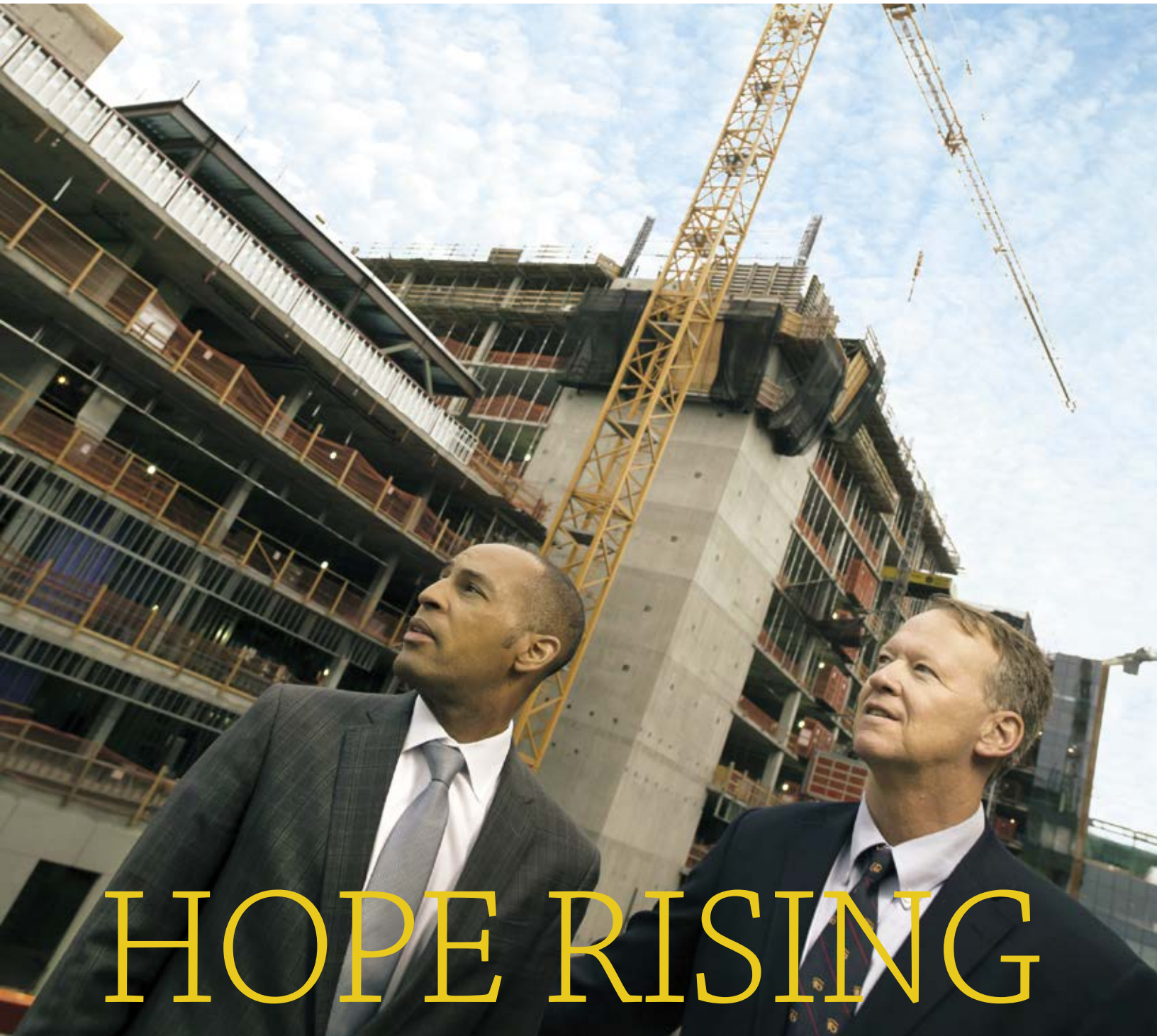


THE FUTURE OF Vision

Winter
2019

University of California, San Francisco | Department of Ophthalmology | Francis I. Proctor Foundation | That Man May See



A new building rises from the ground—and hope rises with it. The UCSF Center for Vision at Mission Bay and increased research funding are bringing together an extraordinary team advancing sight for all.

Friends of That Man May See and the University of California, San Francisco, have raised nearly

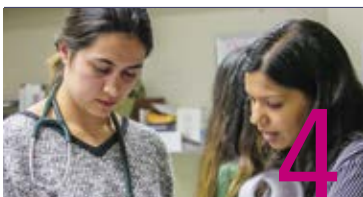
\$170 million for the Future of Vision. That includes an investment of \$45 million to fuel new knowledge and sight-saving discoveries in vision science.

Investing in Pioneers

Understanding the biology of the eye/brain circuitry is ground zero for halting blindness from retinal degenerations and related conditions.

Continued on page 2

A PEEK INSIDE:



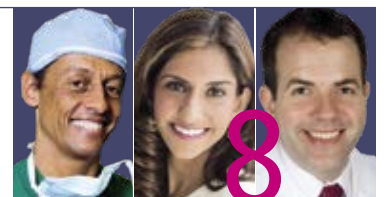
Caring for the City's Homeless



East Bay Vision Clinic Opens



Novelty Frames Fit Special Kids



Meet Six New Faculty



FOCAL POINT

Dear Friends,

These are exciting times for the Department of Ophthalmology and Francis I. Proctor Foundation. We look forward to collaborating even more closely in patient care, research, and education in our new UCSF Center for Vision, opening next year.

Our trainees come from around the world, as do our faculty. Your investments help us to attract the most talented clinicians and vision scientists, whose pioneering research and compassionate care change lives.

We are committed to our community, and we'd like to share with you stories about a new East Bay clinic in Berkeley, low-vision services on the Parnassus campus, and a homeless shelter partnership in San Francisco.

