

Koret Vision Institute + Beckman Vision Center + Department of Ophthalmology + Francis I. Proctor Foundation Fall 2017 + Annual Report University of California, San Francisco + That Man May See

## Focal Point



Dear Friends,

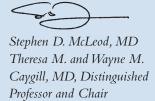
As we unveil the drawings for our new building at Mission Bay, this is indeed an exciting time at UCSF Ophthalmology. Our goal is to transform the paradigms of care for visual disability and blindness. Committed to this cause, vision scientists of the Department of Ophthalmology and the Proctor Foundation will work together under one roof.

The building will be spectacular, but its greatness will be manifested in the accomplishments of its people. This is a group marked by enormous talent, a compulsion for excellence, a passion for discovery, and a zeal for collaboration.

In this issue, we welcome outstanding new residents, fellows, and faculty. Their exceptional minds and bold ideas promise a bright future for vision worldwide.

We thank all of our contributors for gifts large and small to our Future of Vision Campaign. We invite you to read That Man May See's annual report, which expresses our gratitude for your continuing generosity.

Sincerely,





New UCSF Center for Vision Neuroscience. designed by SmithGroupJJR

## Breaking New Ground

## The Future of Vision

his is a tremendous milestone for our patients, our faculty, and the ophthalmology leaders of tomorrow," Stephen D. McLeod, MD, told celebrants at a groundbreaking ceremony for the new UCSF Center for Vision Neuroscience at Mission Bay.

As chair of the Department of Ophthalmology at the University of California, San Francisco (UCSF), Dr. McLeod has worked passionately to make this new home for ophthalmology a reality. "This state-of-the-art building will serve as a platform for major accomplishments in vision research and patient care," he said.

Ground was broken on August 15. "This marks a new era for eye health worldwide," said Thomas M. Lietman, MD, director of the Francis I. Proctor Foundation for Research in

Continued on page 2



## **Basic Science Sparks Breakthroughs**

Reporter Becky Jennings recently interviewed Doug Gould, PhD, newly appointed Director of Research for the Department of Ophthalmology, on how Basic Science sparks breakthroughs in treatment and even cures.

Jennings: Dr. Gould, what is Basic Science?

Gould: Basic Science advances fundamental knowledge about the world. Basic medical science seeks to explain the most elemental biological processes and structures within the body. It is our primary source of novel ideas for overcoming blinding eye diseases.

**Jennings:** You quote the Chinese proverb: "The best time to plant a tree was 20 years ago. The second best time is now." How does this apply to vision research?

Gould: Most biomedical breakthroughs grow out of Basic Science research, the way that trees grow from seeds. For example, we now have drugs to preserve vision in patients with age-related macular degeneration. These drugs were developed out of knowledge established decades earlier by scientists who persisted for years to understand certain factors regulating

Continued on page 2

## A PEEK INSIDE:



Better Glaucoma Care



\$1.6 Million for Cornea Solutions

That Man May See Annual Report





Meet New Faculty

# **UCSF** Center for Vision



The new patient-centered building offers an inspired design, balancing a warm and inviting interior with clear navigational flow and technical function. A curbside drop-off area increases patient convenience.

#### The Future of Vision

Continued from page 1

Ophthalmology."We are expanding our programs to eradicate blinding conditions in the most neglected places on the planet."

#### **Breakthrough Solutions for Vision Loss**

UCSF's world-renowned vision care and research enterprise is dedicated to better understanding the eye and the brain. The Center promises to deliver breakthrough solutions for vision loss and blindness, provide highly specialized patient-centered care, and shape the future of ophthalmology through expert training of tomorrow's clinician researchers and basic scientists.

This state-of-the-art building will serve as a platform for major accomplishments in vision research and patient care."

- Dr. Stephen McLeod

Thanks to many generous supporters and the University, a state-of-the-art vision science building is rising at the intersection of Sixteenth and Third Streets, just south of downtown San Francisco. Scheduled to open in the summer of 2019, the Center will enable mission-driven collaboration and growth for both the Department of Ophthalmology and the Proctor Foundation.

The Future of Vision Campaign attracted over \$150 million to That Man May See, UCSF, and the Regents of the University of California for the building, innovative research programs, and endowments. Yet there is more to be done. The Community Campaign reaches out now to all potential supporters who share the value of sight for all.

#### **Funding Inspires Hope**

Gifts of all sizes make a difference for the new Center, advanced vision care, and research programs of the top-ranked UCSF vision science faculty. Contributions initiate novel avenues of inquiry and anchor large-scale programs, making a broad and deep impact on human lives.

For those who understand the impact of vision loss, this is a unique opportunity to make a mark and be a part of something tangible and of lasting value. Supporting the Future of Vision Campaign inspires hope that, one day, all may see.

To discuss special naming opportunities within the campaign, contact Kathleen Rydar at That Man May See (415.476.5411 or kathleen.rydar@ucsf.edu).

## Basic Science Sparks Breakthroughs Continued from page 1

blood vessel growth. In the early stages, no one could predict or recognize the eventual application.

**Jennings:** What Basic Science findings stand out today?

**Gould:** A new form of gene editing known as CRISPR promises to revolutionize modern medicine. Few would have predicted that scientists seeking a novel way to understand the arsenal used by bacteria to battle viruses would unleash a revolution, but this is exactly what we are witnessing.

**Jennings:** How will CRISPR-based gene editing change medicine?

Gould: Imagine having your DNA altered to prevent or halt disease. We expect CRISPR technology to lead to "genome surgery" and other novel therapies for disorders throughout the body. That's because the CRISPR toolkit lets geneticists precisely alter genetic codes quickly and cheaply. This is a powerful example of the enormous and often unexpected impact of Basic Science.

**Jennings:** How is ophthalmology harnessing the CRISPR revolution?

**Gould:** Vision scientists are on the front lines, with early application of the new CRISPR tools to treat inherited eye disease and prevent blindness. Drs.



Dr. Doug Gould

Tony Moore, Jacque Duncan, and Bruce Conklin are working to develop a CRISPR-based approach to therapy for Best disease, a form of childhood-onset macular degeneration. These are the first steps in developing a strong ocular gene surgery program at UCSF.

**Jennings:** How do funders help Basic Science thrive in the Department of Ophthalmology?

**Gould:** Private support is so important, and friends of That Man May See help our teams advance a wide range of initiatives and programs. Striking out in new directions and weathering financial stresses will allow our researchers to deliver tomorrow's vision science breakthroughs. •



# Neuroscience at Mission Bay

## Future of Vision Campaign Priorities

- **Enrich the Patient Experience** 
  - Bring UCSF Ophthalmology clinics under one roof, with state-of-the-art diagnostic and therapeutic tools, to better care for patients with complex vision needs.
- Advance Research toward Cures

Support breakthrough research and pioneering discovery to save and restore sight, finding patient solutions for the Bay Area and around the world.

