goseki, MD, PhD
Japan

Uveitis

None

Visual Physiology

None

Vitreoretinal Diseases and Surgery

Ismael Chehaibou, MD
France

Gilad Rabina, MD
Israel

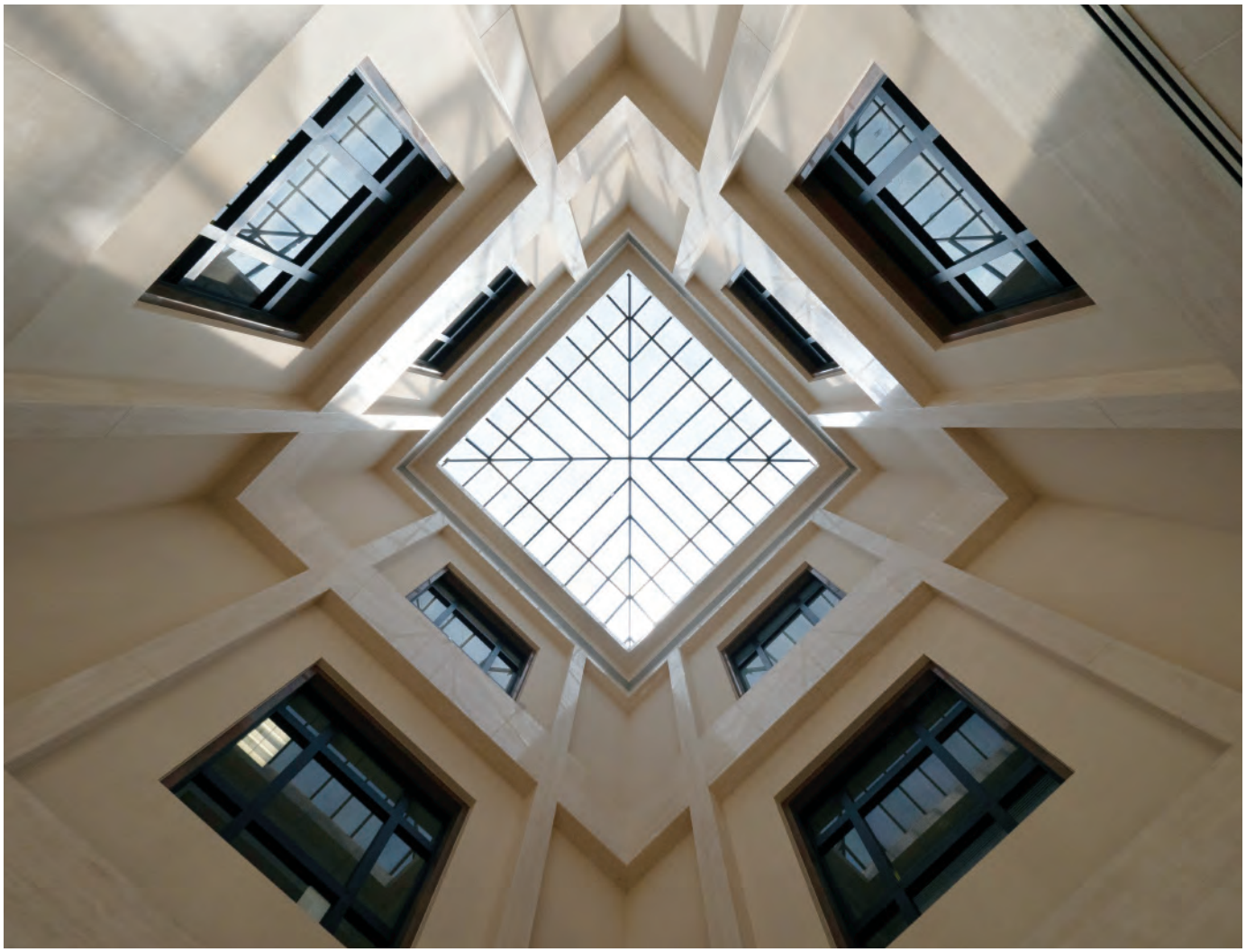
Aditya Verma, MD
(Doheny Eye Center UCLA)
India

Predoctoral Research Fellows

Kevin Eden
W. Blake Gilmore
Khristopher Griffis
Roni Hazim
Norianne Ingram
Margaux Kreitman
Alan Le
Eunice Ng
Joseph Park
Katie Pohl
Gabriel Pollock
Gabriela Sendek
Tongzhou Xu

Postdoctoral Research Fellows

Edouard Baulier, PhD
Abhishek Chadha, PhD
Aurelie Dos Santos, PhD
Antonio Escudero Paniagua, PhD
Nermin Kady, PhD
Ala Morshedian, PhD
Jonathan Rodriguez, PhD
Charles Avery Sader, PhD
Ankita Umapathy, PhD
Yanjie Wang, PhD
Chi Zhang, PhD
Wenlin Zhang, MD, PhD



Research and Funding

Research Contracts and Grants

Vision-Science Research Active Funding

ADMINISTERED BY THE STEIN EYE INSTITUTE

Faculty

Anthony J. Aldave, MD
In Vitro Expansion of HCEnC Using Differing Cell Cultural Systems
Eye Bank Association of America
Duration: 7/1/18–6/30/19
$5,000

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
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
$185,212

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
Ocular Hypertension Treatment Study 20-Year Follow-up: Clinical Center Grant
National Eye Institute
Sub-award with Washington University
Duration: 7/1/15–6/30/19
$4,883

Joseph L. Demer, MD, PhD
Biomechanical Analysis in Strabismus Surgery
National Eye Institute
Duration: 5/1/16–4/30/20
$385,668

Data-Driven Biomechanical Simulation of Eye Movement and Strabismus
National Eye Institute
Sub-award from George Mason University
Duration: 6/1/19–5/30/20
$60,238

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
$292,577

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
$157,484

Michael B. Gorin, MD, PhD
IPS Model for Retinal Hemangioma Pathogenesis
VHL Family Alliance
Duration: 10/1/16–9/30/18
$50,000

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

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: 1/1/16–12/31/19
$75,000

Wayne L. Hubbell, PhD
Molecular Basis of Membrane Excitation
National Eye Institute
Duration: 5/1/15–4/30/20
$311,375

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
$307,120

Michael Ip, MD
The SCORE 2 Long-Term Follow-Up (SCORE2 LTF)
National Eye Institute
Sub-award from Pennsylvania State University
Duration: 4/1/19–3/31/20
$46,143

Studies of Comparative Treatments in Retinal Vein Occlusion 2 (SCORE 2)
National Eye Institute
Sub-award from Pennsylvania State University
Duration: 6/16/16–3/31/19
$47,631

Bartly J. Mondino, MD
RPB Unrestricted Grant
Research to Prevent Blindness, Inc.
Duration: 1/1/12–12/31/19
$115,000

Stacy L. Pineles, MD
Physical Injuries in Patients with Pediatric Eye Diseases
National Eye Institute
Duration: 1/1/19–12/31/20
$150,000

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: 8/1/15–7/31/20
$250,000

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

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
$92,598

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
$253,473

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

Gabriel H. Travis, MD
Instrumentation Grant for Stein Eye Investigators
Bruce Ford and Anne Smith Bundy Foundation
Duration: 8/16/11–8/15/19
$100,000

Functional Characterization of RGR-OPSIN in Retinal Müller Cells
National Eye Institute
Duration: 9/1/15–8/31/18
$250,000

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: 4/1/15–3/21/20
$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: 6/1/17–5/31/19
$164,930

RPE Cell Biology, Aging, and Disease
National Eye Institute
Duration: 9/1/17–5/31/22
$596,846

Delineating the Role of TIMP3 in Macular Degeneration
University of Rochester
Duration: 7/1/18–6/30/19
$24,512

Test of Readthrough Drug Treatment for UGA PTC in the USH1B Gene
Foundation Fighting Blindness
Duration: 1/1/19–12/31/21
$90,308

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
$292,577

Professional Research Series

Sonia Guha, PhD
Role of Doublecortin in Axonal Misrouting in OA1 -/- Mice
Vision of Children
Duration: 7/1/14–3/15/20
$152,236

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

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: 11/1/13–7/14/20
$205,301

Residents and Fellows

Abhishek Chadha, PhD
(Vision-Science Postdoctoral Fellow)
Functional Characterization of MY07A in Retinal Tissue
National Eye Institute
Duration: 7/1/16–6/30/19
$61,174

Wenlin Zhang, MD, PhD
Transcriptome Analysis of the Metabolic Reprogramming in SLC4A11 Associated Congenital Hereditary Endothelial Dystrophy
Knights Templar Eye Foundation, Inc.
Duration: 7/1/17–12/31/18
$65,000

ADMINISTERED BY THE DOHENY EYE INSTITUTE

Steven Barnes, PhD
Functional Resilience of Retinal Ganglion Cells During Mitochondrial Dysfunction
Glaucoma Research Foundation
Shaffer Grant
Duration: 2/26/19–2/15/20
$50,000

Alex A. Huang, MD, PhD
Structure and Function of Aqueous Humor Outflow
American Glaucoma Society and Allergan
Young Clinician Scientist Award
Duration: 3/17/15–7/30/18
$20,000/initial year

Glaukos Research (Outflowing Imaging)
Glaukos Corporation
Duration: 10/17/15–11/30/19
$10,000/two years

SriniVas R. Sadda, MD
Advanced Image Analysis Tools for Diabetic Retinopathy Telemedicine Applications
Eyenuk, Inc.
Sub-award on NEI EY026864
Duration: 8/1/16–7/31/18
$31,847

High Resolution Retinal Imaging by Fourier Ptychography
CalTech
Sub-award on NEI Grant EY026228
Duration: 4/1/16–3/31/19
$2,500

Advanced Image Analysis Tools for Diabetic Retinopathy Telemedicine Application
Eyenuk, Inc.
Sub-award on NEI Grant SB1EY027241
Duration: 9/30/16–7/31/19
$18,704

Automated Image-based Biomarker Computation Tools for Diabetic Retinopathy
Eyenuk, Inc.
Sub-award on NEI Grant TR000377
Duration: 7/1/18–6/30/20
$143,312

Functionally Validated Structural Endpoints for Early AMD
University of Alabama at Birmingham
Sub-award on NEI Grant EY029595
Duration: 5/1/19–2/29/14
$91,655

Fully-automated Lesion Characterization in Ultrawide Field Retinal Images
Eyenuk, Inc.
Sub-award on EY028081
Duration: 6/1/18–5/31/19
$28,662

Genetic Epidemiology of Age-Related Macular Degeneration in the Older Order Amish
University of Pennsylvania
Sub-award on NEI Grant EY023164
Duration: 2/1/13–1/31/19
$60,784

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: 9/1/09–7/31/20
$274,912

James C. Tan, MD, PhD
Karl Kirchgessner Foundation Vision Research Grant
The Karl Kirchgessner Foundation
Duration: 10/17/09–12/31/18
$50,000

Fibrillin-1 and TGFB2 Abnormality Models PAOG Pathogenesis and Treatment
National Eye Institute
Duration: 9/30/17–5/31/20
$250,000

Contractile Modulation of Distal Aqueous Humor Drainage
National Eye Institute
Duration: 6/1/18–5/31/20
$125,000

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: 9/1/15–8/31/19
$81,011

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

Ava K Bitner, OD
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
The Efficacy and Safety of Bimatoprost SR in Patients with Open-Angle Glaucoma or Ocular Hypertension
Allergan Pharmaceutical Corp.
Duration: 4/22/15–5/31/19
$149,974

Protocol INN-005
InnFocus, Inc
Duration 2/4/16–11/13/19
$435,556

Sophie X. Deng, MD, PhD
Regeneration of a Normal Corneal Surface by Limbal Stem Cell Therapy
California Institute for Regenerative Medicine (CIRM)
Duration: 8/1/16–12/31/19
$922,786

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

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

ALK-001
Alkeus Pharmaceuticals
Duration: 5/23/16–8/22/19
$46,070

ARIS
Greater Baltimore Medical Center
Prime: 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: 9/30/14–1/31/19
$39,180

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

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

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
$50,000

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

GX28228
Genentech, Inc.
Duration: 9/22/15–6/12/19
$381,650

Tara A. McCannel, MD, PhD
AU-011-101
Aura Biosciences Inc.
Duration: 9/28/17–9/28/19
$72,979

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: 2/28/11–12/31/18
$112,143

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

AREDS 2 10-Year Follow-up
Emmes Corporation
Duration: 11/1/17–12/31/18
$20,790

Alfredo A. Sadun, MD, PhD
EPI-743
Edison Pharmaceuticals, Inc.
Duration: 10/17/14–9/11/19
$55,860

SPILH-2010
Stealth BioTherapeutics, Inc.
Duration: 2/12/16–7/24/19
$415,909

Reality LHON Registry
GenSight Biologics
Duration: 1/16/18–9/1/19
$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
Diabetic Retinopathy Clinical Research Network
JAEB Center for Health Research
Duration: 6/13/17–12/31/18
$215,081

The IAI-OCTA Study
Regeneron Pharmaceuticals, Inc.
Duration: 3/28/17–3/28/20
$211,609

Yosemite
Genentech, Inc.
Duration: 3/1/19–3/1/23
$470,514

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

Irena Tsui, MD
Ophthalmic Manifestations of Congenital Zika Virus Infection
National Eye Institute
Duration: 3/1/17–2/28/19
$33,094