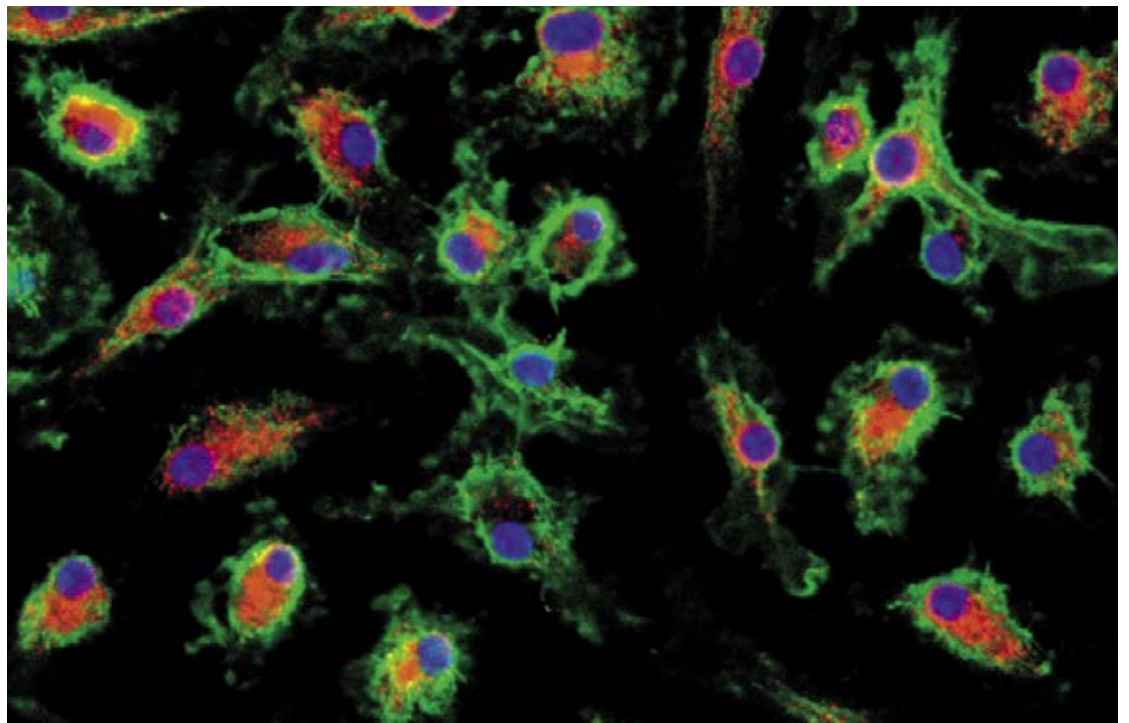
Your gifts allow us to expand, strengthening our capacity to save and restore sight, now and for future generations.

Sincerely,

Stephen D. McLeod, MD
Theresa M. and Wayne M.
Caygill, MD, Distinguished
Professor and Chair

Hope Rising

Continued from page 1



Retinal repair and transplantation face challenges from immune responses involving macrophage cells, such as those pictured here. Dr. Lamba's team works on modulating these cells to promote successful retinal repair.

In the past year, the Department of Ophthalmology has added four powerhouse laboratory researchers. Developmental neurobiologist **Xin Duan, PhD**, cellular biologist **Aparna Lakkaraju, PhD**, neurobiologist and bio-engineer **Deepak Lamba, MBBS, PhD**, and molecular biologist **Maxence Nachury, PhD**, expand the department's expertise in cells and structures that contribute to the neural circuitry from the retina to the visual cortex.

Each of these pioneers leads many promising initiatives. Their work complements the department's initiatives at the forefront of genetics, physiology, and biochemistry. Clinician researchers who provide specialized vision care also collaborate and propel new insights to stop vision loss.

"Every vision scientist has a distinct focus and skill set," explains retinal physiologist **Felice Dunn, PhD**, who partners with **Dr. Duan** and glaucoma specialist **Yvonne Ou, MD**. "We leverage complementary strengths and diverse viewpoints to amplify discovery and innovation across all dimensions of the challenge."

"We are in a very strong place," says Department Chair **Stephen D. McLeod, MD**, "and we are grateful to donors

whose support brought together this dream team." Director of Research **Doug Gould, PhD**, agrees. "With the expertise of our new biologists, we're working on more pieces of the eye/brain puzzle, including every layer of the retina. Novel strategies to overcome retinal sight loss are already emerging from these new labs."

Stem Cells Advance Solutions

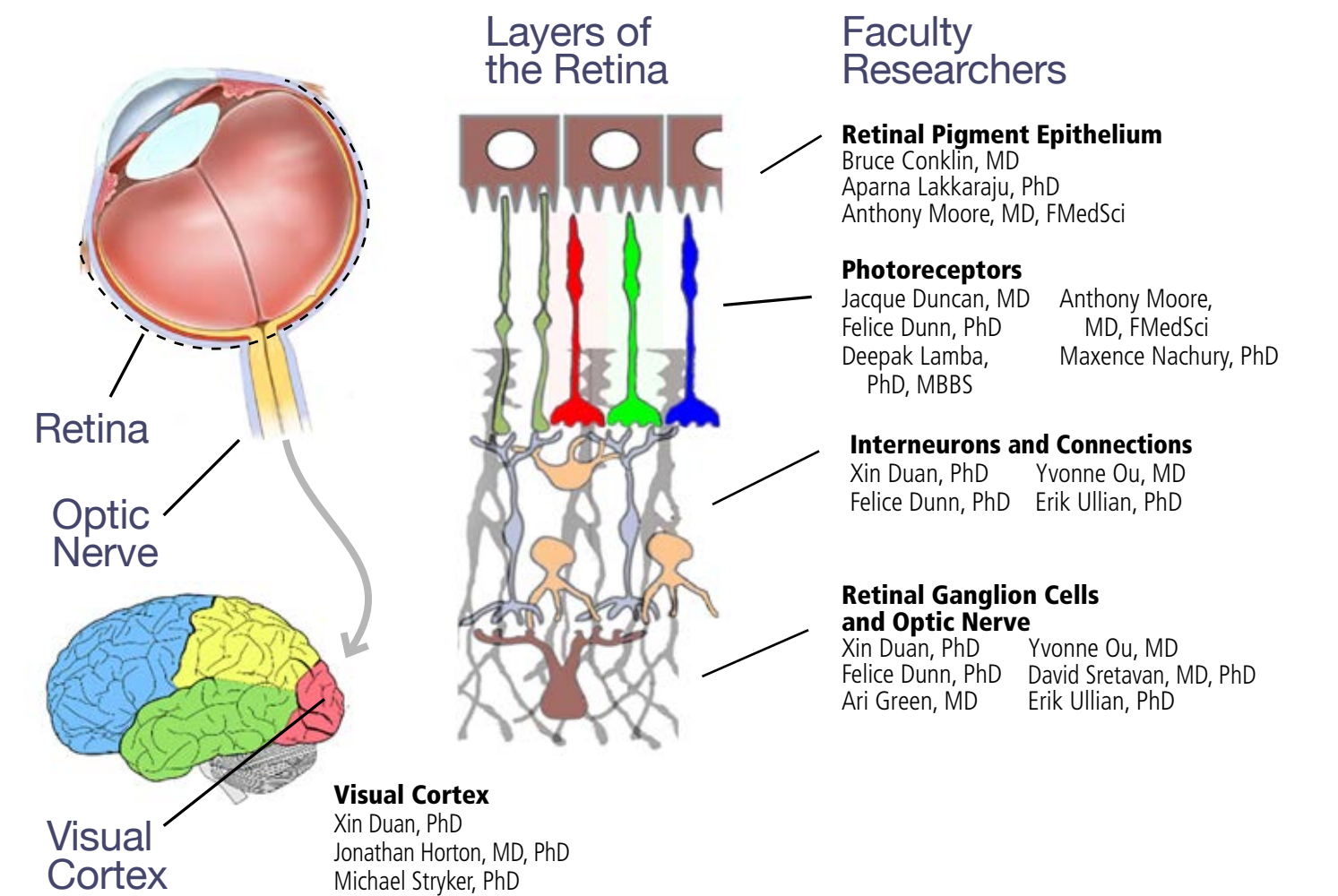
Thanks to pluripotent stem cell methods developed at UCSF, vision scientists now develop retinal cells in the laboratory. UCSF biologists test drugs on these experimental cells, identifying promising directions for treatment, including patient-specific drugs. They even grow retinal tissue from patients' own skin cells, driving research on cell replacement therapies.