Shape the Future of Ophthalmology

Provide excellent training for the finest residents, fellows, and medical students to become tomorrow's leaders in vision research and care. Attract and retain the best vision science faculty in the country.

**Empower the Vision and Mission** 

Imagine a world in which all may see by investing in vision for the near-term and long-range future. Establish endowments to honor grateful patients, physicians, and friends while providing long-term financial stability for vital programs and services.

## Lead Donors Honored in New Building

**UCSF Center for Vision Neuroscience at Mission Bay** 

**Koret Vision Clinic** 

Theresa M. Caygill and Wayne M. Caygill, MD, Atrium

William G. and Ruth R. Hoffman Auditorium

Fortisure Foundation Glaucoma Research Center

Bernie Newcomb and Gerry Marshall Center for Innovative Eye Surgery

Richard Baruch, MD, Surgical Didactics Center

Thomas R. Mazzocco, MD, Microsurgery Laboratory

Harry William Hind Library

Ralph and Sophie Heintz Laboratory

Pearl and Samuel Kimura Ocular Immunology Laboratory

## Better Solutions for Glaucoma



## PROBLEM

Glaucoma surgeries
relieve fluid buildup in the eye,
but natural scarring at
the surgical site
eventually blocks
drainage.

## **PROMISE**

New tactics to reduce scarring aim to extend the sight-saving impact of glaucoma surgery.

Dr. Han with patient Barbara Smeltzer

'm grateful for all Dr. Han does
to preserve my sight," says Barbara
Smeltzer, a patient who recently
underwent surgery to reduce abnormal
pressure in her eyes. This keeps optic
nerve cells from dying. Barbara is one of
an estimated eight million people living
with glaucoma, making it the world's
leading cause of irreversible blindness.
Most glaucoma patients eventually
require surgery to preserve their sight.

Saving patients from sight loss is my passion."

– Dr. Ying Han

"Saving patients from sight loss is my passion," says glaucoma specialist **Ying Han, MD, PhD.** Dr. Han aims to diminish scarring caused by glaucoma procedures, which limits their effectiveness. Two recent awards have advanced Dr. Han's investigations to help glaucoma patients at UCSF and around the world.

## **Awards Hasten Novel Approaches**

Dr. Han and a collaborating biomaterials technologist, Chang Xie, PhD (University of Texas, Austin), received a UCSF Catalyst Award to apply a novel nanomesh material to glaucoma surgery. With product development coaching and funds, they established that micro-channels in the nanomesh circumvent scarring on the eye's surface.

"Now Dr. Xie and I are designing a way to integrate the mesh with the drainage tube we insert during surgery," says Dr. Han.

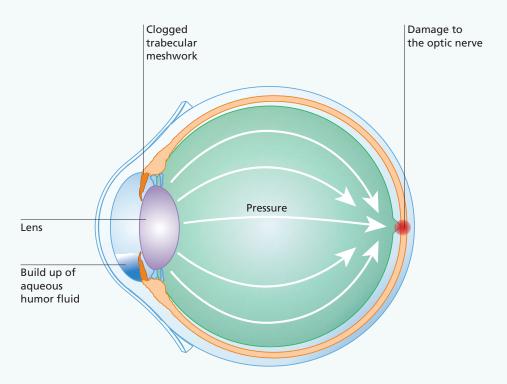
Dr. Han also attracted an award from New World Medical, maker of the Ahmed glaucoma valve. Building on the work of her renowned mentor, **Jorge Alvarado, MD,** Dr. Han hypothesized that using anti-scarring drugs after implanting the valve could better sustain new fluid drainage.

This promising strategy has progressed to a multi-site, double-blind clinical trial. Her preliminary results show that an intensified drug regimen results in healthier intraocular pressure, reduced need for medication, and retained vision, without dramatic complications.

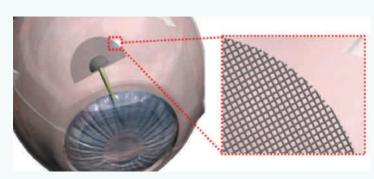
## **Passion for Her Patients**

"Scarring is a major obstacle to maintaining healthy eye pressure for postsurgical patients," says Dr. Han. "The urgent need to improve our treatments motivates me every day."

In addition to UCSF and New World Medical, Dr. Han's investigations are supported by Research to Prevent Blindness, the National Institutes of Health, and Massy Safai, MD.



For most patients with open-angle glaucoma, clogged drainage channels cause fluid buildup and abnormal intraocular pressure, which damages the optic nerve. In glaucoma surgery, a tiny drainage tube is implanted in the front of the eye.



Proposed concept of novel glaucoma drainage implant. Dr. Han's collaborator, Dr. Xie, originally developed this microfluidic meshwork for brain probes. Its tiny channels circumvent a strong scarring response at the surgical site.

## Dr. Jay Stewart

# Ultrasound Strategy Wins NIH Grant

ometimes a thick skin is a good thing. The cornea's tough outer "skin" protects the front of the eye. That dense layer, however, resists absorption of prescription drops that could stop infection or disease affecting the inner layers. The National Institutes of Health has granted \$1.6 million to a crossdisciplinary UCSF team to explore a novel solution.

Vitreoretinal specialist Jay Stewart, MD, leads the investigation, working with cornea specialist Ricardo Lamy, MD, PhD, and radiation oncology specialist Chris Diederich, PhD. Together they will determine whether ultrasound can significantly improve the effectiveness of eye drops and reduce patients' need for surgery.

#### **Toward Breakthrough for Patients**

What is at stake? Millions of people contend with corneal conditions that cause blurred or double vision, painful light sensitivity, or blindness. Without effective intervention, these conditions often become permanent. Surgeries are painful and increase risks to patients.

"This major award signals a potential treatment breakthrough for patients with a variety of corneal conditions," says Stephen D. McLeod, MD, ophthalmology department chair.

## PROBLEM

Stubborn corneal conditions are often unresponsive to eye drops, but surgery subjects patients to pain, recovery time, and infection risks. Some require follow-up corneal transplants.

#### The Promise of Ultrasound

The team has already shown that ultrasound opens pores in cell membranes of the cornea's protective outer layer, increasing delivery of riboflavin to the structural layers below.