Clinical Research Studies

Clinical Trials
RECRUITING

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 Multicenter, Open-Label, Safety, Tolerability, and Efficacy of AR-1105 in Subjects with Macular Edema Due to Retinal Vein Occlusion (RVO)
To evaluate the safety and tolerability of 2 formulations of AR-1105 in subjects with macular edema due to branch retinal vein occlusion (BRVO) or central retinal vein occlusion (CRVO). To evaluate the effect of AR-1105 on BCVA by early treatment of diabetic retinopathy study (ETDRS) methodology. To evaluate the effect of AR-1105 on CRT/CFT and subretinal fluid by spectral domain ocular coherence tomography (SD-OCT). Investigators: Michael Ip, MD, Srinivas Sadda, MD, Gad Heilweil, MD, Mohammed Khan, MD, and Phillip Le, 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 current 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 Randomized, Safety and Efficacy Study of Brimonidine Tartrate Nanoemulsion Eye Drops in Patients with Ocular Graft-vs-Host Disease (oGVHD)
To evaluate the safety, tolerability, and efficacy of Brimonidine Nanoemulsion eye drops in patients with ocular graft vs host disease (oGVHD). Investigators: Oliva L. Lee, MD, and John A. Irvine, 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 Ip, MD, Srinivas Sadda, MD, Gad Heilweil, MD, Mohammed Khan, MD, and Phillip Le, MD, PhD

A Phase 3 Study to Evaluate the Efficacy and Safety of RO6867461 in Patients with Diabetic Macular Edema (YOSEMITE and RHINE)
To evaluate the efficacy of IVT injections of the 6-mg dose of RO6867461 on BCVA outcomes. Investigators: David Sarraf, MD, Colin A. McCannel, MD, and Michael S. Ip, MD, Gad Heilweil, MD, Mohammed Khan, MD

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 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 v. 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

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
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 and Safety of an Investigational Eye Drop in Patients with Open-Angle Glaucoma or Ocular Hypertension
This study evaluates the intraocular pressure-lowering efficacy and safety of two dose strengths of an investigational eye drop in patients with open-angle glaucoma or ocular hypertension after initial and repeated administrations. Investigators: Joseph Caprioli, MD, Anne L. Coleman, MD, PhD, JoAnn A. Giaconi, MD, Simon K. Law, MD, PharmD, and Kouros Nouri-Mahdavi, 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. Screening and randomization visits will be followed by a treatment period. Investigators: Colin A. McCannel, MD, Tara A. McCannel, MD, PhD, Pradeep S. Prasad, MD, MBA, Michael B. Gorin, MD, PhD, and David Sarraf, MD

Evaluation of a Drug for the Treatment of Leber Hereditary Optic Neuropathy
This study evaluates the safety, tolerability, and efficacy of a topical ophthalmic solution in the treatment of subjects with Leber Hereditary Optic Neuropathy (LHON). The study drug has been shown to enhance or benefit mitochondria function in studies done on cells grown in the laboratory. Investigator: Alfredo A. Sadun, MD, PhD

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

Repeated Doses of an Investigational Drug in Patients with Neovascular Age-Related Macular Degeneration
This phase 2, year-long study requires the recruitment of patients with wet or neovascular age-related macular degeneration who are naive to anti-VEGF treatment. Investigators: David Sarraf, MD, Michael B. Gorin, MD, PhD, and Colin A. McCannel, 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

Safety and Efficacy of Zimura™ (Complement C5 Inhibitor) Compared to Sham in Subjects with Autosomal Recessive Stargardt Disease
The objectives of this study are to evaluate the safety and efficacy of Zimura™ intravitreal injection compared to sham in subjects with autosomal recessive Stargardt disease 1. Investigators: Steven D. Schwartz, MD, Hamid Hosseini, MD, Jean-Pierre Hubschman, MD, Pradeep S. Prasad, MD, Phd, and Irena Tsui, 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
RECRUITING

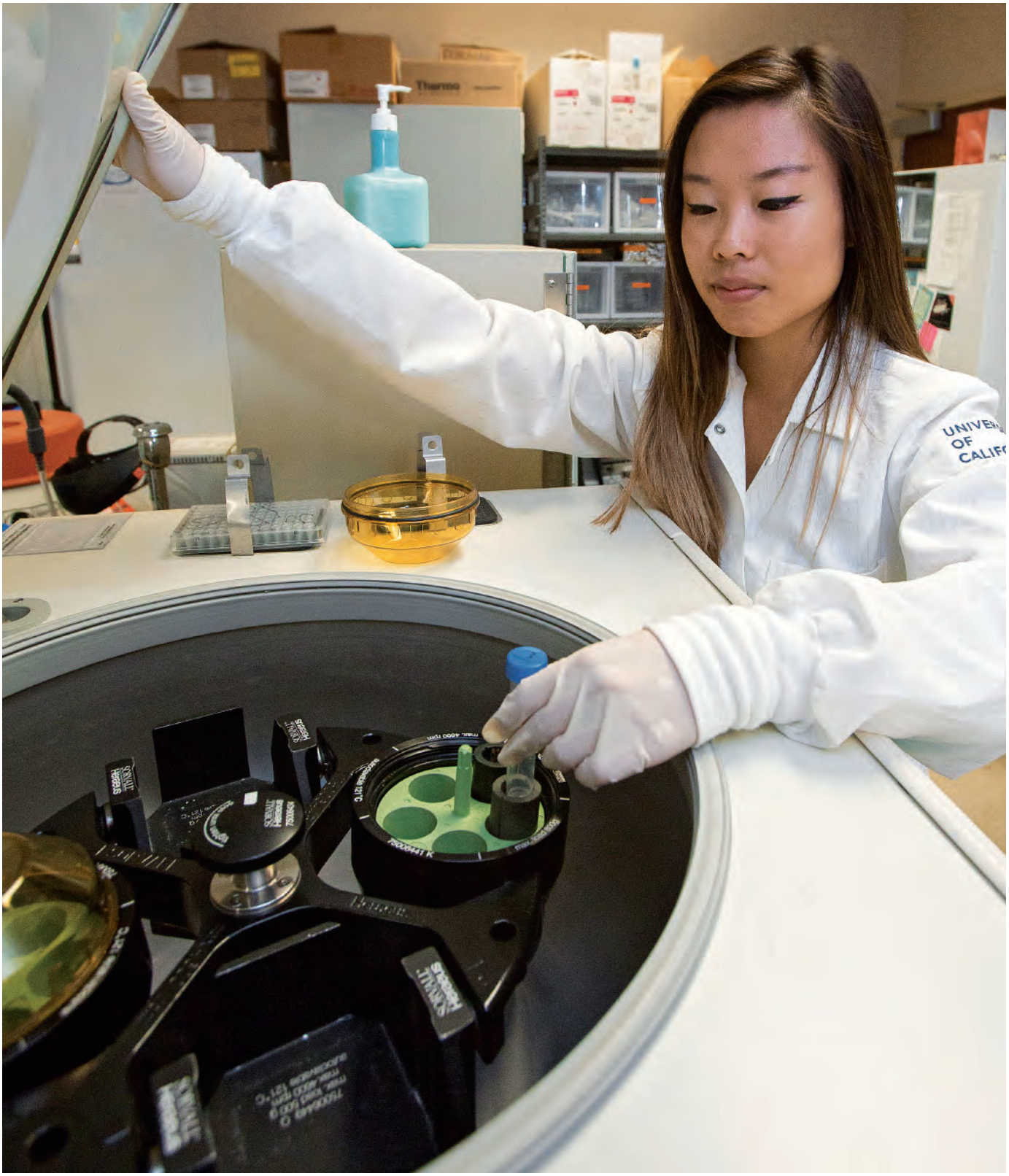
Analysis of the Corneal and Limbal Epithelial Changes in Limbal Stem Cell Deficiency Using In Vivo Confocal Microscopy
Investigators are working to establish a system for diagnosing limbal stem cell deficiency at a cellular level by correlating the information from impression cytology tests, confocal 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



The bench-to-bedside harmony of clinical studies being investigated in collaboration with basic science has created a spectrum of discovery in specialties across ophthalmology.

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

Modified Retinal Fundus Camera
This study evaluates a modified retinal fundus camera to see if significant differences can be found in patients with choroidal melanoma, age-related macular degeneration, or diabetic retinopathy. Investigator: Irena Tsui, MD

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. Investigator: 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

Optical Coherence Tomography in the Newborn Eye
This study is to better characterize the retina and optic nerve in newborns using spectral-domain optical coherence tomography (SD-OCT). SD-OCT has been used for many years to help diagnose and treat adults with eye diseases, but it has never been studied in newborns, where it could potentially help in the diagnoses of glaucoma, optic nerve hypoplasia, foveal hypoplasia, and colobomata, among many other disorders. Investigator: Sherwin J. Isenberg, 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

Clinical Studies
NOT RECRUITING

A Prospective Observation Study of Adult Strabismus
This study is to learn about treatments for strabismus in adults. There are several different treatment options for strabismus: sometimes these conditions are treated with special glasses that help to align the eyes (prism) or with exercises that help the eyes work together, and sometimes these conditions are treated with surgery or Botox injection to straighten the eyes. Investigators: Stacy L. Pineles, MD, and Federico G. Velez, MD

An Extended-Use Program of Elamipretide Topical Ophthalmic Solution for Patients with Leber's 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 benefitting from treatment per the discretion of the treating physician. Investigators: Alfredo A. Sadun, MD, and Rustum Karanjia, MD

Analysis for Visual Function in Age-Related Macular Degeneration
The study establishes electrophysiological benchmarks using the visual evoked potential/pattern electroretinogram (VEP/PERG) protocols of populations with glaucoma before treatment and after treatment. Investigators: SriniVas R. Sadda, MD, Gad Heilweil, MD, Brian A. Francis, MD, MS, Alex A. Huang, MD, PhD, and Vikas Chopra, MD

Analysis of Visual Function in Glaucoma
The purpose of this study is to establish electrophysiological benchmarks using the Visual Evoked Potential/Pattern Electroretinogram protocols of populations with glaucoma before treatment and after treatment. Investigators: Brian A. Francis, MD, MS, Alex A. Huang, MD, PhD, Vikas Chopra, MD, SriniVas R. Sadda, MD, and Gad Heilweil, 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 Characterization, Genetic Testing, and Visual Function in Patients with Stargardt Disease
Investigators are doing a comprehensive analysis of visual function in patients diagnosed with Stargardt disease, an early onset form of macular degeneration caused by a number of mutations in the *ABCR* gene. They are performing molecular genetic testing to confirm the Stargardt diagnosis and better understand the diversity of the condition. Investigators: Debora B. Farber, PhD, DPhhc, Michael B. Gorin, MD, PhD, and Steven Nusinowitz, PhD

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, Anne L. Coleman, MD, PhD, JoAnn A. Giaconi, MD, Simon K. Law, MD, PharmD, and Brian A. Francis, MD, MS

Factors Related to the Severity of Ocular Toxoplasmosis
Toxoplasmosis is a common parasitic disease that can cause a vision-threatening infection of the retina. Individuals with and without ocular toxoplasmosis are being evaluated with a blood test to determine whether (1) people can have a genetic predisposition to severe disease when infected with the parasite, or (2) there is a particular strain of parasite that causes more severe disease than others. Investigators: Gary N. Holland, MD, and Ralph D. Levinson, MD

Genetic Basis of Posterior Polymorphous Corneal Dystrophy
This study seeks to identify the gene(s) responsible for posterior polymorphous dystrophy, an inherited corneal endothelial disorder that may result in irreversible corneal swelling and loss of vision. Investigators: Anthony J. Aldave, MD, and Gary N. Holland, MD

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

Keratoprosthesis Implantation in Patients with Corneal Opacification
This study aims to determine the success rate of keratoprosthesis (artificial corneal) transplantation for visual rehabilitation in patients with corneal opacification. Investigators: Anthony J. Aldave, MD, and Gary N. Holland, 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

Prevention of Visual Impairment in School-Age Children
To promote the use of eyeglasses in schools, first- and second-grade students with refractive errors receive two pairs of eyeglasses, with one pair staying at home and the other in the classroom. School nurses collaborate with teachers in monitoring the use of eyeglasses in the classroom, and parents receive eye care education. Investigator: Anne L. Coleman, MD, PhD

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

Sensory Processing and Learning
This study evaluates amblyopic patients, who are traditionally thought to be beyond the critical period for treatment. These subjects will be enrolled and randomized to one of the two amblyopia therapies using a perceptual learning technique. Investigator: Stacy L. Pineles, 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

2018–2019 Publications of the Full-Time Faculty

July 2018

Akman A, Bayer A, **Nouri-Mahdavi K**. Optical Coherence Tomography in Glaucoma: A Practical Guide. Springer Verlag Berlin/Heidelberg. 2018.

Amesbury EC, **Miller KM**. Toric Intraocular Lens. In Narang P, Trattler W, ed. Optimizing Suboptimal Results Following Cataract Surgery: Refractive and Non-Refractive Management. New York, NY: Thieme Publishers. 2018.

Friesen ET, **Miller KM**. Chapter 41, Challenging Cataract Cases: Posterior Polar. In Pranja NV, ed. Peyman's Principle & Practice of Ophthalmology, 2nd Ed. New Delhi, India: Jaypee Brothers. 2018.