Target, Repair, Regrow, Replace

A tadpole can regrow a damaged tail, but retinal nerve cells never grow back. Knowledge emerging from eye/brain research will one day enable ophthalmologists to repair and/or transplant retinal cells and restore sight. Dr. Duan's team aims to restore retinal function by reactivating, rewiring, and/or genetically regenerating specific types of retinal cells. Dr. Lamba's team grows retinal micro-organs to explore conditions necessary for successful retinal transplants.

Solving the Puzzle of the Eye/Brain Circuitry

Vision begins when light hits the retina's photoreceptors. Millions of retinal cells organized in multiple layers work together to transmit electrical signals through the optic nerve to the visual cortex.



Accelerating Discovery
High-resolution confocal microscopes provide the most detailed images ever seen of living human retinal tissue. Dr. Nachury's team uses the technology to understand tiny cellular antennae called cilia. Genetic defects in the cilia contribute to retinal degeneration and a broad class

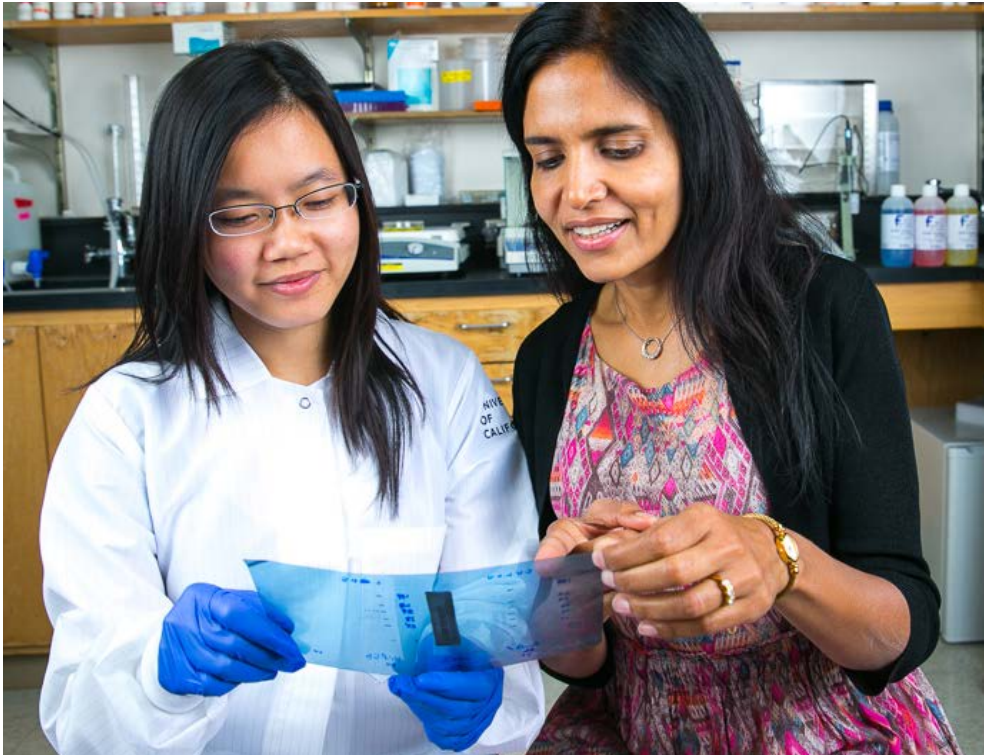
of health disorders. His team investigates a precision-medicine strategy to treat an inherited syndromic retinal degeneration.

Dr. Lakkaraju's team performs live imaging of healthy and diseased retinas to identify early triggers that drive vision loss in inherited and age-related macular degenerations.

Hope in Action
UCSF promotes cross-disciplinary collaboration, an approach that has changed the course of medicine. Vision scientists team up with diverse leaders across the Mission Bay research hub and around the world. Joint appointments to the UCSF Center for Regenerative Medicine, Department of Neurology, and Gladstone Institute of Neurological Disease strengthen key partnerships.

"New studies confirm that collaboration in basic science can lead to cures, drugs, and other medical breakthroughs," says Dr. Gould. "We are leveraging this approach better than ever with a full complement of exceptional laboratory scientists." Dr. McLeod concurs: "This team will make even greater strides in expanding knowledge of the visual system and solving some of the most intractable sight conditions." 

Laboratory research support is provided by the National Institutes of Health, Research to Prevent Blindness, and That Man May See.