"With continued success, it's possible that many more patients could overcome corneal disorders with topical treatments and ultrasound, which is comfortable and minimally invasive," says Dr. Stewart.

## **PROMISE**

Ultrasound has the potential to improve penetration of topical treatments to all layers of the cornea, reducing the need for invasive procedures.

The team plans to determine the optimal ultrasound treatment parameters for topical medications used for keratoconus and other diseases of corneal weakening, fungal corneal ulcers, and bacterial corneal conditions.

"For each condition and medication, we are looking for the sweet spot where the 'dosage' of ultrasound increases porosity and uptake of medication without cell disruption or scarring," explains Dr. Stewart.

#### **Great Tools Speed Results**

Using a state-of-the-art confocal microscope and fluorescent versions of the therapeutic agents, the scientists can see and measure the presence of medication in different corneal layers.

"Confocal microscopy is essential to our work, allowing us to measure drug penetration before the fluorescence fades away," explains Dr. Stewart.

This fast and sophisticated tool speeds the process of determining optimal treatment regimes. The scientists will test them first in laboratory models and, with successful results, in clinical trials for patient care.

#### **Building on Success**

Accessible at the front of the eye, the cornea is a relatively easy place to establish results for this novel treatment approach. But the team won't stop there. "We will build on what we learn about ultrasound and the cornea to pursue solutions for vitreoretinal patients as well," says Dr. Stewart. •

We will build on what we learn about ultrasound and the cornea to pursue solutions for vitreoretinal patients as well."

- Dr. Jay Stewart

Dr. Jay Stewart, flanked by Dr. Ricardo Lamy



# Still Playing Basketball

hen he was six years old, blurred vision and pain triggered Kian Simpson's first visit to the Proctor Foundation. It was the start of a long relationship. "Dr. Wong [Ira Wong, MD, MS] told me to pretend my exam chair had motorcycle handlebars instead of armrests," remembers the 20-year old. "That helped me a lot."

"Thanks to the amazing treatment I received, my uveitis diagnosis has hardly been an issue for me. I still get to do the things I love, like playing basketball," says Kian. With regular monitoring and treatment adjustments over the years, Kian has retained nearly 20/20 vision. "I can still knock down my free throws when it counts," adds Kian with a smile.

#### **Caring Partnership**

When Kian recently moved to attend Harvard University, UCSF uveitis specialist **Nisha Acharya**, **MD**, **MS**, who has treated Kian for the past decade, connected him with excellent care in Boston. Uveitis describes a range of inflammatory disorders that can affect the front or the back of the eye.

I can still knock down my free throws when it counts."

– Kian Simpson Although uveitis can lead to blindness, outcomes are improving with optimal treatment, including new biologic therapies.

"We are so thankful to the Proctor Foundation for helping preserve Kian's sight," says Kian's mother Pamela Chan. "It has been a true partnership in care." •



# That Man May See News

## **New Board Chair**

The board of That Man May See is pleased to name long-time director **John de Benedetti** as its new chair. John has served on the board continuously since 1998, and he is excited to take the lead during the Future of Vision Campaign. (See John's letter on facing page.)

John has dedicated his life to helping others overcome the burdens of blindness. John lost his own vision to Stevens-Johnson Syndrome at the age of 11. John's wife Nina Srejovic, daughters Natalie and Grace, and members of his extended family all play roles in the foundation.

President and chief executive officer of the California Center for Sleep Disorders, John holds a master's degree in business from The Kellogg School of Management at Northwestern University and a bachelor's degree in human biology from Stanford University.



## **Welcome New Directors**



Community leader
Françoise (Frannie)
Fleishhacker has been engaged with That Man
May See for more than three decades. She rejoins the board following two previous appointments as finance chair. Frannie

and her late husband Mortimer (Mort) have long supported the foundation. Frannie also serves on the board of trustees of the American Conservatory Theater. She graduated from Stanford University.



Lily Huang supports the uveitis research of John Gonzales, MD, and Thuy Doan, MD, PhD, through the Huang Pacific Foundation established by her family. She is also interested in international medical research to benefit the people of China, Japan, and her native country of Taiwan. A graduate of Northeastern University, Lily previously served as a board director for a Bay Area school. Her husband Robert recently joined the board of the Asian Art Museum.



An international research trip with **Thomas Lietman**, **MD**, and **Stephen McLeod**, **MD**, led **Charles "Chuck" Leiter**, **PharmD**, to join the board. The
Leiter family, including
Chuck's wife Sue, has

long championed the efforts of the Francis I. Proctor Foundation. Recognized as one of the world's leading ophthalmic pharmacists, Chuck has consulted with major teaching hospitals and institutes. Chuck holds a Doctor of Pharmacy degree from the University of Southern California.



An avid Bay swimmer and triathlete, **Bob Savoie**, CPA, is a partner and chief operating officer of Pinnacle Ventures. He has been a chief financial officer for a number of private equity funds

and a tax advisor to fund clients. His areas of interest for That Man May See are finance and the Alcatraz Swim for Sight. Bob holds a degree in Business Administration from the University of Michigan and lives in Hillsborough with his wife Candace. Their daughter Marissa is a medical student at UCSF. •

## A N N U A L R E P O R T



## Dear Friends of That Man May See,

How exciting it was to break ground for our new building! It is a special honor to lead That Man May See's Board of Directors during this exciting time. With this annual report, we share with you our gratitude for an enormous achievement of our foundation. A landmark building has required a landmark campaign to enable a new home for ophthalmology at UCSF Mission Bay.

Our report provides good news about the impact of your contributions to save and restore sight. From my own personal experience, I have come to realize how determined our specialists are to help those of us with sight challenges. We all want to see the faces of our children, watch pelicans fly low over the Bay, and catch the sunset behind the Golden Gate Bridge.

With your support, we can imagine a future in which all may see. In this report, we celebrate a campaign whose donors have contributed over \$150 million for this mission.

We still cherish That Man May See's dedication to careful management of funds entrusted to us – for over 45 years. Keeping overhead low and supporting one of the finest faculties in the country is our highest priority.

Thank you for being a part of this bright future.

With gratitude,



John de Benedetti Chair, Board of Directors That Man May See

## Impact of Your Donations

## Halting Blinding Infection and Inflammation



The Proctor Foundation identifies, formulates, and tests potential solutions to save sight and lives worldwide. For example, **Thuy Doan, MD, PhD,** uses genetic sequencing to "sift through" the tiniest organisms on the ocular surface. She pinpoints previously

unknown causes of ocular inflammations and infection, providing novel targets for treatment. Her research is supported by the Huang Pacific Foundation. Other current supporters of the Proctor Foundation include Peierls Foundation; Laurence Spitters; Ivan, Maris, and Harry Meyerson; and Marilyn and Jack Whitcher.