Nouri-Mahdavi K. Chapters, "Managing Advanced Glaucomatous Damage Due to Angle Closure Glaucoma" and "Managing Pseudoexfoliation Glaucoma with Advanced Damage." Glaucoma Imaging Atlas: A Diagnostic Imaging Guide for Glaucoma Assessment and Management. Editor: Christian Mardin. Heidelberg Engineering Academy, Heidelberg, Germany. 2018.

Shieh E, **Miller KM**. Chapter 44, Challenging Cataract Cases: Weak Zonules, Pseudoexfoliation, and Traumatic Cataracts. In Pranja NV, ed. Peyman's Principle & Practice of Ophthalmology, 2nd Ed. New Delhi, India: Jaypee Brothers. 2018.

Ghassabi Z, Shanbehzadeh J, **Nouri-Mahdavi K**. A Unified Optic Nerve Head and Optic Cup Segmentation Using Unsupervised Neural Networks for Glaucoma Screening. Conf Proc IEEE Eng Med Biol Soc. 2018 Jul; 2018:5942–5945.

Nittala MG, Velaga SB, Hu Z, **Sadda SR**. Relationship Between Dry Retinal Volume and Visual Acuity in Diabetic Macular Edema. Ophthalmic Surg Lasers Imaging Retina. 2018 Jul 1;49(7): 510–515.

Nassisi M, Fan W, Shi Y, Lei J, Borrelli E, Ip M, **Sadda SR**. Quantity of Intraretinal Hyperreflective Foci in Patients With Intermediate Age-Related Macular Degeneration Correlates With 1-Year Progression. Invest Ophthalmol Vis Sci. 2018 Jul 2;59(8):3431–3439.

Wang K, Ghasemi Falavarjani K, Nittala MG, Sagong M, Wykoff CC, van Hemert J, **Ip M**, **Sadda SR**. Ultra-Wide-Field Fluorescein Angiography-Guided Normalization of Ischemic Index Calculation in Eyes With Retinal Vein Occlusion. Invest Ophthalmol Vis Sci. 2018 Jul 2;59(8):3278–3285.

Miller KM, Kuo A, Olson MD, Masket S. Safety and efficacy of black iris diaphragm intraocular lens implantation in eyes with large iris defects: Report 4. J Cataract Refract Surg. 2018 Jun;44(6): 686–700. Epub 2018 Jul 4.

Chen TC, Hoguet A, Junk AK, **Nouri-Mahdavi K**, Radhakrishnan S, Takusagawa HL, Chen PP. Spectral-Domain OCT: Helping the Clinician Diagnose Glaucoma: A Report by the American Academy of Ophthalmology. Ophthalmology. 2018 Nov;125(11):1817–1827. Epub 2018 Jul 7.

Glasgow BJ, Abduragimov AR. Ligand binding complexes in lipocalins: Underestimation of the stoichiometry parameter (n). Biochim Biophys Acta Proteins Proteom. 2018 Oct;1866(10):1001–1007. Epub 2018 Jul 7.

Gu L, **Bok D**, Yu F, **Caprioli J**, **Piri N**. Downregulation of splicing regulator RBFOX1 compromises visual depth perception. PLoS One. 2018 Jul 12;13(7): e0200417.

Al-Hashimi S, Donaldson K, Davidson R, Dhaliwal D, Jackson M, Kieval JZ, Patterson L, Stonecipher K, Hamilton DR; ASCRS Refractive Cataract Surgery Subcommittee. Medical and surgical management of the small pupil during cataract surgery. J Cataract Refract Surg. 2018 Aug;44(8):1032–1041. Epub 2018 Jul 19. Review.

Clark RA, **Demer JL**. Magnetic Resonance Imaging of the Globe-Tendon Interface for Extraocular Muscles: Is There an "Arc of Contact"? Am J Ophthalmol. 2018 Oct;194:170–181. Epub 2018 Jul 19.

Mohammadi Sichani M, Kazemi R, **Nouri-Mahdavi K**, Gholipour F. Re-evaluation of the efficacy of tranexamic acid in reducing blood loss in percutaneous nephrolithotomy: a randomized clinical trial. Minerva Urol Nefrol. 2019 Feb;71(1):55–62. Epub 2018 Jul 23.

Ali MH, Berry S, Qureshi A, Rattanalert N, **Demer JL**. Decompensated Esophoria as a Benign Cause of Acquired Esotropia. Am J Ophthalmol. 2018 Oct;194:95–100. Epub 2018 Jul 24.

Pichi F, **Sarraf D**. Optically empty choroidal spaces in high hyperopia. Retin Cases Brief Rep. 2018 Jul 24.

Lo C, **Ugradar S**, **Rootman D**. Management of Graves myopathy: Orbital imaging in thyroid-related orbitopathy. J AAPOS. 2018 Aug;22(4):256.e1–256.e9. Epub 2018 Jul 25. Review.

Borrelli E, **Sarraf D**, Freund KB, **Sadda SR**. OCT angiography and evaluation of the choroid and choroidal vascular disorders. Prog Retin Eye Res. 2018 Nov;67:30–55. Epub 2018 Jul 27. Review.

Hanna RM, Lopez EA, Hasnain H, Selamet U, Wilson J, Youssef PN, Akladeous N, Bunnapradist S, **Gorin MB**. Three patients with injection of intravitreal vascular endothelial growth factor inhibitors and subsequent exacerbation of chronic proteinuria and hypertension. Clin Kidney J. 2019 Feb;12(1):92–100. Epub 2018 Jul 27.

Garrity ST, Govetto A, **Hubschman JP**. Branch Retinal Artery Wall Rupture and Subsequent Occlusion During Pars Plana Vitrectomy with Membrane Peel. Retin Cases Brief Rep. 2018 Jul 30.

Stadtmueller BM, Bridges MD, Dam KM, Lerch MT, Huey-Tubman KE, **Hubbell WL**, Bjorkman PJ. DEER Spectroscopy Measurements Reveal Multiple Conformations of HIV-1 SOSIP Envelopes that Show Similarities with Envelopes on Native Virions. Immunity. 2018 Aug 21;49(2):235–246.e4. Epub 2018 Jul 31.

Subramanian PS, **Arnold AC**. Controversies in Neuro-Ophthalmology: Where the Evidence Leads Us. Asia Pac J Ophthalmol (Phila). 2018 Jul–Aug; 7(4):215–217.

August 2018

Hutchinson AK, Kraker RT, **Pineles SL**, VanderVeen DK, Wilson LB, Galvin JA, Lambert SR. The Use of β-Blockers for the Treatment of Periocular Hemangiomas in Infants: A Report by the American Academy of Ophthalmology. Ophthalmology. 2019 Jan;126(1):146–155. Epub 2018 Aug 1.

Borrelli E, Lonngi M, Balasubramanian S, Tepelus TC, Baghdasaryan E, **Pineles SL**, Velez FG, **Sarraf D**, **Sadda SR**, **Tsui I**. Increased choriocapillaris vessel density in amblyopic children: a case-control study. J AAPOS. 2018 Oct;22(5):366–370. Epub 2018 Aug 2.

Bakhoum MF, Freund KB, Dolz-Marco R, Leong BCS, Baumal CR, Duker JS, **Sarraf D**. Paracentral Acute Middle Maculopathy and the Ischemic Cascade Associated With Retinal Vascular Occlusion. Am J Ophthalmol. 2018 Nov; 195:143–153. Epub 2018 Aug 3.

Kogachi K, Ter-Zakarian A, Asanad S, **Sadun A**, Karanjia R. Toxic medications in Leber's hereditary optic neuropathy. Mitochondrion. 2019 May;46:270–277. Epub 2018 Aug 4. Review.

Balasubramanian S, Beckmann J, Mehta H, **Sadda SR**, Chanwimol K, Nassisi M, **Tsui I**, Marlow N, Jain S. Relationship between Retinal Thickness Profiles and Visual Outcomes in Young Adults Born Extremely Preterm: The EPICure@19 Study. Ophthalmology. 2019 Jan;126(1):107–112. Epub 2018 Aug 6.

Le Q, Cordova D, Xu J, **Deng SX**. In Vivo Evaluation of the Limbus Using Anterior Segment Optical Coherence Tomography. Transl Vis Sci Technol. 2018 Aug 7;7(4):12.

Terry MA, **Aldave AJ**, Szczotka-Flynn LB, Liang W, Ayala AR, Maguire MG, Croasdale C, Daoud YJ, Dunn SP, Hoover CK, Macsai MS, Mauger TF, Pramanik S, Rosenwasser GOD, Rose-Nussbaumer J, Stulting RD, Sugar A, Tu EY, Verdier DD, Yoo SH, Lass JH; Cornea Preservation Time Study Group. Donor, Recipient, and Operative Factors Associated with Graft Success in the Cornea Preservation Time Study. Ophthalmology. 2018 Nov;125(11):1700–1709. Epub 2018 Aug 9.

Borrelli E, Shi Y, Uji A, Balasubramanian S, Nassisi M, **Sarraf D**, **Sadda SR**. Topographic Analysis of the Choriocapillaris in Intermediate Age-related Macular Degeneration. Am J Ophthalmol. 2018 Dec;196:34–43. Epub 2018 Aug 16.

Nassisi M, Shi Y, Fan W, Borrelli E, Uji A, **Ip MS**, **Sadda SR**. Choriocapillaris impairment around the atrophic lesions in patients with geographic atrophy: a swept-source optical coherence tomography angiography study. Br J Ophthalmol. 2019 Jul;103(7):911–917. Epub 2018 Aug 21.

Kovach JL, Isildak H, **Sarraf D**. Crystalline retinopathy: Unifying pathogenic pathways of disease. Surv Ophthalmol. 2019 Jan–Feb;64(1):1–29. Epub 2018 Aug 23. Review.

Yang MC, **Al-Hashimi S**, **Rootman DB**. Salzmann's nodular degeneration of cornea associated with thyroid eye disease. Orbit. 2019 Aug;38(4):325–327. Epub 2018 Aug 27.

Chen CW, Lee YH, Gerber MJ, Cheng H, Yang YC, Govetto A, Francone AA, Soatto S, Grundfest WS, **Hubschman JP**, Tsao TC. Intraocular robotic interventional surgical system (IRISS): Semi-automated OCT-guided cataract removal. Int J Med Robot. 2018 Dec; 14(6):e1949. Epub 2018 Aug 28.

Prasad P. Injury to the Eye. JAMA. 2018 Aug 28;320(8):846.

Balasubramanian S, Borrelli E, Lonngi M, Velez F, **Sarraf D**, **Sadda SR**, **Tsui I**. Visual function and optical coherence tomography angiography features in children born preterm. Retina. 2018 Aug 30.

September 2018 (Fall)

Bittner AK, Haythornthwaite JA, Patel C, Smith MT. Subjective and Objective Measures of Daytime Activity and Sleep Disturbance in Retinitis Pigmentosa. Optom Vis Sci. 2018 Sep;95(9): 837–843.

Bittner AK, Jacobson AJ, Khan R. Feasibility of Using Bluetooth Low Energy Beacon Sensors to Detect Magnifier Usage by Low Vision Patients. Optom Vis Sci. 2018 Sep;95(9):844–851.

Bittner AK, Yoshinaga P, Bowers A, Shepherd JD, Succar T, Ross NC. Feasibility of Telerehabilitation for Low Vision: Satisfaction Ratings by Providers and Patients. Optom Vis Sci. 2018 Sep;95(9):865–872.

Velez FG, Davila JP, Diaz A, Corradetti G, **Sarraf D**, **Pineles SL**. Association of Change in Iris Vessel Density in Optical Coherence Tomography Angiography With Anterior Segment Ischemia After Strabismus Surgery. JAMA Ophthalmol. 2018 Sep 1;136(9):1041–1045.

Founti P, **Coleman AL**, Wilson MR, Yu F, Anastasopoulos E, Harris A, Pappas T, Koskosas A, Kilintzis V, Salonikiou A, Raptou A, Topouzis F. Overdiagnosis of open-angle glaucoma in the general population: the Thessaloniki Eye Study. Acta Ophthalmol. 2018 Nov;96(7): e859–e864. Epub 2018 Sep 4.

Yao Y, Qu J, Dong C, Li X, Liang J, Yin H, Huang L, Li Y, Liu P, Pan C, Ding X, Song D, **Sadda SR**, Zhao M. The impact of extent of internal limiting membrane peeling on anatomical outcomes of macular hole surgery: results of a 54-week randomized clinical trial. Acta Ophthalmol. 2019 May;97(3):303–312. Epub 2018 Sep 5.

Kintzer AF, Green EM, Dominik PK, Bridges M, Armache JP, Deneka D, Kim SS, **Hubbell W**, Kossiakoff AA, Cheng Y, Stroud RM. Structural basis for activation of voltage sensor domains in an ion channel TPC1. Proc Natl Acad Sci USA. 2018 Sep 25;115(39):E9095–E9104. Epub 2018 Sep 6.

Heiden D, Tun N, Smithuis FN, Keenan JD, Oldenburg CE, **Holland GN**, Drew WL. Active cytomegalovirus retinitis after the start of antiretroviral therapy. Br J Ophthalmol. 2019 Feb;103(2):157–160. Epub 2018 Sep 8.