Dr. Lakkaraju's team identified promising small molecule drugs that are now in preclinical evaluation. Dr. Lakkaraju (right) discusses a sensitive biochemical technique with team member Li Xuan Tan, PhD.

Serving the City's Homeless

A volunteer-run clinic helps shelter residents keep their sight.

"Whether crossing the street or trying to avoid trouble, poor vision intensifies the vulnerability of an already vulnerable population," says ophthalmology resident **Lauren Hennein, MD**. When Dr. Hennein floated the idea for a shelter-based vision clinic two years ago, **Alejandra de Alba Campomanes, MD, MPH**, became an enthusiastic faculty sponsor. Dr. Hennein and medical student **Ogonna Nnamani** dug in to make it happen.

Training to Care

With The California Endowment's \$20,000 equipment gift to That Man May See, the monthly clinic opened in fall 2017. It joins other UCSF services at Division Circle Navigational Center, a shelter run by the St. Vincent de Paul Society in San Francisco's South of Market area.

The clinic has no paid staff. A handful of medical and premedical students

are led by Dr. Hennein and Mrs. Nnamani. Volunteers provide care under the supervision of ophthalmology residents, fellows, and faculty. Project Homeless Connect pays to have glasses made. Students learn to do intake, collect histories, perform comprehensive exams, coach patients on their conditions, and document next steps.

Dr. de Alba is thrilled. "Providing care at the shelter allows us to serve those in the most unstable circumstances," she says. "Aspiring doctors are learning the value of community service as well as patient care and the tools of ophthalmology."

Connecting to County

The clinic is a bridge to sight-saving treatments at Zuckerberg San Francisco General Hospital and Trauma Center. **Jay Stewart, MD**, chief of ophthalmology there, saves appointments for patients referred from the shelter.

"Those already experiencing sight loss are the most motivated to follow up," says Dr. Stewart. "We want to make it easy."

Momentum and Hope

"Even though we want to serve more people, our first goal is to make the clinic sustainable," says Dr. Hennein. "Eventually, we'd like to open our doors twice each


month." Right now, leaders hope to acquire a portable slit lamp to provide more comprehensive services.

Volunteering at the clinic is extremely popular. "It is inspiring to see young students' eagerness



Volunteer Sarah Menchaca learns from attending faculty ophthalmologist Dr. Neeti Parikh.

to learn and their enthusiastic commitment to help in such a respectful, compassionate way," says Dr. de Alba. "It gives me so much hope."

Thanks to The California Endowment, That Man May See, and Akorn Pharmaceuticals for donations; additional faculty sponsors Drs. Stewart and McLeod; premedical student clinic director Kiki Spaulding, Project Homeless Connect's Alison Van Nort, MSW, and faculty and student volunteers. 



Shelter Clinic Volunteers

Back row, from left: Ana Marija Sola, Joseph Atangan, Ermin Dzihic, Charlie Kersten, Dr. Murtaza Saiffee
Front row, from left: Sarah Menchaca, Kiki Spaulding, Dr. Lauren Hennein, Tianyi Zhang, Heer Purewal

East Bay Vision Care

**John Muir Health
and UCSF Health
Berkeley
Outpatient Center**

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Berkeley, CA 94702

VISION CARE

Optometry, comprehensive
ophthalmology, glaucoma,
and retina services
now available

*Neuro-ophthalmology
and cornea services
coming soon!*



Dr. Joey Hsia with glaucoma patient Marcia Davison. She is grateful to be reading again and to receive specialized care at the new East Bay clinic.

Just two days after Joey Hsia, MD, prescribed new eye drops, 82-year-old Marcia Davison turned to a friend. “I have big news: I can read again.”


Double Teaming

Marcia had arrived at UCSF seeking help with complications from a previous glaucoma surgery. Her UCSF specialists have worked very closely with her for more than two years, sometimes meeting twice weekly to find solutions for her fragile sight.

“**Ying Han, MD**, and Dr. Hsia were right there with me,” she remembers. “They had major discussions about the unique factors in my case, and feel I have a relationship with them. They really went beyond my expectations.” Marcia’s husband Dick has done the driving since

his wife’s glaucoma grew worse. In rush hour traffic, their return from San Francisco to Walnut Creek could take three hours.

East Bay Clinic Opens

The Davisons are thrilled that Dr. Hsia now can treat Marcia at a new site in southwest Berkeley. The John Muir Health and UCSF Health Berkeley Outpatient Center brings together primary and specialty care by UCSF ophthalmologists in collaboration with the UC Berkeley School of Optometry and John Muir Health physicians. The goal is to deliver high-quality comprehensive care for patients in the East Bay and beyond. “Dr. Hsia and Dr. Han are still my UCSF glaucoma specialists, and we’re making progress,” Marcia says. “It’s the same expertise, but closer to home. I am so pleased.” 

UCSF
OPHTHALMOLOGY

**COMES
TO THE
EAST
BAY.**

Young Scientists Honored

F.Y.I.

Research Day Presentations

- 1 Big data in refractive surgery
- 2 Intraocular pressure sensing using light
- 3 Inner retina disassembly in glaucoma lab models
- 4 Summary of MORDOR trial, sub-Saharan Africa
- 5 Combinatorial cadherins wire up parallel retinal direction-selective circuits
- 6 UCSF ocular oncology research in the past five years
- 7 The role of Cc2d2a in photoreceptor ciliary trafficking
- 8 The organization of the superior colliculus in strabismus

Seventeen doctoral and postdoctoral fellows labor at the heart of UCSF Ophthalmology's research enterprise.

Unseen by patients, these young laboratory scientists investigate the nature of sight and vision disorders, seeking breakthroughs toward ending blindness. Guided by faculty mentors, they develop original research, advance faculty investigations, and prepare to lead teams of their own.

Knights Templar Award

The Knights Templar Eye Foundation recently gave a prestigious national award and funding support to postdoctoral fellow **Swanand Koli, PhD**. His proposed research, under the guidance of faculty geneticist **Saidas Nair, PhD**, addresses the rampant rise

in myopia (nearsightedness), a risk factor for several blinding diseases. Dr. Koli's investigation into molecular mechanisms contributing to refractive development will help lay the groundwork for potential interventions to slow or halt myopia.