## **Confocal Microscopy Opens Doors** of Discovery

Don and Judy McCubbin and Chuck Robel provided anchor funding for this powerful new piece of equipment that is accelerating vision research and opening new paths of inquiry. To learn more about how this technology makes a difference, see "Dr. Jay Stewart: Ultrasound Strategy Wins NIH Grant" (page 5) and "New Faculty: Dr. Xin Duan" (page 11).

## **Helping Babies and Children**



The Kimball Foundation supported the purchase of a widefield imaging system from OPTOS. "This imaging system eases the burden of examination on infants and children with retinal disorders," says pediatric ophthalmologist **Tony Moore, MD.** Quickly and

without anesthesia, the equipment allows ophthalmologists to acquire very detailed pictures of greater portions of the retina. The result – little ones who are happier, safer, and receiving the best possible care. "This tool is invaluable for finding, monitoring, and treating retinal disorders that threaten young sight," adds Dr. Moore.

## **New Lectureships Launched**

Lectures by accomplished vision scientists help educate the next generation of specialists. The Leiter Lectureship was established by gifts from Mort and Marilyn Leiter and Chuck and Sue Leiter. The first Leiter Lecture will be presented by **Todd Margolis, MD, PhD,** one of the country's most innovative and influential cornea specialists, who spent much of his career at UCSF and the Proctor Foundation.

UCSF uveitis pioneer **Robert Nozik, MD**, has been honored with a new lectureship, established by **Emmett Cunningham Jr., MD, MPH, PhD.** Dr. Cunningham, who trained with Dr. Nozik at the Proctor Foundation, has become a prominent ophthalmologist in his own right. As such, he gave the first annual Robert A. Nozik, MD, Lecture in July.

## **High-Stakes Early Research**

In 2016–2017, sponsors of the Alcatraz Swim for Sight contributed more than \$200,000 for vital vision research. With this support, That Man May See seed-funded seven high-stakes projects. The following examples show how novel avenues aim to advance care for sight-related disorders.

## **Targeting Genetic Defects That Harm the Cornea**



Matilda Chan, MD, PhD, leads a project to help patients with Fuchs endothelial corneal dystrophy. Corneal transplants are currently the only definitive treatment for this inherited disorder, which causes progressive swelling of the cornea and vision loss in both eyes.

The researcher collaborates with other UCSF corneal specialists and a UCSF lab with extensive experience and advanced techniques for identifying small molecules aimed at correcting the genetic mutation that causes the disorder. Promising findings will support a bid for federal research funds.

## **Preventing River Blindness**



Catherine Oldenburg, PhD, is coordinating a randomized controlled trial in Liberia aimed at preventing river blindness, the world's second most common infectious cause of sight loss. The trial will test whether the antibiotic Azithromycin causes infertility in

the parasite believed to cause corneal damage. Positive results will pave the way for the Proctor Foundation to mount a large-scale trial to determine more definitively whether the novel therapy offers more effective and longer-lasting protection.

## **Helping Patients with Nerve Diseases**



The retina can provide a non-invasive window into neurological health. **Ari Green, MD**'s team has developed an extremely sensitive retinal imaging and eye-tracking system to improve care for patients with neurodegenerative disorders such as multiple sclerosis, Parkinson's,

and Alzheimer's diseases. The Tracking Scanning Laser Ophthalmoscope records the smallest of fixational eye movements. The capacity to track changes in these micromovements will make possible invaluable contributions to early detection and longitudinal monitoring. Seed funds allowed the team to optimize its system and combine it with other high-resolution imaging capabilities.

Gifts at every level support these achievements.

# In Gratitude for Generous Gifts

Thank you for generous gifts and new pledges for the UCSF Department of Ophthalmology and the Francis I. Proctor Foundation made during the past fiscal year, July 1, 2016, to June 30, 2017. Gifts at every level make a difference.

Founder's Circle (\$8,000,000+)

Koret Foundation

Legacy Leaders (\$5,000,000+)

Estate of Theresa M. Caygill

Visionary Leaders (\$2,000,000+)

Ruth R. Hoffman

Bernie Newcomb and Gerry Marshall

Distinguished Contributors (\$1,000,000+)

Thomas and Johanna Baruch

Benefactors (\$500,000+)

Claire Giannini Fund Research to Prevent Blindness Simons Foundation

Honored Patrons (\$250,000+)

Larry L. Hillblom Foundation, Inc. Bernard and Barbro Osher

Estate of Ronald P. Winiker

Visionaries (\$100,000+)

Mary and Phil Anderson

Dr. and Mrs. Eugene de Juan Jr.

The Herbst Foundation, Inc. The Kimball Foundation

Don and Judy McCubbin

Amy S. Millman and Paul M. Kochis

Lisle and Roslyn Payne

The Peierls Foundation, Inc. Joan and David Traitel

Entrepreneurs (\$50,000+)

Dennis and Niki Allison Estate of Alfred Hom

Dr. Thomas and Mrs. Yvonne Mazzocco

Chuck Robel

Venetta and John Rohal Sandler Foundation

The David and Elva Sinai Foundation, Inc.

Investors (\$25,000+)

Anonymous Daniel Benatar

Chizen Family Foundation

Jeanne Copeland

Estate of Denise B. Evans

Kathlyn McPherson Masneri and Arno P. Masneri Fund

Norby Anderson

Lynn M. Pasternak

Kathleen L. Rydar Robert and Gail Smelick

Estate of Theodore T. Zuck

Director's Council (\$10,000+) Anonymous (3)

Gerson P. Bakar and Barbara Bass Bakar

Alice K. Cook

**DEPARTMENT OF OPHTHALMOLOGY** 

Providing sustained support for research and clinical faculty

Hal Dawson and Mary McVey The Friend Family Foundation

**Professorships and Chairs** 

in Ophthalmology\*

John Hall and Rebecca Derrington Estate of Frederick J. Hornbacher

Kawaja Family

Charles W. Leiter, PharmD, and Susan L. Leiter

Mrs. James P. Livingston

Kathleen McCormick

Stephen D. McLeod, MD, and Marion Faymonville

Joe and Margaret Melcher

Maris and Ivan Meverson

New World Medical, Inc.