Ausayakhun S, Yen M, Jirawison C, Ausayakhun S, Khunsongkiet P, Leenasirimakul P, Kamphaengkham S, Snyder BM, Heiden D, **Holland GN**, Margolis TP, Keenan JD. Visual acuity outcomes in cytomegalovirus retinitis: early versus late diagnosis. Br J Ophthalmol. 2018 Dec;102(12):1607–1610. Epub 2018 Sep 11.

Gu X, Bridges MD, Yan Y, de Waal PW, Zhou XE, Suino-Powell KM, Xu HE, **Hubbell WL**, Melcher K. Conformational heterogeneity of the allosteric drug and metabolite (ADaM) site in AMP-activated protein kinase (AMPK). J Biol Chem. 2018 Nov 2;293(44): 16994–17007. Epub 2018 Sep 11.

Tsui I, Moreira MEL, Rossetto JD, Vasconcelos Z, Gaw SL, Neves LM, Zin OA, Haefeli L, Silveira Filho JCB, Gomes SC Jr, Adachi K, Pone MVDS, Pone SM, Pereira JP Jr, Belfort R, Arumugaswami V, Brasil P, Nielsen-Saines K, Zin AA. Eye Findings in Infants With Suspected or Confirmed Antenatal Zika Virus Exposure. Pediatrics. 2018 Oct;142(4). Epub 2018 Sep 13.

Felszeghy S, Viiri J, Paterno JJ, Hyttinen JMT, Koskela A, Chen M, Leinonen H, Tanila H, Kivinen N, Koistinen A, Toropainen E, Amadio M, Smedowski A, Reinisalo M, Winiarczyk M, Mackiewicz J, Mutikainen M, Ruotsalainen AK, Kettunen M, Jokivarsi K, Sinha D, Kinnunen K, Petrovski G, Blasiak J, Bjørkøy G, Koskelainen A, Skottman H, Urtti A, Salminen A, **Kannan R**, Ferrington DA, Xu H, Levonen AL, Tavi P, Kauppinen A, Kaarniranta K. Loss of NRF-2 and PGC-1α genes leads to retinal pigment epithelium damage resembling dry age-related macular degeneration. Redox Biol. 2019 Jan;20:1–12. Epub 2018 Sep 14.

Mehravaran S, Quan A, Hendler K, Yu F, **Coleman AL**. Implementing enhanced education to improve the UCLA Preschool Vision Program. J AAPOS. 2018 Dec;22(6):441–444. Epub 2018 Sep 15.

Demer JL, Clark RA. Functional anatomy of human extraocular muscles during fusional divergence. J Neurophysiol. 2018 Nov 1;120(5):2571–2582. Epub 2018 Sep 19.

Li X, Liang D, Shao H, Born WK, Kaplan HJ, **Sun D**. Adenosine receptor activation in the Th17 autoimmune responses of experimental autoimmune uveitis. Cell Immunol. 2019 May;339:24–28. Epub 2018 Sep 19.

Baghdasaryan E, Tepelus TC, Marion KM, Huang J, Huang P, **Sadda SR**, **Lee OL**. Analysis of ocular inflammation in anterior chamber-involving uveitis using swept-source anterior segment OCT. Int Ophthalmol. 2019 Aug; 39(8):1793–1801. Epub 2018 Sep 20.

Pineles SL, Velez FG. Anterior superior oblique tuck: an alternate treatment for excyclotorsion. J AAPOS. 2018 Oct;22(5):393–393.e1. Epub 2018 Sep 20.

Pichi F, Fragiotta S, Freund KB, Au A, Lembo A, Nucci P, Sebastiani S, Gutierrez Hernandez JC, Interlandi E, Pellegrini F, Dolz-Marco R, Gallego-Pinazo R, Orellana-Rios J, Adatia FA, Munro M, Abboud EB, Ghazi N, Cunha Souza E, Amer R, Neri P, **Sarraf D**. Cilioretinal artery hypoperfusion and its association with paracentral acute middle maculopathy. Br J Ophthalmol. 2019 Aug;103(8):1137–1145. Epub 2018 Sep 26.

Nittala MG, Hogg RE, Luo Y, Velaga SB, Silva R, Alves D, Staurenghi G, Chakravarthy U, **Sadda SR**. Changes in Retinal Layer Thickness in the Contralateral Eye of Patients with Unilateral Neovascular Age-Related Macular Degeneration. Ophthalmol Retina. 2019 Feb;3(2):112–121. Epub 2018 Sep 27.

Wang MY, Asanad S, Asanad K, Karanjia R, **Sadun AA**. Value of medical history in ophthalmology: A study of diagnostic accuracy. J Curr Ophthalmol. 2018 Sep 27;30(4):359–364.

October 2018

Au A, Hou K, Baumal CR, **Sarraf D**. Radial Hemorrhage in Henle Layer in Macular Telangiectasia Type 2. JAMA Ophthalmol. 2018 Oct 1;136(10): 1182–1185.

Dean M, Kirschen D, **Hubschman JP**, Straatsma BR, **Sarraf D**, Francone A. Bilateral Acquired Progressive Retinal Nerve Fiber Layer Myelination. Ophthalmic Surg Lasers Imaging Retina. 2018 Oct 1;49(10):e147–e150.

Lim MC, **Holland GN**. Clinical Concepts, Coding, and How It Relates to Big Data. JAMA Ophthalmol. 2018 Oct 1;136(10):1191–1192.

Nguyen AH, Fatehi N, Romero P, Miraftabi A, Kim E, Morales E, **Giaconi J**, **Coleman AL**, **Law SK**, **Caprioli J**, **Nouri-Mahdavi K**. Observational Outcomes of Initial Trabeculectomy With Mitomycin C in Patients of African Descent vs Patients of European Descent: Five-Year Results. JAMA Ophthalmol. 2018 Oct 1;136(10):1106–1113.

Arnold AC. Urgent Evaluation of the Patient With Acute Central Retinal Artery Occlusion. Am J Ophthalmol. 2018 Dec;196:xvi–xvii. Epub 2018 Oct 2.

Figueroa MS, Govetto A, Steel DH, Sebag J, Virgili G, **Hubschman JP**. Pars Plana Vitrectomy for the Treatment of Tractional and Degenerative Lamellar Macular Holes: Functional and Anatomical Results. Retina. 2018 Oct 3.

Chew EY, Clemons TE, Jaffe GJ, Johnson CA, Farsiu S, Lad EM, Guymer R, Rosenfeld P, **Hubschman JP**, Constable I, Wiley H, Singerman LJ, Gillies M, Comer G, Blodi B, Eliott D, Yan J, Bird A, Friedlander M; Macular Telangiectasia Type 2-Phase 2 CNTF Research Group. Effect of Ciliary Neurotrophic Factor on Retinal Neurodegeneration in Patients with Macular Telangiectasia Type 2: A Randomized Clinical Trial. Ophthalmology. 2019 Apr; 126(4):540–549. Epub 2018 Oct 4.

Hariri AH, **Ip MS**, Girach A, Lam BL, Fischer MD, Sankila EM, Pennesi ME, Holz FG, Maclaren RE, Birch DG, Hoyng CB, MacDonald IM, Black GC, Tsang SH, Bressler NM, Stepien KE, Larsen M, **Gorin MB**, Meunier I, Webster AR, **Sadda S**; For Natural History of the Progression of Choroideremia (NIGHT) Study Group. Macular spatial distribution of preserved autofluorescence in patients with choroideremia. Br J Ophthalmol. 2019 Jul; 103(7):933–937. Epub 2018 Oct 8.

Hsu HY, Ernst B, Schmidt EJ, Parihar R, Horwood C, Edelstein SL. Laboratory Results, Epidemiologic Features, and Outcome Analyses of Microbial Keratitis: A 15-Year Review From St. Louis. Am J Ophthalmol. 2019 Feb;198:54–62. Epub 2018 Oct 9.

Quinn N, Csincsik L, Flynn E, Curcio CA, Kiss S, **Sadda SR**, Hogg R, Peto T, Lengyel I. The clinical relevance of visualising the peripheral retina. Prog Retin Eye Res. 2019 Jan;68:83–109. Epub 2018 Oct 10. Review.

Zloto O, Lubetsky A, Ben-Bassat Mizrachi I, Kesler A, **Quiros PA**, Huna-Baron R. Prognostic value of JAK2V617F mutation in pseudotumor cerebri associated with cerebral venous sinus thrombosis. Acta Neurol Scand. 2019 Feb;139(2):166–171. Epub 2018 Oct 11.

Arya M, Rebhun CB, Alibhai AY, Chen X, Moreira-Neto C, Baumal CR, Reichel E, Witkin AJ, Duker JS, **Sadda SR**, Waheed NK. Parafoveal Retinal Vessel Density Assessment by Optical Coherence Tomography Angiography in Healthy Eyes. Ophthalmic Surg Lasers Imaging Retina. 2018 Oct 15;49(10):S5–S17.

Hazim RA, Volland S, Yen A, Burgess BL, **Williams DS**. Rapid differentiation of the human RPE cell line, ARPE-19, induced by nicotinamide. Exp Eye Res. 2019 Feb;179:18–24. Epub 2018 Oct 15.

Angeles-Han ST, Yeh S, Patel P, Duong D, Jenkins K, Rouster-Stevens KA, Altaye M, Fall N, Thornton S, Prahalad S, **Holland GN**. Discovery of tear biomarkers in children with chronic noninfectious anterior uveitis: a pilot study. J Ophthalmic Inflamm Infect. 2018 Oct 16;8(1):17.

Rabiolo A, Gelormini F, Sacconi R, Cicinelli MV, Triolo G, Bettin P, **Nouri-Mahdavi K**, Bandello F, Querques G. Comparison of methods to quantify macular and peripapillary vessel density in optical coherence tomography angiography. PLoS One. 2018 Oct 18; 13(10):e0205773.

Ugradar S, **Goldberg R**, **Rootman D**. Anatomic variation of the entrance of the optic canal into the orbit. Orbit. 2019 Aug;38(4):305–307. Epub 2018 Oct 18.

Zin AA, **Tsui I**, Rossetto JD, Gaw SL, Neves LM, Zin OA, Haefeli L, Barros Silveira Filho JC, Adachi K, Vinicius da Silva Pone M, Pone SM, Molleri N, Pereira JP Jr, Belfort R, Arumugaswami V, Vasconcelos Z, Brasil P, Nielsen-Saines K, Lopes Moreira ME. Visual function in infants with antenatal Zika virus exposure. J AAPOS. 2018 Dec; 22(6):452–456.e1. Epub 2018 Oct 22.

Phelps DL, Watterberg KL, Nolen TL, Cole CA, Cotten CM, Oh W, Poindexter BB, Zaterka-Baxter KM, Das A, Lacy CB, Scorsone AM, Walsh MC, Bell EF, Kennedy KA, Schibler K, Sokol GM, Laughon MM, Lakshminrusimha S, Truog WE, Garg M, Carlo WA, Laptook AR, Van Meurs KP, Carlton DP, Graf A, DeMauro SB, Brion LP, Shankaran S, Orge FH, Olson RJ, Mintz-Hittner H, Yang MB, Haider KM, Wallace DK, Chung M, Hug D, **Tsui I**, Cogen MS, Donahue JP, Gaynon M, Hutchinson AK, Bremer DL, Quinn G, He YG, Lucas WR Jr, Winter TW, Kicklighter SD, Kumar K, Chess PR, Colaizy TT, Hibbs AM, Ambalavanan N, Harmon HM, McGowan EC, Higgins RD; Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. Effects of Myo-inositol on Type 1 Retinopathy of Prematurity Among Preterm Infants <28 Weeks' Gestational Age: A Randomized Clinical Trial. JAMA. 2018 Oct 23;320(16):1649–1658.

Sebastiani S, Pellegrini M, Giannaccare G, **Sarraf D**. Paracentral acute middle maculopathy associated with phosphodiesterase-5 inhibitor therapy. Retin Cases Brief Rep. 2018 Oct 25.

Velez FG, **Pineles SL**. Adjustable Posterior Fixation Suture Technique in Adjustable Superior Rectus Transposition. J Binocul Vis Ocul Motil. 2018 Oct–Dec;68(4):154–155. Epub 2018 Oct 26.

November 2018

Alizadeh R, Vickers L, Hirunpatravong P, Romero P, Lin MC, Sharifipour F, **Caprioli J**. A Phenotype of Primary Open-angle Glaucoma With Systemic Vasospasm. J Glaucoma. 2018 Nov; 27(11):987–992.

Driver TH, Aravena C, Duong HNV, Christenbury JG, Yu F, Basak SK, **Aldave AJ**. Outcomes of the Boston Type I Keratoprosthesis as the Primary Penetrating Corneal Procedure. Cornea. 2018 Nov;37(11):1400–1407.

El Hamouly A, **Fung S**, Sami H, Jiandani D, Williams S, Mireskandari K, Ali A. Endothelial cell loss in obstetric forceps-related corneal injury: a longitudinal specular microscopic study. Cornea. 2018 Nov;37(11):1421–1424.

Ghassabi Z, Nguyen AH, Amini N, Henry S, **Caprioli J**, **Nouri-Mahdavi K**. The Fovea-BMO Axis Angle and Macular Thickness Vertical Asymmetry Across The Temporal Raphe. J Glaucoma. 2018 Nov;27(11):993–998.

Freund KB, **Sarraf D**, Leong BCS, Garrity ST, Vupparaboina KK, Dansingani KK. Association of Optical Coherence Tomography Angiography of Collaterals in Retinal Vein Occlusion With Major Venous Outflow Through the Deep Vascular Complex. JAMA Ophthalmol. 2018 Nov 1;136(11): 1262–1270.