Research Day 2018

Fellows' accomplishments were celebrated and shared on Research Day 2018. Awards for outstanding research papers and posters by residents or fellows in the ophthalmology department were determined by faculty panels. Vision scientists shared investigations to spark new learning, ideas, and connections. An outstanding keynote address, "Experiences in Translational Research for Inherited Blindness," was provided by eminent translational vision scientist Jean Bennett, MD, PhD. 



Swanand Koli, PhD, received recognition from the Knights Templar Eye Foundation for his study of genetic factors in the development of nearsightedness. Marty Cusing (left) and Gregg Hall presented the award.



For Huinan (Marcus) Li, PhD, the Best Poster distinction led to opportunities to present his research at key ophthalmology conferences. (Mentor: Erik Ullian, PhD)

Janette Tang, MD, took the honor for Best Clinical Research Poster for "High-resolution measures of disease progression over 36 months in patients with retinal degenerations." (Mentor: Jacque Duncan, MD)

David Copenhagen, PhD (left), congratulated Ivan Anastassov, PhD, winner of the David and Joyce Copenhagen Award for the year's best paper. Dr. Anastassov presented "Protein distribution and connectivity at the rod-rod bipolar cell synapse in the developing retina." (Mentor: Felice Dunn PhD)

Reframing Children's Futures



Unique frames allow 4-year-old Micah, shown with his dad, to wear glasses and hearing aid comfortably at the same time.

Frank Brodie, MD, is developing technology to prevent vision loss in children with skull malformations.

During his resident pediatric rotation, Dr. Brodie met Micah and other toddlers who desperately needed nonstandard frames. Micah was born with an abnormal skull shape as well as severe vision and hearing loss. He needed frames that fit his head and around his bulky hearing aid.

Young children who don't wear their corrective glasses frequently develop amblyopia, vision loss due to undeveloped eye-brain connections. Dr. Brodie realized that patient-specific designs could make a difference.

Dr. Brodie began working with Chief of Pediatric Ophthalmology **Alejandra de Alba Campomanes, MD, MPH**, on a program to create custom 3D-printed

frames. They enlisted the radiology department to create 3D head models from patients' existing CT scans.

The eyewear company JINS volunteered to design frames with adaptive features suited to each child's unique anatomy. Using 3D printers, Drs. Brodie and de Alba were able to produce the frames, which fit standard lenses and are durable, comfortable, and colorful.

Building on Progress

The UCSF pilot program has been a tremendous success. The team is now working with software companies to simplify customization. A generous donation from Renee and William Rothmann helped to launch this innovative effort. "Their support to develop new technology will transform the lives of many more children in our community and around the world," says Dr. Brodie. 

#1

CAUSE OF
VISUAL
IMPAIRMENT
IN YOUNG
CHILDREN:
AMBLYOPIA

1 IN 2,000

INFANTS ARE
BORN WITH
ABNORMALITIES
OF THE SKULL
OR FACE.

THE AUGIE FUND

AT THAT MAN
MAY SEE
PROVIDES
GLASSES
FOR FAMILIES
IN NEED.

Welcome New Faculty



Dr. Sydney Williams

brings 26 years of clinical and surgical experience in glaucoma to his appointment with the Department of Ophthalmology. He has long volunteered as a clinical professor for the department, mentoring residents at Zuckerberg San Francisco General Hospital and Trauma Center.

MD: Howard University

Residency: UCSF

Fellowship: Harvard University (Glaucoma)

Q You've served as a UCSF clinical professor since 1992. What was your role?

A While I was in private practice, I volunteered once a month with residents and fellows at San Francisco General. I guided young doctors in the glaucoma clinic and with surgery.

Q Why did you decide to join UCSF's Glaucoma Service?

A I feel a real calling to teach, not only to help transmit the fundamentals of clinical practice but to share insights I've gained over the years. I started as a professor at Stanford, and I really enjoy the teaching environment.

Q What else do you hope to pass on to young clinicians?

A Glaucoma is so far irreversible, so treatment is for life. It's a serious responsibility. I also hope to transmit

the understanding that caring for patients means you have to care about the patient. In medicine today, that basic fact can be forgotten or lost in the technology of medicine.

Q Your father was an ophthalmologist—did he influence your career path?

A Yes! He loved ophthalmology and that was infectious, as though it were an illness that I did not know I had. I first wanted to practice primary care and did so with the National Health Service Corps. I learned a lot about caring for people there, but I found that I wanted to operate.

Q What innovations in glaucoma care are you looking forward to now?

A I would like to see three things: 1) pharmacologic "armor" to protect the optic nerve, 2) a way to rebuild damaged optic nerves, and 3) a genetic test to predict the probability of severe glaucoma. 👁



Dr. Nailyn Rasool

holds joint appointments with the Department of Ophthalmology and the Department of Neurology. As Associate Director of the Neuro-ophthalmology Service, she provides patient care for children and adults. She is board certified by the Royal College of Physicians and Surgeons of Canada.

MD: University of British Columbia

Residencies:

Dalhousie University (Adult Neurology), Columbia University (Ophthalmology)

Fellowship: Harvard Medical School (Neuro-ophthalmology)

Q Before starting at UCSF, you set out for East Africa and Central Asia?

A Yes, I worked with physicians in both Pakistan and Kenya, helping to strengthen their diagnostic and management approaches for complex neuro-ophthalmic conditions. I also assisted in developing outreach care to more marginalized populations.

Q What attracted you to neuro-ophthalmology?

A I love the ability to gain insight into the brain and neuro-axis through visual manifestations. Many neuro-ophthalmic conditions are systemic diseases affecting many organ systems. The ability to help diagnose and treat these conditions earlier helps prevent further damage and thus provides these patients a greater quality of life.

Q How does your Neurology Training improve the care you provide to vision patients?

A Many visual disorders result from problems in the brain, including tumors, strokes, hemorrhages, degenerative conditions, infections, and inflammation. Having had training as both a neurologist and ophthalmologist, I am very comfortable with these diseases and more complex cases.

Q After ten years of outstanding training and scholarship, why did you want UCSF to be your academic home?

A UCSF has phenomenal ophthalmology, neurology, neurosurgery, and neuroradiology departments! It is an absolute privilege to work alongside and collaborate with these individuals, and everyone has been very welcoming.

Q How did growing up in Vancouver shape your interests outside of medicine?