Francis S. North Foundation

Richard and Candace Olsen

Robert and Karen Rishwain

Jeanne and Sanford Robertson

Arthur and Toni Rembe Rock

The Schreck Family

Stephen and Paula Smith

Sue and Laurence Spitters

Luminaries (\$5,000+)

Estate of Lillian V. Balzarini The Bellini Foundation

Timothy G. Berger, MD, and Jessica E. O'Dwyer

Becky Christian and Peter Solvik Patrick and Ginger Connolly

Paula Dawson

John F. de Benedetti and Nina K. Srejovic

Jerome and Catherine Debs

Luke B. Evnin, PhD, and Deann Wright

Gloria and Saul Feldman

K. Bruce Friedman

Leslye and Rob Goldberg Matt and Melinda Guelfi

Christie and John Hastings

The Heritage Trust Foundation

Jim and Joan Kirsner

Angus and Virginia MacLean Alastair and Celine Mactaggart

William and Mary Ann S. Margaretten

Phyllis Moldaw

Marlene Spitz Cancer Research Fund

John and Peggy Stock W. Scott Thomas

Daniel J. Ullyot, MD

Marilyn and Jack Whitcher

Bruce U. Wintroub, MD, and Marya Wintroub

Dream Makers (\$2,500+)

Anonymous

Linda L. Aldrich Apple

Joan E. Avenali

Estate of Marion M. Carrington

David F. Chang, MD, and Victoria A. Chang

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

Sandra and Conrad Donner Karen and Elias Eliadis

The Enersen Foundation

Tom and Gunilla Follett

Mary Ellen and Michael E. Fox Family Foundation

Paul and Béatrice Gomory

Hiscox

James R. Hollander Donald R. and Judy Krohn

Thomas M. Lietman, MD, and Chihori W. Lietman, MD

Lydia A. Lukian, MD

Donna L. and Edward E. Martins Foundation Inc.

Ed and Marcia Pollack

PSN Family Charitable Trust

Daniel Robichaud

Robert and Isabel Schuchardt

Shustek Dubinsky Family Philanthropic Fund Bob and Naomi Stamper

William and Hannah Sweet

Mrs. Camele Wanat

Ulla Christina West, MD, and William B. Conerly

Eric Zankman and Pamela Kaufmann

#### Innovators (\$1,000+)

Anonymous (9)

Richard L. and Cecilia Abbott

Lillian Albertsen Fund

Chris Albinson

Paul and Betty Baldacci Family Foundation Joelle L. Benioff

Becky and Jeff Bleich

H. Michael Braude Dr. and Mrs. William Breall

C. Preston Butcher and Carolyn Butcher

Maria Carson Breber Dr. and Mrs. J. Brooks Crawford

Bruce and Suzanne Crocker

The Dauber Foundation Rosalind Gray Davis and Robert M. Davis

David Deehl

Sue and John Diekman

John and Marilyn Dougery Scott Faber

John and Kathy Fernbacher John Fisher

Allan J. Flach, MD, PharmD, and Teri Flach

Jeff Fluhr

John and Barbara Glynn Google.org

Lorrie and Richard Greene

Rod and Carole Hartless

W. Kurt and Julianne Hauser

John F. and Frances T. Henshaw

Leni and Doug Herst Dr. and Mrs. Dean R. Hirabayashi

Jonathan C. Horton, MD, PhD

Huntington Farms

David K. Ingalls

Drs. Alex and Chauncy Irvine Margaret A. Jacobsen

Jack S. and Irene B. Kaus Arnold Kawano and Sandra Lee

Dr. Man Kim and Mrs. Grace Kim

Ernest M. Kotlier, MD Dr. and Mrs. Shiu Y. Kwok

Stephanie LeGras

Local Independent Charities

Diane M. Luders

Zoya A. Lukian

Bill and Leigh Matthes Joan and Roger McGee

Farideh L. B. Mehran

Todd and Stacey and Joe Melcher

Dr. and Mrs. Stacy R. Mettier Jr.

James and Janet Mitchell

Anthony and Lary Lynn Muller Fund of the Community Foundation for Monterey County

Tim Miiller

Scott W. Newman and Mary de Benedetti Newman

Owen and E. Toki Oakley

John Dagres and Jack Odell Rosanne and Michael Ogles

Richard and Susan Olness Jack and Sherry Overall

J. Michael Patterson Mauree Iane and Mark W. Perry in honor of

Marva Wintroub Barry Petersen Frederick M. Pistilli

Linda and Ed Plant Gerald Quinnell Noah Rabinsky

Tom Reilly Leesa Romo

Barbara H. Rosston at Silicon Valley Community Foundation

Joel S. Saldinger, MD, and Sylvia Saldinger

Darren Schroeder Daniel M. Schwartz, MD

Michael and Susan Schwartz Edward C. Shotwell III 1996 Charitable Annuity

James Hart Smith, PhD, and Mary Pfeiffer Smith

Mary Ann Milias St. Peter Richard Starmann

Judith Good Stearns R. B. and Jean C. Switzer

Scott and Jenny Sykes

Lead Trust

Jack Taylor

Theta Delta Xi Ted and Betty Tight

Ann and Marshall Turner

Sean Van der Linden Alan Vidinsky and Joanne Vidinsky Kevin Waldman

Alexander S. Walker

Joseph Wall Jr. Diane Wilsey

Charles B. Wilson, MD, and Frances S. Petrocelli

Carey and Noah Wintroub Ira G. Wong, MD, MS, and Eleanor W. Wong

William W. and Margaret C. Wu Peggy and Lee Zeigler

Andrew Zwick

The Dawn Society Endowment **ENDOWMENTS** de Benedetti Family Fund for Vision Research

> Heleanor Campbell Foerster Ophthalmic Pathology Endowment\* Francis Goldsmith Fund for Eye Disease\*

William Randolph Hearst Endowment in Pediatric Ophthalmology Samuel J. Kimura, MD, Endowment Fund

Denise B. Evans Research Fund in Ophthalmology

Martinelli Otstott Endowed Fund for Vision Research\* Nina Pera Fund for Research in Ophthalmology\*

Marilyn Moore Pratt Fund for Vision Research Robert H. Sanborn Research Fund\* Shastid Fund for Retinal Degenerative Disease

Sinai Family Endowment for Pediatric Ophthalmology\*

Jane and Marshall Steel Jr. Endowment Fund for Vision Research

Dexter C. Tight Macular Degeneration Endowed Research Fund **Education Funds** 

Providing permanent funding for academic lectures

George and Rosalie Hearst Fellowship in Ophthalmology\* Steven G. Kramer, MD, PhD, Endowed Fund

Transamerica Visiting Professorship in Vision Science

Amy S. McNamara Endowed Fund\* Francis I. Proctor Lecture Fund\*

**General Funds** Applied where the need is greatest

Frances W. and Levon K. Garron Endowment

Michael J. Hogan, MD, Endowment Fund Charles Taylor Reeve Endowed Fund\* Agnes M. Welsh Eye Fund\*