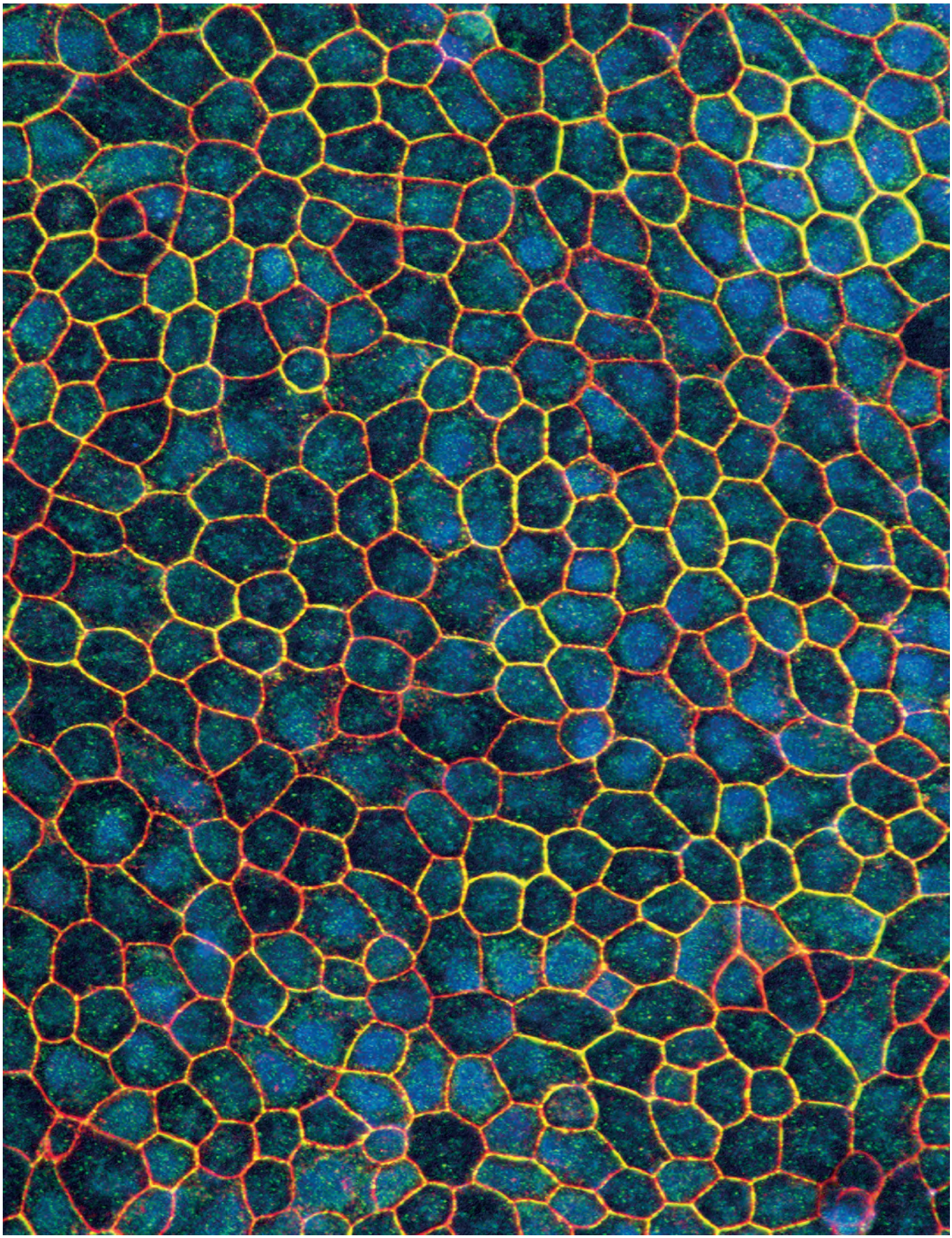
Gupta RR, Iaboni DSM, Seamone ME, **Sarraf D**. Inner, outer, and full-thickness retinal folds after rhegmatogenous retinal detachment repair: A review. Surv Ophthalmol. 2019 Mar–Apr;64(2):135–161. Epub 2018 Nov 1. Review.

Tseng VL, Chlebowski RT, Yu F, Cauley JA, Li W, Thomas F, Virnig BA, **Coleman AL**. Notice of Retraction and Replacement. Tseng et al. Association of cataract surgery with mortality in older women: findings from the Women's Health Initiative. JAMA Ophthalmol. 2018;136(1):3–10. JAMA Ophthalmol. 2018 Nov 1;136(11):1313–1314.

Velez FG, **Pineles SL**. Management of surgical overcorrections following surgery for Duane syndrome with esotropia in primary position. J AAPOS. 2019 Feb;23(1):2–4. Epub 2018 Nov 2.

Fantini M, Asanad S, Karanjia R, **Sadun A**. Hormone replacement therapy in Leber's hereditary optic neuropathy: Accelerated visual recovery in vivo. J Curr Ophthalmol. 2018 Nov 3; 31(1):102–105.

Lenis TL, Hu J, Ng SY, Jiang Z, Sarfare S, Lloyd MB, Esposito NJ, Samuel W, Jaworski C, **Bok D**, Finnemann SC, Radeke MJ, Redmond TM, **Travis GH**, **Radu RA**. Expression of ABCA4 in the retinal pigment epithelium and its implications for Stargardt macular degeneration. Proc Natl Acad Sci USA. 2018 Nov 20;115(47):E11120–E11127. Epub 2018 Nov 5.



Retinal pigment epithelium cell culture derived from human stem cells.
Photo: Roni Hazim, PhD, postdoctoral fellow in the laboratory of David Williams, PhD.

Tan ACS, Pilgrim MG, Fearn S, Bertazzo S, Tsolaki E, Morrell AP, Li M, Messinger JD, Dolz-Marco R, Lei J, Nittala MG, **Sadda SR**, Lengyel I, Freund KB, Curcio CA. Calcified nodules in retinal drusen are associated with disease progression in age-related macular degeneration. Sci Transl Med. 2018 Nov 7;10(466).

Yeganeh A, Sinha KR, Fell D, **Rootman DB**. The effect of eyebrow stenting on the measurement of levator excursion in normal and ptotic eyelids. Orbit. 2019 Oct;38(5):353–356. Epub 2018 Nov 9.

Asanad S, Meer E, Fantini M, Borrelli E, **Sadun AA**. Leber's hereditary optic neuropathy: Shifting our attention to the macula. Am J Ophthalmol Case Rep. 2018 Nov 13;13:13–15.

Kassem A, Karanjia R, McClelland C, **Sadun A**, Lee MS. Unilateral cone-rod dysfunction and retinal thinning in a child carrying the 14484 mutation of Leber hereditary optic neuropathy. J AAPOS. 2019 Apr;23(2):104–106. Epub 2018 Nov 14.

Nassisi M, Baghdasaryan E, Tepelus T, Asanad S, Borrelli E, **Sadda SR**. Topographic distribution of choriocapillaris flow deficits in healthy eyes. PLoS One. 2018 Nov 15;13(11):e0207638.

Dastiridou AI, Katsanos A, Denis P, **Francis BA**, Mikropoulos DG, Teus MA, Konstas AG. Cyclodestructive Procedures in Glaucoma: A Review of Current and Emerging Options. Adv Ther. 2018 Dec;35(12):2103–2127. Epub 2018 Nov 17. Review.

Gangalum RK, Kim D, Kashyap RK, Mangul S, Zhou X, Elashoff D, **Bhat SP**. Spatial Analysis of Single Fiber Cells of the Developing Ocular Lens Reveals Regulated Heterogeneity of Gene Expression. iScience. 2018 Dec 21;10:66–79. Epub 2018 Nov 17.

Hoguet A, Chen PP, Junk AK, Mruthyunjaya P, **Nouri-Mahdavi K**, Radhakrishnan S, Takusagawa HL, Chen TC. The Effect of Anti-Vascular Endothelial Growth Factor Agents on Intraocular Pressure and Glaucoma: A Report by the American Academy of Ophthalmology. Ophthalmology. 2019 Apr;126(4):611–622. Epub 2018 Nov 22.

VanderVeen DK, Kraker RT, **Pineles SL**, Hutchinson AK, Wilson LB, Galvin JA, Lambert SR. Use of Orthokeratology for the Prevention of Myopic Progression in Children: A Report by the American Academy of Ophthalmology. Ophthalmology. 2019 Apr;126(4):623–636. Epub 2018 Nov 23.

Baulier E, Garcia Diaz A, Corneo B, **Farber DB**. Generation of a human Ocular Albinism type 1 iPSC line, SEli001-A, with a mutation in GPR143. Stem Cell Res. 2018 Dec;33:274–277. Epub 2018 Nov 28.

Carta A, Mora P, Aldigeri R, Gozzi F, Favilla S, Tedesco S, Calzetti G, Farci R, Barboni P, Bianchi-Marzoli S, Fossarello M, Gandolfi S, **Sadun AA**. Optical coherence tomography is a useful tool in the differentiation between true edema and pseudoedema of the optic disc. PLoS One. 2018 Nov 29;13(11): e0208145.

Caprioli J, Mohamed L, Morales E, Rabiolo A, Sears N, Pradtana H, Alizadeh R, Yu F, Afifi AA, **Coleman AL**, **Nouri-Mahdavi K**. A Method to Measure the Rate of Glaucomatous Visual Field Change. Transl Vis Sci Technol. 2018 Nov 30;7(6):14.

December 2018 (Winter)

Falavarjani KG, Shenazandi H, Naseri D, Anvari P, Sedaghat A, Hashemi M, **Sadun AA**. Correlation of optic disc morphometry and optic disc microvasculature assessed with optical coherence tomography angiography. Can J Ophthalmol. 2018 Dec;53(6):595–599.

Graubart EB, Waxman EL, Forster SH, **Giaconi JA**, Rosenberg JB, Sankar PS, Goyal A, Mirza RG. Ophthalmology Objectives for Medical Students: Revisiting What Every Graduating Medical Student Should Know. Ophthalmology. 2018 Dec;125(12):1842–1843.

Thorne A, Dyk DW, Fanney D, **Miller KM**. Phacoemulsifier occlusion break surge volume reduction. J Cataract Refract Surg. 2018 Dec; 44(12):1491–1496.

Ip MS. Treatment of Central Retinal Vein Occlusion-A New Look at a Blast From the Past. JAMA Ophthalmol. 2018 Dec 1;136(12):1397–1398.

Leng Y, Tam EK, Falavarjani KG, **Tsui I**. Effect of Age and Myopia on Retinal Microvasculature. Ophthalmic Surg Lasers Imaging Retina. 2018 Dec 1; 49(12):925–931.

Pichi F, Abboud EB, **Sarraf D**. Is the Association of Retinal Venous Malformations With Venous Malformations of the Brain Clinically Meaningful?- Reply. JAMA Ophthalmol. 2018 Dec 1; 136(12):1425.

Lee OL, Tepelus TC, Huang J, Irvine AG, Irvine C, Chiu GB, **Sadda SR**. Evaluation of the corneal epithelium in non-Sjögren's and Sjögren's dry eyes: an in vivo confocal microscopy study using HRT III RCM. BMC Ophthalmol. 2018 Dec 4;18(1):309.

Pereira JP Jr, Nielsen-Saines K, Sperling J, Maykin MM, Damasceno L, Cardozo RF, Valle HA, Dutra BRT, Gama HD, Adachi K, Zin AA, **Tsui I**, Vasconcelos Z, Brasil P, Moreira ME, Gaw SL. Association of Prenatal Ultrasonographic Findings With Adverse Neonatal Outcomes Among Pregnant Women With Zika Virus Infection in Brazil. JAMA Netw Open. 2018 Dec 7; 1(8):e186529.

Au A, **Sarraf D**. Vascular anatomy and its relationship to pathology in retinoschisis. Eye (Lond). 2019 May; 33(5):693–694. Epub 2018 Dec 12.

Lopes Moreira ME, Nielsen-Saines K, Brasil P, Kerin T, Damasceno L, Pone M, Carvalho LMA, Pone SM, Vasconcelos Z, Ribeiro IP, Zin AA, **Tsui I**, Adachi K, Gaw SL, Halai UA, Salles TS, da Cunha DC, Bonaldo MC, Raja Gabaglia C, Guida L, Malacarne J, Costa RP, Gomes SC Jr, Reis AB, Soares FVM, Hasue RH, Aizawa CYP, Genovesi FF, Aibe M, Einspieler C, Marschik PB, Pereira JP Jr, Portari EA, Janzen C, Cherry JD. Neurodevelopment in Infants Exposed to Zika Virus In Utero. N Engl J Med. 2018 Dec 13;379(24):2377–2379.

Bai X, **Yang XJ**, Cheng Y, Chen L. Establishment of an induced pluripotent stem cell line (FDEENTi001-A) from a patient with pathological myopia. Stem Cell Res. 2019 Jan;34:101369. Epub 2018 Dec 14.

Kashani AH, Green KM, Kwon J, Chu Z, Zhang Q, Wang RK, Garrity S, **Sarraf D**, Rebhun CB, Waheed NK, Schaal KB, Munk MR, Gattoussi S, Freund KB, Zheng F, Liu G, Rosenfeld PJ. Suspended Scattering Particles in Motion: A Novel Feature of OCT Angiography in Exudative Maculopathies. Ophthalmol Retina. 2018 Jul;2(7):694–702. Epub 2017 Dec 15.