A I grew up climbing mountains and in the ocean – a very west coast lifestyle. I love anything outdoors. I enjoy running, skiing, hiking, tennis, squash and yoga, and I am always up for an adventure! 👁



Dr. Aparna Lakkaraju

joins the Department of Ophthalmology as a cell biologist. She investigates mechanisms driving vision loss in age-related macular degeneration (AMD) to identify solutions to preserve sight throughout the life span.

PhD: University of Minnesota
Postdoctoral fellowship: Cornell University (Cell Biology and Ophthalmology)
Previous Position: Associate Professor, Ophthalmology and Visual Sciences, University of Wisconsin, Madison

Q Why does your research team study the retinal pigment epithelium (RPE)?

A The RPE is critical for maintaining healthy vision, but little is known about how damage to this layer of the retina causes age-related macular degeneration (AMD). This lack of knowledge limits treatment. We investigate how early changes in metabolism and inflammation in this layer can impact retinal health and, consequently, vision.

Q What are some of your team's significant findings so far?

A My research team pinpointed how immune abnormalities in the retina can cause macular degeneration. We identified how the accumulation of fatty molecules advances the disease process. We could potentially target those molecules to treat AMD. We also found that an antidepressant drug protected the health of RPE in our lab models.

Q What are you excited about now?

A With high-resolution microscopy, we can "see" into the living retina.

This helps us identify early signs of disease. In studying how retinal cells send out small bubbles to "talk" to one another, we discovered that in AMD the bubbles contain stress signals. Now we're exploring how these can lead to AMD. I am also excited about evaluating drugs to reduce fatty molecules and preserve vision at the earliest stages of AMD.

Q Tell us about your life outside the lab.

A I love reading, traveling, and art in almost any form. My 11-year-old daughter, Isha, and I enjoy learning pottery and violin together.

Q You quote Wendell Berry's poetry line: "The mind that is not baffled is not employed." Why?

A Initial research plans often prove to be dead ends. Discoveries come only when we are pressed to engage our creative minds. Understanding this helps young researchers develop resilience and prepare for the challenges ahead. 👁



Dr. Bryan J. Winn

is a specialist in oculoplastic, orbital, and reconstructive surgery. He joins the Department of Ophthalmology as the Service Chief for Ophthalmology at the San Francisco VA Medical Center. He investigates the roles of epigenetic factors (environmental factors that affect genetic activity) in orbital and periocular inflammatory diseases.

MD: Columbia University
Residency: UCSF
Fellowship: Seattle (Oculoplastics)
Previous Position: Columbia University, Division Director of Oculoplastic and Orbital Surgery and Associate Designated Institutional Official for Graduate Medical Education at New York-Presbyterian Hospital

Q What interests you about returning to San Francisco?

A I'm pleased to reconnect with UCSF colleagues, and I'm launching a new clinic for patients with inflammatory orbital and periorbital diseases. Recent research suggests that the micro-organisms living in the intestines of these patients may affect their eye disorders. It's an area ripe for exploration. I'm also excited to take advantage of the Bay Area's outdoor life with my wife, Amanda, and kids, Jackson and Olivia.

Q The Veterans Administration's Whole Health initiative encourages clinicians to focus on veterans' health needs in a global rather than specific disease-centric manner. How will you address this?

A My clinical approach as well as research interests focus on factors that modulate health and disease such as stress, sleep, diet, and exercise. I am interested in bridging silos between medical subspecialties to better understand patients' eye diseases in the context of their overall health and well-being.

Q Treating abnormalities in the micro-organisms of the intestines shows promise for autoimmune disorders, including rheumatoid arthritis. How so?

A The environment interacts strongly with our tissues in the mucosal barriers, such as the lining of the mouth, intestines, and the surface of the eye. Populations of bacteria, viruses, and fungi that live in these micro-environments, especially the intestines, function abnormally in people with some autoimmune and inflammatory diseases. Mounting evidence suggests that correcting this can greatly decrease symptoms elsewhere in the body.

Q How will you explore potential benefits for eye patients?

A First we will determine whether people with orbital and periocular inflammatory conditions have significantly distinct microbiome profiles. If we establish this, we can start conceptualizing novel therapies to treat or even prevent particular orbital disorders. Right now, we depend on medications to control inflammation, and their side effects often reduce patients' quality of life. 👁

Welcome New Faculty



Dr. Joey Yen-Cheng Hsia

joins the Department of Ophthalmology after a UCSF fellowship year with five faculty glaucoma specialists. For his outstanding potential to contribute to the field of ophthalmology, Dr. Hsia was awarded one of 20 Heed Fellowships given nationwide last year.

MD: Case Western Reserve University
Residency: UCSF
Fellowship: UCSF (Glaucoma)

Q What led you to specialize in glaucoma?

A As an undergraduate at UCLA, I took a part time work-study position at the eye institute, and the experience inspired me to pursue a career in medicine. I then chose to specialize in glaucoma because I can build life-long relationships with my patients, and its complexity of care and surgical management provides a challenge.

Q How did your UCSF fellowship shape you as a clinician scientist?

A My fellowship prepared me to confidently handle complex glaucoma cases. Exposure to the newest diagnostic and surgical techniques and technologies gives me many tools to provide the best care possible. The varied research interests of this outstanding faculty continually inspire me.

Q What research projects do you have in mind?

A I’m collaborating with scientists at the UC Berkeley School of Optometry to investigate a novel diagnostic device to improve earlier diagnosis and evaluate progression. I am also interested in optimizing safety and clinical outcomes for glaucoma surgeries.

Q You looked at how cataract surgery affects glaucoma. Are any insights emerging?

A Cataract surgery can lower intraocular pressure, which helps glaucoma patients. We identified key parameters that can predict lower eye pressure after cataract surgery for patients with primary open angle glaucoma, the most prevalent type of glaucoma in the United States.

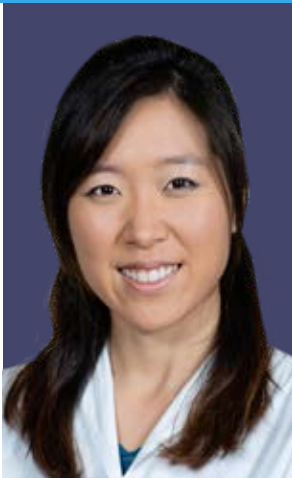
Q What are some of your other interests?