#### FRANCIS I. PROCTOR FOUNDATION FOR RESEARCH IN OPHTHALMOLOGY

Providing sustained support for research, education, and patient care

**Professorships and Chair** Elizabeth C. Proctor Distinguished Professorship\* Ruth Lee and Phillips Thygeson Distinguished Professorship\* H. Bruce Ostler Endowed Chair in Ocular Epidemiology\*

Ralph Graciano Fund for Research in Ophthalmology\*

The Harper-Inglis Memorial Fund for Eye Research\* Ralph M. and Sophie K. Heintz Laboratory and Lecture Fund\* Harry William Hind Library Fund\*

Pearl and Samuel Kimura Ocular Immunology Laboratory Fund\* Elizabeth C. Proctor Fellowship Fund\* Francis I. Proctor Endowment for Research in Ophthalmology\* Cecilia Vaughan Memorial Fellowship Fund and Heintz

Thomas E. Moore Jr., MD, Lectureship on Corneal Disease

NAMED FUNDS

Endowment Fund★

Joel Glaser, MD, Fund for Visual Neuroscience Leiter Lectureship

Robert A. Nozik, MD, Lectureship

\* UC Regents endowments Others are held by the UCSF Foundation.

#### Fortisure Foundation Distinguished Professorship in Ophthalmology\* Jean Kelly Stock Distinguished Professorship Edward and Estelle Alexander Chair for Vision Research Harvey A. Birsner, MD, Endowed Chair in Neuro-ophthalmology\* Thomas W. Boyden Endowed Chair in Ophthalmology Denise B. Evans Endowed Chair in Ophthalmology

Theresa M. and Wayne M. Caygill, MD, Distinguished Professorship

Ophthalmic Pathology Deborah Hoyt and Creig S. Hoyt, MD, Chair in Pediatric Ophthalmology William F. Hoyt Chair in Ophthalmology

Michael J. Hogan, MD, and Andrew Yau Chair in

Alexander Irvine, MD, Endowed Chair Pearl T. and Samuel J. Kimura, MD, Chair Steven G. Kramer, MD, PhD, Endowed Chair in Ophthalmology

Michal Vilensky Endowed Chair for Research in Ophthalmology

Rose B. Williams Chair for Research in Corneal Disease\* **Research Funds** 

Supporting innovative research

Shirley Reich Chair in Ophthalmology

Steven P. Shearing Chair in Ophthalmology

Theresa E. Allen Endowed Research Fund in Ophthalmology Mary Budiselich Glaucoma Research Fund

VISIONS Fall 2017

## Board of Directors, That Man May See, Inc., 2016-2017

#### **Directors and Officers**

John F. de Benedetti\*

Kathleen L. Rydar\* President

Faye A. Mellos★ Secretary

Françoise G. Fleishhacker\* Treasurer and CFO

Thomas R. Baruch Eleanor K. Becker, MD Daniel Benatar\* Edward B. Collins Thomas D. Follett\* Paul L. Gomory Jr.\* Iohn Hall Lorie I. Hirson Ron Hirson Lilv S. Huang Sean A. Johnston Chuck Leiter Thomas M. Lietman, MD Angus L. MacLean Jr.\* Donald J. McCubbin Stephen D. McLeod, MD Ronald B. Melles, MD R. Douglas Norby\* Richard J. Olsen

John P. Rohal\* Robert N. Savoie Albert R. Schreck\* Stephen S. Smith\* Robert L. Stamper, MD John V. Stock Nita Subramanian, MBBS, DOMS David T. Traitel

#### **Directors Emeriti**

Creig S. Hoyt, MD Pearl T. Kimura, in memoriam Thomas R. Mazzocco, MD

#### **Honorary Board**

Emily Huggins Fine, Chair Richard L. Abbott, MD Thomas J. Bird Jackson Busch Brook H. Byers Ann Jones Carlson Roger S. Carlson

J. Brooks Crawford, MD Bruce E. Crocker J. Hallam Dawson Janet L. Dinsmore Ronald Drabkin Margaret R. Duflock Reed Freyermuth Maurice Galante, MD David H. Glotzer William H. Green Larry Haimovitch Ossama R. Hassanein, PhD H. Dunbar Hoskins Jr., MD Paige M. Hutson Thomas F. Kostic Gerry L. Marshall Peter H. Mattson Nan Tucker McEvoy Herbert P. Moore Jr. J. Fraser Muirhead, MD Allen S. Musikantow

Walter S. Newman Rosanne B. Ogles Isabel P. Schuchardt Stephen S. Seiff, MD James B. Swinerton R. M. "Terry" Thomas Dexter C. "Ted" Tight Andrew Yau Alejandro A. Zaffaroni, MD

\*Executive Committee

## **UCSF Vision Sciences Faculty 2017**

David B. Pratt

J. Frederick Riedel, MD

## 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

David R. Copenhagen, PhD Neurobiology of Retina and Eye Development

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

Bertil E. Damato, MD, PhD, FRCOphth

Ocular Oncology

Alejandra de Alba Campomanes, MD, MPH Pediatric Ophthalmology

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,

Genetics of Ocular Development, Glaucoma, and Retinal Degeneration

Jennifer Graves, MD, PhD Neuro-

ophthalmology Ari J. Green, MD

Neuro-ophthalmology

Ying Han, MD, PhD Glaucoma

Jonathan C. Horton, MD, PhD Neuro-ophthalmology and Pediatric Ophthalmology

David G. Hwang, MD, FACS

Cornea, External Disease,

and Refractive Surgery

Jeanette Hyer, PhD

Eye Development and Anterior Segment

Jeremy D. Keenan, MD, MPH Cornea and External Disease

Robert C. Kersten, MD, FACS

Oculoplastic, Reconstructive, and Orbital Surgery

Thomas M. Lietman, MD

Cornea, External Disease, and Epidemiology

Shan C. Lin, MD Glaucoma

Stephen D. McLeod, MD Cornea, External Disease, and Refractive Surgery

Anthony T. Moore, MD, FMedSci

Pediatric Ophthalmology

Saidas Nair, PhD Glaucoma

Ayman Naseri, MD

Cataract, Cornea, and External Disease

Catherine E. Oldenburg, PhD, MPH Epidemiology

Yvonne Ou, MD Glaucoma

Sriranjani Padmanabhan, MD

Glaucoma

Neeti Parikh, MD Comprehensive Ophthalmology

Travis C. Porco, PhD, MPH

Epidemiology

Saras Ramanathan, MD Comprehensive Ophthalmology

Jennifer Rose-Nussbaumer, MD

Cornea and External Disease Daniel M. Schwartz, MD

Vitreoretinal Surgery

Julie Schallhorn, MD, MS Cornea, External Disease,

and Refractive Surgery

Gerami D. Seitzman, MD

Cornea, External Disease, and Refractive Surgery

David W. Sretavan, MD, PhD Neuroscience, Glaucoma, Nanotechnology, and Ophthalmic Devices