Huang AS, Penteado RC, Papoyan V, Voskanyan L, Weinreb RN. Aqueous angiographic outflow improvement after trabecular microbypass in glaucoma patients. Ophthalmology Glaucoma 1, 11–21. Published online: December 17, 2018.

McClements ME, Barnard AR, Singh MS, Charbel Issa P, Jiang Z, **Radu RA**, MacLaren RE. An AAV Dual Vector Strategy Ameliorates the Stargardt Phenotype in Adult *Abca4-/-* Mice. Hum Gene Ther. 2019 May;30(5):590–600. Epub 2018 Dec 24.

Hariri AH, Gui W, Datoo O'Keefe GA, **Ip MS**, **Sadda SR**, **Gorin MB**. Ultra-Widefield Fundus Autofluorescence Imaging of Patients with Retinitis Pigmentosa: A Standardized Grading System in Different Genotypes. Ophthalmol Retina. 2018 Jul;2(7):735–745. Epub 2017 Dec 27.

Sadda SR, Borrelli E, Fan W, Ebraheem A, Marion KM, Kwon S. Impact of mydriasis in fluorescence lifetime imaging ophthalmoscopy. PLoS One. 2018 Dec 28;13(12):e0209194.

January 2019

Dunn JP, **Miller KM**. Chapter 6. Nd:YAG Laser Capsulotomy and Anterior Lens Surface Polishing. In Hausheer JR. Basic Techniques of Ophthalmic Surgery, 3rd Ed. San Francisco: American Academy of Ophthalmology. 2019.

Koreishi A, Galor A, Yoo SH, **Miller KM**. Chapter 2. Phacoemulsification. In Hausheer JR. Basic Techniques of Ophthalmic Surgery, 3rd Ed. San Francisco: American Academy of Ophthalmology. 2019.

Miller KM. Chapter 18, Sulcus IOL Fixation – My Technique. In Chang DF. Advanced IOL Fixation Techniques: Strategies for compromised or missing capsular support. Thorofare, NJ: SLACK Inc. 2019.

Aravena C, Bozkurt K, Chuephanich P, Supiyaphun C, Yu F, **Deng SX**. Classification of Limbal Stem Cell Deficiency Using Clinical and Confocal Grading. Cornea. 2019 Jan;38(1):1–7.

Baghdasaryan E, Tepelus TC, Marion KM, Bagherinia H, **Sadda SR**, **Hsu HY**. Evaluation of Corneal Epithelial Thickness Imaged by High Definition Optical Coherence Tomography in Healthy Eyes. Cornea. 2019 Jan;38(1):62–66.

Chu J, Thi T, **Chopra V**. Anterior-Segment OCT to Visualize and Treat Capsular Bag Distension Syndrome. Ophthalmology. 2019 Jan;126(1):124.

Fung S, Elbaz U, Mireskandari K, Ali A. Graft versus host disease: a pediatric perspective. Exp Rev Ophthalmol 2019; 14(2):89–99.

Hu M, Wang H, **Huang AS**, Li L, Shi Y, Xu Y, Wang N. Microcatheter-assisted Trabeculotomy for Primary Congenital Glaucoma After Failed Glaucoma Surgeries. J Glaucoma. 2019 Jan;28(1):1–6.

González S, Oh D, Baclagon ER, **Zheng JJ**, **Deng SX**. Wnt Signaling Is Required for the Maintenance of Human Limbal Stem/Progenitor Cells In Vitro. Invest Ophthalmol Vis Sci. 2019 Jan 2;60(1): 107–112.

Sun MM, Chan AM, Law SM, Duarte S, Diaz-Aguilar D, Wadehra M, **Gordon LK**. Epithelial Membrane Protein-2 (EMP2) Antibody Blockade Reduces Corneal Neovascularization in an In Vivo Model. Invest Ophthalmol Vis Sci. 2019 Jan 2; 60(1):245–254.

Navajas EV, Schuck N, Govetto A, Akil H, Docherty G, Heisler M, Sarunic MV, **Sarraf D**. En face optical coherence tomography and optical coherence tomography angiography of inner retinal dimples after internal limiting membrane peeling for full-thickness macular holes. Retina. 2019 Jan 3.

Yang YM, Chow PE, **McCannel TA**, Lamb JM. A comparison of the shielding effectiveness of silicone oil vitreous substitutes when used with Palladium-103 and Iodine-125 eye plaques. Med Phys. 2019 Feb;46(2): 1006–1011. Epub 2019 Jan 4.

Velaga SB, Nittala MG, Jenkins D, Melendez J, Ho A, Strauss RW, Scholl HP, **Sadda SR**. Impact of segmentation density on spectral domain optical coherence tomography assessment in Stargardt disease. Graefes Arch Clin Exp Ophthalmol. 2019 Mar;257(3):549–556. Epub 2019 Jan 6.

Haritoglou C, Tadayoni R, **Hubschman JP**. Lamellar macular hole surgery - current concepts, future prospects. Clin Ophthalmol. 2019 Jan 8;13:143–146.

Le Q, **Deng SX**. The application of human amniotic membrane in the surgical management of limbal stem cell deficiency. Ocul Surf. 2019 Apr; 17(2):221–229. Epub 2019 Jan 8. Review.

Pereira JP Jr, Maykin MM, Vasconcelos Z, Avvad-Portari E, Zin AA, **Tsui I**, Brasil P, Nielsen-Saines K, Moreira ME, Gaw SL. The Role of Amniocentesis in the Diagnosis of Congenital Zika Syndrome. Clin Infect Dis. 2019 Jan 8.

Wingler LM, Elgeti M, Hilger D, Latorraca NR, Lerch MT, Staus DP, Dror RO, Kobilka BK, **Hubbell WL**, Lefkowitz RJ. Angiotensin Analogs with Divergent Bias Stabilize Distinct Receptor Conformations. Cell. 2019 Jan 24;176(3):468–478.e11. Epub 2019 Jan 10.

Jung JJ, Chen MH, Shi Y, Nassisi M, Marion K, **Sadda SR**, Hoang QV. Correlation of en face optical coherence tomography angiography averaging versus single-image quantitative measurements with retinal vein occlusion visual outcomes. Retina. 2019 Jan 22.

Csaky KG, Patel PJ, Sepah YJ, Birch DG, Do DV, **Ip MS**, Guymer RH, Luu CD, Gune S, Lin H, Ferrara D. Microperimetry for geographic atrophy secondary to age-related macular degeneration. Surv Ophthalmol. 2019 May-Jun;64(3):353–364. Epub 2019 Jan 28.

Kim JH, Rabiolo A, Morales E, Fatehi N, Lee WS, Yu F, Afifi AA, **Nouri-Mahdavi K**, **Caprioli J**. Cataract Surgery and Rate of Visual Field Progression in Primary Open-Angle Glaucoma. Am J Ophthalmol. 2019 May;201:19–30. Epub 2019 Jan 28.

Huang J, Gu S, Chen M, Zhang SJ, Jiang Z, Chen X, Jiang C, Liu G, **Radu RA**, Sun X, Vollrath D, Du J, Yan B, Zhao C. Abnormal mTORC1 signaling leads to retinal pigment epithelium degeneration. Theranostics. 2019 Jan 30;9(4):1170–1180.

Sinha KR, Al Shaker S, Yeganeh A, Moreno T, **Rootman DB**. The Relationship Between Eyebrow and Eyelid Position in Patients With Ptosis, Dermatochalasis and Controls. Ophthalmic Plast Reconstr Surg. 2019 Jan/Feb;35(1):85–90.

February 2019

Asanad S, Meer E, Tian JJ, Fantini M, Nassisi M, **Sadun AA**. Leber's hereditary optic neuropathy: Severe vascular pathology in a severe primary mutation. Intractable Rare Dis Res. 2019 Feb;8(1):52–55.

Asanad S, Wu J, Nassisi M, Ross-Cisneros FN, **Sadun AA**. Optical coherence tomography-angiography in Wolfram syndrome: a mitochondrial etiology in disease pathophysiology. Can J Ophthalmol. 2019 Feb;54(1):e27–e30.

Demer JL. Childhood Self-perceptions in Children With Amblyopia: Is the Problem the Disease or the Treatment? JAMA Ophthalmol. 2019 Feb 1;137(2):174–175.

Tsui I, **Pineles SL**. What Coats Disease and Age-Related Macular Degeneration Have in Common. JAMA Ophthalmol. 2019 Feb 1;137(2):184.

Wang M, Lau LI, Sreekumar PG, Spee C, Hinton DR, **Sadda SR**, **Kannan R**. Characterization and Regulation of Carrier Proteins of Mitochondrial Glutathione Uptake in Human Retinal Pigment Epithelium Cells. Invest Ophthalmol Vis Sci. 2019 Feb 1;60(2):500–516.

Yang H, Luo H, Gardiner SK, Hardin C, Sharpe GP, **Caprioli J**, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, Fortune B, Chauhan BC, Burgoyne CF. Factors Influencing Optical Coherence Tomography Peripapillary Choroidal Thickness: A Multicenter Study. Invest Ophthalmol Vis Sci. 2019 Feb 1;60(2):795–806.

Asanad S, Tian JJ, Frousiakis S, Jiang JP, Kogachi K, Felix CM, Fatemeh D, Irvine AG, Ter-Zakarian A, Falavarjani KG, Barboni P, Karanjia R, **Sadun AA**. Optical Coherence Tomography of the Retinal Ganglion Cell Complex in Leber's Hereditary Optic Neuropathy and Dominant Optic Atrophy. Curr Eye Res. 2019 Jun;44(6):638–644. Epub 2019 Feb 4.

Li Y, Wei Q, Le A, Gawargious BA, **Demer JL**. Rectus Extraocular Muscle Paths and Staphylomata in High Myopia. Am J Ophthalmol. 2019 May;201:37–45. Epub 2019 Feb 4.

El-Abedin Rajab GZ, **Demer JL**. Long-term results of surgical excision of conjunctival retention cyst using trypan blue with methylcellulose. Am J Ophthalmol Case Rep. 2019 Feb 6;14:28–31.

Lin SR, **Aldave AJ**, Chodosh J. Recurrent corneal erosion syndrome. Br J Ophthalmol. 2019 Sep;103(9):1204–1208. Epub 2019 Feb 13. Review.

Catapano J, **Fung S**, Halliday W, Jobst C, Cheyne D, Ho ES, Zuker RM, Borschel GH, Ali A. Treatment of neurotrophic keratopathy with minimally invasive corneal neurotization: long-term clinical outcomes and evidence of corneal reinnervation. Br J Ophthalmol. 2019 Feb 15.

Zhang X, Parrish RK 2nd, Greenfield DS, **Francis BA**, Varma R, Schuman JS, Tan O, Huang D; Advanced Imaging for Glaucoma Study Group. Predictive Factors for the Rate of Visual Field Progression in the Advanced Imaging for Glaucoma Study. Am J Ophthalmol. 2019 Jun;202:62–71. Epub 2019 Feb 20.

Clark RA, Choy AE, **Demer JL**. Lateral rectus sag and recurrent esotropia in children. J AAPOS. 2019 Apr;23(2):81.e1–81.e5. Epub 2019 Feb 21.

Nassisi M, Baghdasaryan E, Borrelli E, Ip M, **Sadda SR**. Choriocapillaris flow impairment surrounding geographic atrophy correlates with disease progression. PLoS One. 2019 Feb 22;14(2):e0212563.

Glasgow BJ. Ellipsometry of human tears. Ocul Surf. 2019 Apr;17(2):341–346. Epub 2019 Feb 25.

Garrity ST, Jung JY, Zambrowski O, Pichi F, Su D, Arya M, Waheed NK, Duker JS, Chetrit Y, Miserocchi E, Giuffrè C, Kaden TR, Querques G, Souied EH, Freund KB, **Sarraf D**. Early hydroxychloroquine retinopathy: optical coherence tomography abnormalities preceding Humphrey visual field defects. Br J Ophthalmol. 2019 Feb 28.

March 2019 (Spring)

Deng SX, Borderie V, Chan CC, Dana R, Figueiredo FC, Gomes JAP, Pellegrini G, Shimmura S, Kruse FE; and The International Limbal Stem Cell Deficiency Working Group. Global Consensus on Definition, Classification, Diagnosis, and Staging of Limbal Stem Cell Deficiency. Cornea. 2019 Mar;38(3):364–375.

Ip MS, Oden NL, Scott IU, VanVeldhuisen PC, Blodi BA, Ghuman T, Baker CW; SCORE2 Investigator Group. Month 12 Outcomes After Treatment Change at Month 6 Among Poor Responders to Aflibercept or Bevacizumab in Eyes With Macular Edema Secondary to Central or Hemiretinal Vein Occlusion: A Secondary Analysis of the SCORE2 Study. JAMA Ophthalmol. 2019 Mar 1;137(3):281–287.

Sun MM, **Levinson RD**, Filipowicz A, Anesi S, Kaplan HJ, Wang W, Goldstein DA, Gangaputra S, Swan RT, Sen HN, **Gordon LK**. Uveitis in Patients Treated with CTLA-4 and PD-1 Checkpoint Blockade Inhibition. Ocul Immunol Inflamm. 2019 Mar 1:1–11.