A In my free time, I enjoy cooking, home improvement projects, traveling, SCUBA diving, and taking our chocolate Labrador for a hike. 🐾

Proctor Foundation Clinical Fellows



Todd Driver, MD
Cornea
MD: UCSF
Internship: UCLA
Residency:UCLA
Birthplace: Denver



Michele Lee, MD
Cornea
MD: Columbia University
Internship: Mount Sinai West
Residency: Stanford University
Birthplace: Los Angeles



Athanasios Marneris, MD
Uveitis
MD: Midwestern University
Internship and Residency: University of Michigan Health
Birthplace: Chicago



Plern Sutra
International Uveitis Fellow
Medical Degree: Chulalongkorn University
Residency: Khon Kaen University
Position: Retina specialist, Khon Kaen University
Birthplace: Khon Kaen, Thailand



Edmund Tsui, MD
Uveitis
MD: Dartmouth University
Internship: Dartmouth College, General Surgery
Residency: New York University
Birthplace: Toronto



Dr. Julius Oatts

joins the Department of Ophthalmology as a pediatric and strabismus specialist.

Master’s Degree: Yale University (Health Science)
MD: Yale University
Internship: Yale-New Haven Hospital
Fellowship: Boston Children’s Hospital, Harvard University (Pediatric Ophthalmology and Strabismus)

- Q** What was a highlight of your fellowship year in Boston?

A My mentors are highly regarded in the field and taught me not only pediatric ophthalmology but about mentorship itself, which will guide my own teaching. It was also interesting to work in such a large department, especially because the UCSF pediatric ophthalmology service is growing. It’s one of the department’s largest subspecialties.

Q Why did you choose pediatric ophthalmology?

A I’m really drawn to the “primary provider” model where I get to know patients and their families, sometimes over many years. I enjoy caring for the full range of their vision needs.

Q Do you plan further training?

A Together with Dr. Ying Han, I am developing the pediatric glaucoma service at UCSF. To gain a different view, I’ll also train with a leading specialist at Moorfields Eye Hospital in London.
- Q** What opportunities for research do you see?

A Many! I’m happy to be joining the NIH-funded Pediatric Eye Disease Investigator Group, which develops evidence-based best practices. For childhood glaucoma, Dr. Han and I are identifying areas for future investigation.

Q Having been a UCSF resident, what’s it like to return?

A I’m excited to be part of a growing and top-ranked ophthalmology department, where there’s good research and an emphasis on evidence-based medicine. I can hit the ground running because I’m familiar with this culture and system. At the same time, it feels good to bring perspectives from elsewhere that may benefit UCSF patients.

Q Outside of medicine, what are your interests?

A Not many people know I was a theater minor in college. I enjoy seeing shows, exploring the Bay Area outdoors, and staying active. 

Department of Ophthalmology Clinical Fellows



Greg Bever, MD
Ocular Oncology
MD: Boston University
Residency: UCSF
Birthplace: Bay City, MI



Thomas Copperman, MD
Oculoplastics
MD: Wright State University
Residency: Boston University
Birthplace: Cleveland, OH



Crystal Le, MD
Glaucoma
MD: Tulane University
Internship and Residency: Tulane University
Birthplace: New Orleans



Salman Rahman, MD
Ocular Oncology
MD: Baylor University
Internship: University of Texas Medical Branch, Galveston
Birthplace: Augusta, GA

UCSF Vision Sciences Faculty

Stephen D. McLeod, MD

Distinguished Professor and Chair,
Department of Ophthalmology

Thomas M. Lietman, MD

Distinguished Professor and
Director, Francis I. Proctor Foundation
for Research in Ophthalmology

Richard L. Abbott, MD

Cornea and External Disease

Nisha R. Acharya, MD, MS

Uveitis

Armin R. Afshar, MD, MBA

Ocular Oncology

Robert B. Bhisitkul, MD, PhD

Vitreoretinal Surgery

Michele M. Bloomer, MD

Pathology

Matilda F. Chan, MD, PhD

Cornea and External Disease

Bruce Conklin, MD

Genetic Disease, Genome Engineering

David R. Copenhagen, PhD

Neurobiology of Retina and Eye
Development

**Emmett T. Cunningham Jr., MD,
PhD, MPH**

Uveitis

**Alejandra de Alba Campomanes,
MD, MPH**

Pediatric Ophthalmology and Adult
Strabismus

Eugene de Juan Jr., MD

Vitreoretinal Surgery

Thuy Doan, MD, PhD

Uveitis

Xin Duan, PhD

Developmental Neurobiology

Jacque L. Duncan, MD

Medical Retina, Electrophysiology,
and Imaging

Felice A. Dunn, PhD

Retinal Physiology

John A. Gonzales, MD

Uveitis and Medical Cornea

Douglas B. Gould, PhD

Director of Research

Ari J. Green, MD

Neuro-ophthalmology

Ying Han, MD, PhD

Glaucoma

Jonathan C. Horton, MD, PhD

Neuro-ophthalmology
and Pediatric Ophthalmology

Joey Yen-Cheng Hsia, MD

Glaucoma

David G. Hwang, MD, FACS

Cornea, External Disease,
and Refractive Surgery

Jeanette Hyer, PhD

Eye Development and Anterior Segment

Maanasa Indaram, MD

Pediatric Ophthalmology and Adult
Strabismus

Jeremy D. Keenan, MD, MPH

Cornea and External Disease

Robert C. Kersten, MD, FACS

Oculoplastic, Reconstructive,
and Orbital Surgery

Aparna Lakkaraju, PhD

Cellular Biology

Deepak Lamba, MD, PhD

Neurobiology and Bio-engineering

Thomas M. Lietman, MD

Cornea, External Disease, and Epidemiology

Stephen D. McLeod, MD

Cornea, External Disease,
and Refractive Surgery

Anthony T. Moore, MD, FMedSci

Pediatric Ophthalmology and Adult
Strabismus

Maxence Nachury, PhD

Molecular Biology

Saidas Nair, PhD

Glaucoma and Myopia

Ayman Naseri, MD

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Thomas John Bird served on That Man May See’s board for nearly a decade.