Jay M. Stewart, MD Vitreoretinal Surgery

Erik M. Ullian, PhD

Visual System Development and Glaucoma

Reza Vagefi, MD Oculoplastic, Reconstructive, and Orbital Surgery

## **Faculty Emeritus and Recall**

Jorge A. Alvarado, MD Brooks Crawford, MD Allan J. Flach, MD, PharmD Creig S. Hoyt, MD

Robert L. Stamper, MD

**Faculty Emeriti** 

William F. Hoyt, MD Alexander R. Irvine, MD

Jennifer H. LaVail, PhD

Matthew M. LaVail, PhD

James J. O'Donnell, MD

Julie L. Schnapf, PhD

Stuart R. Seiff, MD John A. Stanley, MD

John P. Whitcher, MD, MPH Ira G. Wong, MD, MS

## 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	\$3,057,792	\$2,965,246	\$6,023,038	68%
Donations from Corporations and Foundations	\$972,350	\$1,745,162	\$2,717,512	31%
Earnings on Deposited Funds**	\$77,215		\$77,215	1%
Total Revenue	\$4,107,357	\$4,710,408	\$8,817,765	100%

Application of Funds Actual % Research, Education, Patient Care \$7,983,580 91% and Community Services Fundraising \$482,187

Management and Administration

**Total Expenses** 

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

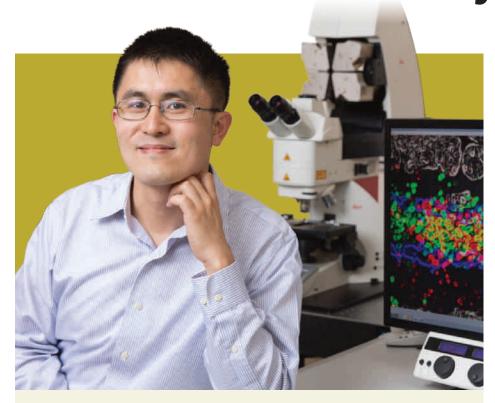
\$351,998

\$8,817,765

4%

100%

# **Welcome New Faculty**



## Dr. Xin Duan

PhD: Johns Hopkins University (Neuroscience)

Fellowship: Harvard University (Neurobiology of the Retina)

Developmental neurobiologist **Xin Duan, PhD,** investigates the molecular and cellular basis of visual circuit wiring during development and rewiring during injury and disease. He holds an appointment in the Department of Ophthalmology and mentors students and fellows in the Neuroscience graduate program.

# Q You investigate how communication between the retina and the brain develops. What is the potential of this pioneering work?

A We are working toward a new generation of more effective, more precise biological treatment to restore retinal crosstalk to the brain. My team is establishing new understanding and novel strategies to restore fine visual features in an experimental laboratory model. We've made progress already, restoring retinal detection of limited visual adaptation, such as distinguishing light from dark in the lab model. Now we are working to restore depth perception, figure/ground separation, motion, direction, and other fine features by reactivating, rewiring, or genetically regenerating specific types of retinal cells.

## Q The National Eye Institute's "Audacious Goal" is to restore vision through regeneration of neurons and neural connections. Why is this significant?

A Retinal degeneration is one of the most devastating and difficult-to-treat vision challenges, often ending in blindness. The NEI has determined that solutions most likely will be rooted in understanding the neurons in the retina and retinal ganglion cells, which is a major focus for us.

# Q How are emerging technologies advancing your work?

A New technologies allow us to better see and manipulate the retinal cells at high precision. CRISPR gene editing, cellular barcoding, optogenetics, and confocal microscopy all accelerate our research. Confocal microscopy lets us image the electrical path from the retina at the back of the eye through the optic nerve into the visual cortex.

# Q How does the Bay Area biomedical research community advance your goals?

A This is THE PLACE to achieve breakthroughs for retinal patients. Many geneticists, stem cell scientists, and bioengineers are in conversation here, across industry and academia, with leading researchers at UCSF Medical Center and beyond. There is also new wealth willing to invest in humanitarian causes – the Chan Zuckerberg Initiative is a great example.

## Q Tell us about your family.

A My wife is a geneticist, and our six-year old daughter Doris enjoys Suzuki violin lessons. Her enthusiastic paintings decorate my office. We will all miss the beautiful New England snows a bit, but we appreciate the diverse culture and food here.



Dr. Graves's experimental biosensor leverages technology from a computer gaming "bracelet." Measuring three complementary aspects of movement in the arm or leg, the device has the potential to improve inperson exams and enable highly accurate remote evaluations of patients with neurological disorders.

## Dr. Jennifer Graves

**MD and PhD:** University of Texas, Southwestern (Molecular Biophysics)

Residency: University of Pennsylvania

**Fellowships:** University of Pennsylvania (Neuro-Ophthalmology) and UCSF (Multiple Sclerosis)

Master's of Applied Science in Clinical Research: UCSF

Neuro-ophthalmologist **Jennifer Graves**, **MD**, **PhD**, serves eye patients facing optic nerve-related sight loss. She also holds an appointment in the Department of Neurology, where she focuses on multiple sclerosis (MS).

# Q Are your vision patients affected by a wide range of disorders?

A bsolutely. Temporary or permanent blurring, double vision, or blindness can stem from neurological vision impairments caused by MS, other autoimmune disorders, infections, or concussions.

# Q How do ophthalmology and MS come together in your research?

Over their lifetimes, patients with MS have an approximate 50 percent risk for acute optic neuritis. I study optic neuritis as well as vision difficulties that arise as MS patients lose their ability to move or position their eyes correctly. Nuances of these conditions in children are a special interest. Young patients may have better capacity for recovery than adults, but they face the challenges of attaining academic and intellectual milestones in the face of this chronic illness.

# Q You've published 25 papers in the past two years. Many explore environmental factors that may influence MS, including events of optic neuritis and disability. Why this focus?