Aldave AJ, Terry MA, Szczotka-Flynn LB, Liang W, Ayala AR, Maguire MG, O'Brien RC, Benetz BA, Bokosky JE, Dunn SP, Gillette TE, Hammersmith KM, Hardten DR, Jeng BH, Jones MF, Lindstrom RL, Maverick KJ, Nirankari VS, Oliva MS, Raber IM, Rapuano CJ, Rosenwasser GOD, Ross KW, Seedor JW, Shamie N, Stoeger CG, Tauber S, Van Meter WS, Verdier DD, Lass JH; Cornea Preservation Time Study Group. Effect of Graft Attachment Status and Intraocular Pressure on Descemet Stripping Automated Endothelial Keratoplasty Outcomes in the Cornea Preservation Time Study. Am J Ophthalmol. 2019 Jul;203:78–88. Epub 2019 Mar 6.

Rostami B, Nguyen-Cuu J, Brown G, Brown M, **Sadun AA**, Sebag J. Cost-Effectiveness of Limited Vitrectomy for Vision-Degrading Myodesopsia. Am J Ophthalmol. 2019 Aug;204:1–6. Epub 2019 Mar 6.

Chen MF, Kim CH, **Coleman AL**. Cyclodestructive procedures for refractory glaucoma. Cochrane Database Syst Rev. 2019 Mar 10;3:CD012223.

Borrelli E, **Sadda SR**, Uji A, Querques G. Pearls and Pitfalls of Optical Coherence Tomography Angiography Imaging: A Review. Ophthalmol Ther. 2019 Jun;8(2):215–226. Epub 2019 Mar 13. Review.

Putthirangsiwong B, Katsev B, Steinsapir KD, **Goldberg RA**, **Rootman DB**. Surgical Predictors of Reduced Marginal Reflex Distance After Upper Blepharoplasty. Ophthalmic Plast Reconstr Surg. 2019 Mar 21.

Sadda SR, Borrelli E, Fan W, Ebraheem A, Marion KM, Harrington M, Kwon S. A pilot study of fluorescence lifetime imaging ophthalmoscopy in preclinical Alzheimer's disease. Eye (Lond). 2019 Aug;33(8):1271–1279. Epub 2019 Mar 28.

Lin SR, Prapaipanich P, Yu F, **Law SK**, **Caprioli J**, **Aldave AJ**, **Deng SX**. Comparison of endothelial keratoplasty techniques in patients with prior glaucoma surgery - a case-matched study. Am J Ophthalmol. 2019 Mar 29.

April 2019

Chopra V, Lee CC. Progressive OCT Retinal Nerve Fiber Layer Loss in Myopia. Ophthalmology. 2019 Apr; 126(4):529–530.

Liu X, **Law SK**. Autologous Partial-thickness Scleral Flap and Donor Corneal Graft in Management of Tube Erosion of Glaucoma Drainage Device. J Glaucoma. 2019 Apr;28(4):347–351.

Sadun AA, Asanad S. The Eye in Alzheimer's Disease. Ophthalmology. 2019 Apr;126(4):511–512.

Wang YE, Tepelus TC, Gui W, **Irvine JA**, **Lee OL**, **Hsu HY**. Reduction of Acanthamoeba Cyst Density Associated With Treatment Detected by In Vivo Confocal Microscopy in Acanthamoeba Keratitis. Cornea. 2019 Apr; 38(4):463–468.

Asanad S, Ross-Cisneros FN, Nassisi M, Barron E, Karanjia R, **Sadun AA**. The Retina in Alzheimer's Disease: Histomorphometric Analysis of an Ophthalmologic Biomarker. Invest Ophthalmol Vis Sci. 2019 Apr 1;60(5):1491–1500.

Corbelli E, Parravano M, Sacconi R, **Sarraf D**, Yu SY, Kim K, Capuano V, Miere A, Souied E, Varano M, Boninfante A, Chae B, Carnevali A, Querques L, Bandello F, Querques G. Prevalence and Phenotypes of Age-Related Macular Degeneration in Eyes With High Myopia. Invest Ophthalmol Vis Sci. 2019 Apr 1;60(5):1394–1402.

Grove JCR, Hirano AA, de Los Santos J, McHugh CF, Purohit S, Field GD, **Brecha NC**, **Barnes S**. Novel hybrid action of GABA mediates inhibitory feedback in the mammalian retina. PLoS Biol. 2019 Apr 1;17(4):e3000200.

Rangchian A, Francone A, Farajzadeh M, Hosseini H, Connelly K, **Hubschman JP**, Kavehpour P. Effects of Collagenase type II on Vitreous Humor, an in-situ Rheological Study. J Biomech Eng. 2019 Apr 3.

Takusagawa HL, Hoguet A, Junk AK, **Nouri-Mahdavi K**, Radhakrishnan S, Chen TC. Swept-Source OCT for Evaluating the Lamina Cribrosa: A Report by the American Academy of Ophthalmology. Ophthalmology. 2019 Sep;126(9):1315–1323. Epub 2019 Apr 4.

Fang M, Fan W, Shi Y, **Ip MS**, Wykoff CC, Wang K, Falavarjani KG, Brown DM, van Hemert J, **Sadda SR**. Classification of Regions of Nonperfusion on Ultra-widefield Fluorescein Angiography in Patients with Diabetic Macular Edema. Am J Ophthalmol. 2019 Apr 5.

Huang J, Tepelus TC, Baghdasaryan E, Huang P, Shi Y, **Hsu HY**, **Sadda SR**, **Lee OL**. Correlation between Guttata Severity and Thickness of Descemet's Membrane and the Central Cornea. Curr Eye Res. 2019 Aug;44(8):849–855. Epub 2019 Apr 5.

Chen MF, Meer E, Velez FG, Jones M, Mathern GW, **Pineles SL**. Etiology and Age Modifies Subjective Visual Function After Cerebral Hemispherectomy. J Child Neurol. 2019 Jul;34(8):446–451. Epub 2019 Apr 7.

Zhang C, Tannous E, **Zheng JJ**. Oxidative stress upregulates Wnt signaling in human retinal microvascular endothelial cells through activation of disheveled. J Cell Biochem. 2019 Aug; 120(8):14044–14054. Epub 2019 Apr 8.

Ervin AM, Strauss RW, Ahmed MI, Birch D, Cheetham J, Ferris FL 3rd, **Ip MS**, Jaffe GJ, Maguire MG, Schönbach EM, **Sadda SR**, West SK, Scholl HPN; ProgStar Study Group. A Workshop on Measuring the Progression of Atrophy Secondary to Stargardt Disease in the ProgStar Studies: Findings and Lessons Learned. Transl Vis Sci Technol. 2019 Apr 12;8(2):16.

Goldberg RA. Commentary on: Rehabilitation of the Dysmorphic Lower Eyelid From Hyaluronic Acid Filler: What to Do After a Good Periocular Treatment Goes Bad. Aesthet Surg J. 2019 Apr 17.

Pineles SL, Chang MY, Holmes JM, Kekunnaya R, Özkan SB, Velez FG. Innovative techniques for the treatment of adult strabismus. J AAPOS. 2019 Jun;23(3):132–139. Epub 2019 Apr 17.

Angeles-Han ST, Ringold S, Beukelman T, Lovell D, Cuello CA, Becker ML, Colbert RA, Feldman BM, **Holland GN**, Ferguson PJ, Gewanter H, Guzman J, Horonjeff J, Nigrovic PA, Ombrello MJ, Passo MH, Stoll ML, Rabinovich CE, Sen HN, Schneider R, Halyabar O, Hays K, Shah AA, Sullivan N, Szymanski AM, Turgunbaev M, Turner A, Reston J. 2019 American College of Rheumatology/Arthritis Foundation Guideline for the Screening, Monitoring, and Treatment of Juvenile Idiopathic Arthritis-Associated Uveitis. Arthritis Care Res (Hoboken). 2019 Jun; 71(6):703–716. Epub 2019 Apr 25.

Angeles-Han ST, Ringold S, Beukelman T, Lovell D, Cuello CA, Becker ML, Colbert RA, Feldman BM, **Holland GN**, Ferguson PJ, Gewanter H, Guzman J, Horonjeff J, Nigrovic PA, Ombrello MJ, Passo MH, Stoll ML, Rabinovich CE, Sen HN, Schneider R, Halyabar O, Hays K, Shah AA, Sullivan N, Szymanski AM, Turgunbaev M, Turner A, Reston J. 2019 American College of Rheumatology/Arthritis Foundation Guideline for the Screening, Monitoring, and Treatment of Juvenile Idiopathic Arthritis-Associated Uveitis. Arthritis Rheumatol. 2019 Jun;71(6): 864–877. Epub 2019 Apr 25.

Thorne AW, **Rootman DB**. Influence of surgical approach for decompression on lower eyelid position in thyroid eye disease. Orbit. 2019 Apr 25:1–3.

Trzeciecka A, Stark DT, Kwong JMK, Piqueras M, Bhattacharya SK, **Caprioli J**. Comparative lipid profiling dataset of the inflammation-induced optic nerve regeneration. Data Brief. 2019 Apr 25; 24:103950.

Ghasemi Falavarjani K, Habibi A, Anvari P, Ghasemizadeh S, Ashraf Khorasani M, Shenazandi H, **Sarraf D**. Effect of segmentation error correction on optical coherence tomography angiography measurements in healthy subjects and diabetic macular oedema. Br J Ophthalmol. 2019 Apr 29.

Glasgow BJ, Abduragimov AR. Methods toward simplification of time resolved fluorescence anisotropy in proteins labeled with NBD (4-chloro-7-nitrobenzofurazan) adducts. MethodsX. 2019 Apr 29;6:998–1008.

May 2019

Lin M, Alizadeh R, **Law SK**. Outcomes of Combined Ahmed Glaucoma Valve and Trabeculectomy Revision With Adjunctive Antimetabolite. J Glaucoma. 2019 May;28(5):404–410.

Modabber M, Darvish-Zargar M, Breton L, Chung DD, Duong H, **Aldave AJ**, Choremis J. Crystalline Keratopathy in Post-LASIK Ectasia: A Case Report. Cornea. 2019 May;38(5):635–638. Review.

Demer JL, Clark RA. Functional anatomy of extraocular muscles during human vergence compensation of horizontal heterophoria. J Neurophysiol. 2019 Jul 1;122(1):105–117. Epub 2019 May 1.

Dervenis N, **Coleman AL**, Harris A, Wilson MR, Yu F, Anastasopoulos E, Founti P, Pappas T, Kilintzis V, Topouzis F. Factors Associated With Retinal Vessel Diameters in an Elderly Population: the Thessaloniki Eye Study. Invest Ophthalmol Vis Sci. 2019 May 1;60(6): 2208–2217.

Holland GN, Van Natta ML, Goldenberg DT, Ritts R Jr, Danis RP, Jabs DA; Studies of Ocular Complications of AIDS Research Group. Relationship Between Opacity of Cytomegalovirus Retinitis Lesion Borders and Severity of Immunodeficiency Among People With AIDS. Invest Ophthalmol Vis Sci. 2019 May 1;60(6):1853–1862.

Sun MM, **Gordon LK**, **Levinson RD**. Implications of Birdshot-Like Uveitis on the Pathogenesis of Birdshot Chorioretinopathy. JAMA Ophthalmol. 2019 May 1;137(5):583–584.

Wangsathaporn K, **Tsui I**. Commotio Retinae Resulting From Rubber Band Injury in Two Girls. Ophthalmic Surg Lasers Imaging Retina. 2019 May 1; 50(5):309–313.

Fatehi N, **McCannel TA**, **Giaconi J**, **Caprioli J**, **Law SK**, **Nouri-Mahdavi K**. Outcomes of Glaucoma Drainage Device Surgery in Eyes with Treated Uveal Melanoma. Ocul Oncol Pathol. 2019 Jan;5(1):20–27. Epub 2018 May 2.

Morshedian A, Kaylor JJ, Ng SY, Tsan A, Frederiksen R, Xu T, Yuan L, **Sampath AP**, **Radu RA**, **Fain GL**, **Travis GH**. Light-Driven Regeneration of Cone Visual Pigments through a Mechanism Involving RGR Opsin in Müller Glial Cells. Neuron. 2019 Jun 19;102(6):1172–1183.e5. Epub 2019 May 2.

McCannel CA. Open Macular Holes are Lost Opportunities. Ophthalmol Retina. 2018 Aug;2(8):755–756. Epub 2018 May 4.

Wykoff CC, Khurana RN, Lampen SIR, Noronha G, Brown DM, Ou WC, **Sadda SR**; HULK Study Group. Suprachoroidal Triamcinolone Acetonide for Diabetic Macular Edema: The HULK Trial. Ophthalmol Retina. 2018 Aug;2(8):874–877. Epub 2018 May 4.

Kwon S, Borrelli E, Fan W, Ebraheem A, Marion KM, **Sadda SR**. Repeatability of Fluorescence Lifetime Imaging Ophthalmoscopy in Normal Subjects With Mydriasis. Transl Vis Sci Technol. 2019 May 8;8(3):15.

Bai X, **Yang XJ**, Chen L. Establishment of an induced pluripotent stem cell line (FDEENTi002-A) from a patient with Best's disease carrying c.888C>A mutation in BEST1 gene. Stem Cell Res. 2019 Jul;38:101459. Epub 2019 May 9.