Tom Bird, his wife Janice, and sons Tom and Chris joined in making generous gifts to support excellence at UCSF Ophthalmology. The family had a special fondness for Creig Hoyt, MD, supporting his work and helping to establish an endowed chair in his honor.

Born in Ontario in 1953, Tom found professional success throughout his career. He came to San Francisco to work with Bank of America as it rolled out its first ATM network. Later he developed his own software company, Innovative Design Inc., which maximized the efficiency of mainframe computers at Fortune 500 companies. 🐼

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Visionary Award, Glaucoma Research Foundation
Robert Stamper, MD



Honorary Life Fellowship and Medal, British and Ireland Pediatric Ophthalmology and Strabismus Association
Anthony Moore, MD, FMedSci
Dr. Moore is only the second ophthalmologist ever to receive this honor.



Trailblazer Award in Neuroscience, UCSF Weill Institutes for Neuroscience
Felice Dunn, PhD,
and **Xin Duan, PhD**
This team is building precise genetic and large-scale imaging tools to understand the diversity of neuron types in the visual system. Their work

has the potential to anchor new treatment strategies for ocular and neurological diseases.



Stein Innovator Award, Research to Prevent Blindness
Maxence Nachury, PhD
Dr. Nachury's team is investigating a precision-medicine strategy to treat

Bardet-Biedl syndrome. This may represent a novel pathway for pharmacological intervention in a variety of retinal diseases.

Selected Publications

Department of Ophthalmology

Rubenstein JL, Geng H, Fraser EJ, Formaker P, Chen L, Sharma J, Killea P, Choi K, Ventura J, Kurhanewicz J, Lowell C, Hwang J, Treseler P, Sneed PK, Li J, Wang X, Chen N, Gangoiti J, Munster PN, **Damato B.** "Phase 1 investigation of lenalidomide/rituximab plus outcomes of lenalidomide maintenance in relapsed CNS lymphoma." *Blood Advances*. 2018 July 10.

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Law MX, **Hoyt CS, Horton JC.** "Recurrent superior oblique myokymia treated by distal tendon extirpation." *Journal of Neuro-ophthalmology*. 2018 Oct 04.



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Proctor Foundation

Seitzman GD, Thulasi P, Hinterwirth A, Chen C, Shantha J, **Doan T**. "Capnocytophaga keratitis: Clinical presentation and use of metagenomic deep sequencing for diagnosis." *Cornea*. 2018 Oct 19.



Keenan JD, Tadesse Z, Gebresillasie S, Shiferaw A, Zerihun M, Emerson PM, Callahan K, Cotter SY, Stoller NE, **Porco TC**, **Oldenburg CE**, **Lietman TM**. "Mass azithromycin distribution for hyperendemic

trachoma following a cluster-randomized trial: A continuation study of randomly reassigned subclusters (TANA II). *PLoS Med*. 2018 Aug 14.

Deiner MS, **McLeod SD**, Chodosh J, **Oldenburg CE**, Fathy CA, **Lietman TM**, **Porco TC**. "Clinical age-specific seasonal conjunctivitis patterns and their online detection in Twitter, blog, forum, and comment social media posts." *Investigative Ophthalmology & Visual Science*. 2018 Feb 1.



Gonzales JA, Chou A, **Rose-Nussbaumer JR**, Bunya VY, Criswell LA, Shiboski CH, **Lietman TM**. "How are ocular signs and symptoms of dry eye associated with depression in women with and without Sjögren Syndrome?" *American Journal of Ophthalmology*. 2018 Jul.

Doan T, Hinterwirth A, Arzika AM, Cotter SY, Ray KJ, O'Brien KS, Zhong L, Chow ED, Zhou Z, Cummings SL, Fry D, **Oldenburg CE**, Worden L, **Porco TC**, **Keenan JD**, **Lietman TM**. "Mass azithromycin distribution and community microbiome: A cluster-randomized trial." *Open Forum Infectious Diseases*. 2018 Jul 24.



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Birthplace: Los Angeles
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With gratitude,

A handwritten signature in black ink, appearing to read "John de Benedetti". The signature is stylized and fluid, with the first name being the most prominent.

John de Benedetti
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John P. "Jack" Whitcher,
MD, MPH
Andrew Yau
Alejandro A. Zaffaroni, MD

Past Chairs

Amy S. Millman
John P. Rohal
Daniel Benatar
Marilyn M. Pratt
Stephen S. Smith
Peter H. Mattson
Angus L. MacLean Jr.
Dexter C. "Ted" Tight
Richard J. Olsen
Brook H. Byers
Stacy R. Mettier Jr., MD
James P. Livingston
William H. Green

Past Presidents

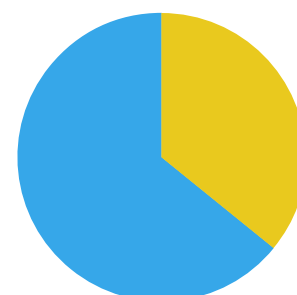
Walter S. Newman
Stacy R. Mettier Jr., MD
Crowell Beard, MD
Samuel J. Kimura, MD

*Executive Committee
†Deceased during 2017-2018

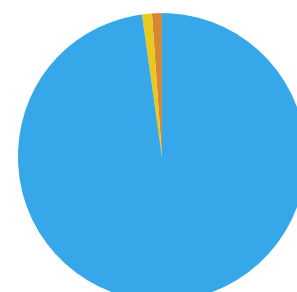
FUNDRAISING REVIEW

That Man May See Generated Funds

SOURCES OF FUNDS	Direct to TMMS	Via Other UCSF Entities*	Total	%
Donations from Individuals, Including bequests and trusts	\$1,497,162	\$17,033,202	\$18,530,364	36%
Donations from Corporations and Foundations	\$2,028,570	\$31,410,000	\$33,438,570	64%
Earnings on Deposited Funds**	\$83,178		\$83,178	0%
TOTAL REVENUE	\$3,608,910	\$48,443,202	\$52,052,112	100%



APPLICATION OF FUNDS	Actual	%
Research, Education, Patient Care, and Community Services	\$51,217,927	98%
Fundraising	\$482,187	1%
Management and Administration	\$351,998	1%
TOTAL EXPENSES	\$52,052,112	100%



*Board of Regents, UCSF Foundation and Contracts & Grants
**Includes fee reimbursements from UCSF