Fan W, Nittala MG, Velaga SB, Hirano T, Wykoff CC, Ip M, Lampen SIR, van Hemert J, Fleming A, Verhoek M, **Sadda SR**. Distribution of Nonperfusion and Neovascularization on Ultra-Wide Field Fluorescein Angiography in Proliferative Diabetic Retinopathy (RECOVERY Study): Report 1. Am J Ophthalmol. 2019 May 9.

Fung S, Stewart RMK, Dhallu SK, Sim DA, Keane PA, Wilkins MR, Tuft SJ. Anterior segment optical coherence tomographic angiography assessment of acute chemical injury. Am J Ophthalmol. 2019 May 9.

Nouri-Mahdavi K, Fatehi N, **Caprioli J**. Longitudinal Macular Structure-Function Relationships in Glaucoma and Their Sources of Variability. Am J Ophthalmol. 2019 May 9.

Alagorie AR, Verma A, Nassisi M, **Sadda SR**. Quantitative Assessment of Choriocapillaris Flow Deficits in Eyes with Advanced Age-Related Macular Degeneration Versus Healthy Eyes. Am J Ophthalmol. 2019 Sep;205:132–139. Epub 2019 May 10.

Hong S, Yang H, Gardiner SK, Luo H, Hardin C, Sharpe GP, **Caprioli J**, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, Fortune B, Chauhan BC, Burgoyne CF. OCT-Detected Optic Nerve Head Neural Canal Direction, Obliqueness and Minimum Cross-Sectional Area in Healthy Eyes. Am J Ophthalmol. 2019 May 13.

Topouzis F, Founti P, Yu F, Wilson MR, **Coleman AL**. Twelve-year incidence and baseline risk factors for pseudoexfoliation: The Thessaloniki Eye Study (An American Ophthalmological Society Thesis). Am J Ophthalmol. 2019 May 13.

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 May 14.

Chadha A, Volland S, Baliaouri NV, Tran EM, **Williams DS**. The route of the visual receptor rhodopsin along the cilium. J Cell Sci. 2019 May 15;132(10).

Ugradar S, Lo C, Manoukian N, Putthirangsiwong B, **Rootman D**. The Degree of Posttraumatic Enophthalmos Detectable by Lay Observers. Facial Plast Surg. 2019 Jun;35(3):306–310. Epub 2019 May 17.

Demer JL. Non-commutative, nonlinear, and non-analytic aspects of the ocular motor plant. Prog Brain Res. 2019;248:93–102. Epub 2019 May 20.

Zhang Y, Williams PR, Jacobi A, Wang C, Goel A, Hirano AA, **Brecha NC**, Kerschensteiner D, He Z. Elevating Growth Factor Responsiveness and Axon Regeneration by Modulating Presynaptic Inputs. Neuron. 2019 Jul 3; 103(1):39–51.e5. Epub 2019 May 20.

Bhat SP. The developing ocular lens: A practical paradigm for probing chromatin landscape and gene expression. Dev Biol. 2019 Sep 1;453(1):105–106. Epub 2019 May 23.

Demer JL, Clark RA. Translation and eccentric rotation in ocular motor modeling. Prog Brain Res. 2019;248:117–126. Epub 2019 May 23.

Gorin MB. When Genetics Can Point Researchers and Clinicians in New Directions. JAMA Ophthalmol. 2019 May 23.

Sacconi R, **Sarraf D**, Garrity S, Freund KB, Yannuzzi LA, Gal-Or O, Souied E, Sieiro A, Corbelli E, Carnevali A, Querques L, Bandello F, Querques G. Nascent Type 3 Neovascularization in Age-Related Macular Degeneration. Ophthalmol Retina. 2018 Nov;2(11): 1097–1106. Epub 2018 May 25.

Francone A, Yun L, Kothari N, Cheng I, Farajzadeh M, Govetto A, **Hubschman JP**. Lamellar Macular Holes in the Presence of Age-Related Macular Degeneration. Retina. 2019 May 27.

Shi Y, Huang J, Baghdasaryan E, Huang P, Huang X, **Sadda SR**, **Lee OL**. Representation of Central Endothelial Cell Density by Analysis of Single Best Specular Microscopy Image Regardless of Cell Size Variance. Transl Vis Sci Technol. 2019 May 29;8(3):23.

Ugradar S, **Rootman DB**. Orbital fat expansion in thyroid eye disease is related to age. Eur J Ophthalmol. 2019 May 30:1120672119852322.

Uji A, Nittala MG, Hariri A, Velaga SB, **Sadda SR**. Directional kinetics analysis of the progression of geographic atrophy. Graefes Arch Clin Exp Ophthalmol. 2019 Aug;257(8):1679–1685. Epub 2019 May 30.

Waldman AT, Yeshokumar AK, Lavery A, Liu G, **Pineles SL**, Repka MX, Adang L, Narula S, Liu GT. Validation of a symptom-based questionnaire for pediatric CNS demyelinating diseases. J AAPOS. 2019 Jun;23(3):157.e1–157.e7. Epub 2019 May 31.

Sharifipour F, Yazdani S, Asadi M, Saki A, **Nouri-Mahdavi K**. Modified Deep Sclerectomy for the Surgical Treatment of Glaucoma. J Ophthalmic Vis Res. 2019 Apr–Jun;14(2):144–150.

June 2019

Kogachi K, Konstas A, Karanjia R, **Sadun AA**. Endovascular Stenting in a Transgender Patient With Idiopathic Intracranial Hypertension. J Neuroophthalmol. 2019 Jun;39(2):247–248.

Liu X, Thung EG, **Caprioli J**, **Law SK**. Combined Ab Externo Cyclopexy and Cryopexy in Cyclodialysis Cleft Repair. J Glaucoma. 2019 Jun;28(6):568–574.

Mohammadzadeh V, Galian K, Martinyan J, **Nouri-Mahdavi K**. Vision Loss After Glaucoma Surgery: Progressive Macular Thinning as a Sign of Snuff-Out Phenomenon. J Glaucoma. 2019 Jun;28(6):e99–e102.

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.

Parke DW 2nd, **Coleman AL**. New Data Sets in Population Health Analytics. JAMA Ophthalmol. 2019 Jun 1;137(6): 640–641.

Chanwimol K, Balasubramanian S, Nassisi M, Gaw SL, Janzen C, **Sarraf D**, **Sadda SR**, **Tsui I**. Retinal Vascular Changes During Pregnancy Detected With Optical Coherence Tomography Angiography. Invest Ophthalmol Vis Sci. 2019 Jun 3;60(7):2726–2732.

Kim EW, De Leon A, Jiang Z, **Radu RA**, Martineau AR, Chan ED, Bai X, Su WL, Montoya DJ, Modlin RL, Liu PT. Vitamin A Metabolism by Dendritic Cells Triggers an Antimicrobial Response against Mycobacterium tuberculosis. mSphere. 2019 Jun 5;4(3).

Scott IU, VanVeldhuisen PC, Barton F, Oden NL, **Ip MS**, Blodi BA, Worrall M, Fish GE; Study of Comparative Treatments for Retinal Vein Occlusion 2 Investigator Group. Patient-Reported Visual Function Outcomes After Anti-Vascular Endothelial Growth Factor Therapy for Macular Edema Due to Central Retinal or Hemiretinal Vein Occlusion: Preplanned Secondary Analysis of a Randomized Clinical Trial. JAMA Ophthalmol. 2019 Jun 6.

Barnes CS, Schuchard RA, Birch DG, Dagnelie G, Wood L, Koenekoop RK, **Bittner AK**. Reliability of Semiautomated Kinetic Perimetry (SKP) and Goldmann Kinetic Perimetry in Children and Adults With Retinal Dystrophies. Transl Vis Sci Technol. 2019 Jun 11; 8(3):36.

Shah SN, Kogachi K, Correa ZM, Schefler AC, Aronow ME, Callejo SA, Cebulla CM, Day-Ghafoori S, Francis JH, Lally S, **McCannel TA**, Paton KE, Phan IT, Pointdujour-Lim R, Ramasubramanian A, Rath P, Shields CL, Skalet AH, Wells JR, Jennelle RL, Berry JL. Trends in Radiation Practices for Female Ocular Oncologists in North America: A Collaborative Study of the International Society of Ocular Oncology. Ocul Oncol Pathol. 2019 Jan;5(1):54–59. Epub 2018 Jun 12.

Frausto RF, Chung DD, Boere PM, Swamy VS, Duong HNV, Kao L, Azimov R, Zhang W, Carrigan L, Wong D, Morselli M, Zakharevich M, Hanser EM, Kassels AC, Kurtz I, Pellegrini M, **Aldave AJ**. ZEB1 insufficiency causes corneal endothelial cell state transition and altered cellular processing. PLoS One. 2019 Jun 13;14(6):e0218279.

Xu D, Nagiel A, Rahimy E, **McCannel CA**. Practice Patterns of Endophthalmitis Treatment: An International Survey of Retina Specialists. Ophthalmol Retina. 2018 Sep;2(9):979–980. Epub 2018 Jun 14.

Wang YE, Tepelus TC, Vickers LA, Baghdasaryan E, Gui W, Huang P, **Irvine JA**, **Sadda S**, **Hsu HY**, **Lee OL**. Role of in vivo confocal microscopy in the diagnosis of infectious keratitis. Int Ophthalmol. 2019 Jun 17.

Xu X, Yannuzzi NA, Fernández-Avellaneda P, Echegaray JJ, Tran KD, Russell JF, Patel NA, Hussain RM, **Sarraf D**, Freund KB. Differentiating Veins From Arteries on Optical Coherence Tomography Angiography by Identifying Deep Capillary Plexus Vortices. Am J Ophthalmol. 2019 Jun 19.

Lambert SR, Aakalu VK, Hutchinson AK, **Pineles SL**, Galvin JA, Heidary G, Binenbaum G, VanderVeen DK. Intraocular Lens Implantation during Early Childhood: A Report by the American Academy of Ophthalmology. Ophthalmology. 2019 Jun 20.

Chung DD, Zhang W, Jatavallabhula K, Barrington A, Jung J, **Aldave AJ**. Alterations in GRHL2-OVOL2-ZEB1 axis and aberrant activation of Wnt signaling lead to altered gene transcription in posterior polymorphous corneal dystrophy. Exp Eye Res. 2019 Jun 21; 188:107696.

Kim JH, Rabiolo A, Morales E, Yu F, Afifi AA, **Nouri-Mahdavi K**, **Caprioli J**. Risk Factors for Fast Visual Field Progression in Glaucoma. Am J Ophthalmol. 2019 Jun 22.

Daneshvar R, Yarmohammadi A, Alizadeh R, Henry S, **Law SK**, **Caprioli J**, **Nouri-Mahdavi K**. Prediction of Glaucoma Progression with Structural Parameters: Comparison of Optical Coherence Tomography and Clinical Disc Parameters. Am J Ophthalmol. 2019 Jun 24.

Phalke SP, Huang Y, Rubtsova K, Getahun A, **Sun D**, Reinhardt RL, O'Brien RL, Born WK. γδ T cells shape memory-phenotype αβ T cell populations in non-immunized mice. PLoS One. 2019 Jun 25;14(6):e0218827.

Bhat SP, Gangalum RK, Kim D, Mangul S, Kashyap RK, Zhou X, Elashoff D. Transcriptional profiling of single fiber cells in a transgenic paradigm of an inherited childhood cataract reveals absence of molecular heterogeneity. J Biol Chem. 2019 Sep 13;294(37):13530–13544. Epub 2019 Jun 26.

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 chairman 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 that 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 chairman since 1994, the Institute's core pillars have been increasingly developed and a broad agenda of program-building and expansion has been implemented.

The first Stein Eye Center was opened in Santa Monica in 2012, and 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. Combined, the Stein Eye Institute, Stein Eye Center, Doheny Eye Center UCLA locations, and UCLA-affiliated hospitals provide patients across the Southland with access to the finest vision care.

But perhaps most ambitious of all, 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.

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

Edward A. Landry, Esq.
Partner
Musick, Peeler & Garrett
2016–present

Bartly J. Mondino, MD
Director
Stein Eye Institute
1994–present

Ronald L. Olson, Esq.
Partner
Munger, Tolles & Olson
1995–present

Gerald H. Oppenheimer
President, Gerald Oppenheimer
Family Foundation
President, Systems Design
Associates
1992–present

Nelson C. Rising, Esq.
Chairman 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
Chairman, UCLA Department of Ophthalmology
Affiliation Chairman, Doheny Eye Institute

Anthony C. Arnold, MD
Vice Chairman, Education

Anne L. Coleman, MD, PhD
Vice Chairman, UCLA Department of Ophthalmology

SriniVas R. Sadda, MD
President and Chief Scientific Officer, Doheny Eye Institute

Alfredo A. Sadun, MD, PhD
Vice Chairman, Doheny Eye Center UCLA

Alapakkam P. Sampath, PhD
Associate Director, Stein Eye Institute

Jonathan D. Smith
Chief Administrative Officer, Stein Eye Institute

Gabriel H. Travis, MD
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.

Philanthropy for the Next 50 Years

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:

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


PRINTED WITH
SOY INK


FSC
Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fiber
Cert no. SCS-COC-001200
www.fsc.org
© 1996 Forest Stewardship Council

UCLA Stein Eye Institute | DOHENY EYE INSTITUTE

UCLA DEPARTMENT OF OPHTHALMOLOGY
DAVID GEFFEN SCHOOL OF MEDICINE AT UCLA