A Identifying environmental risk factors may lead to novel treatments and help us better define ways to prevent MS. Because children have had MS for a short time, they are ideal subjects for understanding these factors and their interactions with genetic factors. Our recent work with the US Network of Pediatric MS Centers showed that environmental factors near the time of gestation may affect risk, that low vitamin D levels may increase relapse rate, and that diet may affect risk.

# Q I understand your children have passionate interests, too. How do you encourage them?

A We explore the Monterey Bay Aquarium as a family, and Devin, age 5, wants to be a shark scientist. He knows almost every species of shark. Emma, age 7, is starting her fifth year of dance and is excited to create her own choreography. Devin makes cameo appearances in living room performances for me and my husband Mike. I studied modern dance myself, and sometimes Emma allows me into the show.



## Dr. Gerami Seitzman

MD: University of Michigan

Residency: Wilmer Eye Institute, Johns Hopkins University Fellowship: UCSF Francis I. Proctor Foundation for Research in Ophthalmology (Cornea and External Disease, Uveitis, and Refractive Surgery)

Cornea specialist Gerami Seitzman, MD, previously held appointments at Johns Hopkins University, the Krieger Eye Institute, and the VA Medical Center in Palo Alto. She holds joint appointments with the Proctor Foundation and the Department of Ophthalmology.

## **Q** What is it like to return to the UCSF community after 13 years?

A It feels like coming home! Dr. Lietman and Dr. McLeod were faculty when I was a UCSF fellow, and I'm pleased to see them in leadership today. They are the right people to guide this enterprise. UCSF's beauty of inquiry and deep commitment to patient-centered care mean a lot to me as well.

Q You've received many awards, including one for **"Outstanding Humanistic Qualities of Compassion,** Integrity, and Respect by an **Internal Medicine Resident."** Does this capture your approach to patient care?

A I work to bring compassion and respect to patients and peers, so this award made me happy. My mom was a speech pathologist and I used to go to work with her. I saw her make each patient interaction a positive experience. No matter the diagnosis, she made her patients smile.

## **Q** You want to enhance vision care through better communication. Tell us about that.

A To achieve great care, the clinician needs to partner with the patient. When doctors explain conditions or treatments in ways that patients don't understand, we compromise their ability to make the best decisions for themselves. I am collaborating with Dr. Saras Ramanathan to integrate communication skills into resident and fellow education.

## **Q** You're excited about teaching. Why?

A It's exciting to have a hand in shaping the next generation of ophthalmologists! I want to model and nurture behaviors that lead to patient understanding and engagement. That's how we achieve the best outcomes. •

## **New Clinical Fellows 2017**



Greg Bever, MD **Ocular Oncology** Mentors: Drs. Bertil Damato, Armin Afshar

**MD:** Boston University **Residency:** UCSF Birthplace: Bay City, MI



Thomas Copperman, MD

**Oculoplastics** 

Mentors: Drs. Robert Kersten, Reza Vagefi

**MD**: Wright State University **Residency:** Boston University Birthplace: Cleveland, OH



Joey Hsia, MD

Glaucoma

**Mentors:** Glacoma faculty

MD: Case Western Reserve University

**Residency:** UCSF

Birthplace: Taichung, Taiwan



Yijie (Brittany) Lin, MD, MBA

Mentors: Department and Proctor Cornea faculty

**Residency:** New York Eye and Ear Infirmary

MBA: Harvard Business School Birthplace: Guangdong Province, China



Varun Pawar, MD

**Uveitis** 

Mentors: Drs. Thuy Doan, Nisha Acharya,

John Gonzales

**Residency:** Saint Louis University Birthplace: Pittsburgh, PA



Kaidi Wang, MD

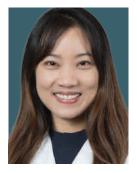
Mentors: Drs. Nisha Acharya, John Gonzales,

Thuy Doan

**Residency:** Stanford University

**MD:** Harvard University Birthplace: Zhengzhou, China

## **New International Clinical Fellows 2017**



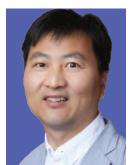
Taniya Bhoopat, MD Cornea and Ocular Inflammation Mentor: Dr. John Gonzales MD and Residency: Chiang Mai University Fellowship: Cornea and Refractive Surgery, Chulalongkorn University Birthplace: Chiang Mai, Thailand



Sunee Chansangpetch, MD Glaucoma Mentor: Dr. Shan Lin MD: Chulalongkorn University **Residency:** Chulalongkorn University Birthplace: Bangkok



Mariana Flores, MD Pediatric Ophthalmology Mentor: Dr. Alejandra de Alba Campomanes MD: Monterrey Institute of Technology and Higher Education Residency: Institute of Ophthalmology "Conde de Valenciana" Birthplace: Saltillo, Mexico



Dahui Ma, MD Vitreoretinal Diseases Mentor: Dr. Jay Stewart MD: Sun Yat-sen University Residency: Shenzhen Eye Hospital Birthplace: Guangdong, China



Zhao Mengya, MD Glaucoma Mentors: Dr. Ying Han MD: Bengbu Medical College PhD: Shanghai Jiao Tong University Birthplace: Henan province, China



Christine Siguan-Bell, MD Glaucoma Mentors: Dr. Shan Lin MD: Cebu Institute of Medicine **Residency:** University of the Philippines Birthplace: Cebu City, Philippines



Fuyan Zhang, MD Vitreoretinal Diseases Mentor: Dr. Jay Stewart MD: West China Medical University Residency: Gui Zhou Medical University Birthplace: Gui Yang, China

## Recent Gifts Make a Difference

Thank you for generous gifts and new pledges for patient care, vision research, teaching, and community service in the UCSF Department of Ophthalmology and Francis I. Proctor Foundation. These investments were made between March 2, 2017, and October 9, 2017.

Founder's Circle (\$8,000,000+)Koret Foundation

**Visionary Leaders** (\$2,000,000+)Estate of Theresa M. Caygill

Honored Patrons (\$250,000+) Larry L. Hillblom Foundation, Inc. Research to Prevent Blindness

**Visionaries (\$100,000+)** American Heart Association Mary and Phil Anderson Thomas and Johanna Baruch The Herbst Foundation, Inc. Joan and David Traitel

Estate of Ronald P.Winiker

Entrepreneurs (\$50,000+)

Dennis and Niki Allison BrightFocus Foundation Hellman Foundation Estate of Alfred Hom

Investors (\$25,000+)

Anonymous (Unknown Donor) Chizen Family Foundation Françoise G. Fleishhacker Don and Judy McCubbin Lynn M. Pasternak Robert and Gail Smelick Estate of Theodore T. Zuck

Director's Council (\$10,000+)

Alice K. Cook Hal Dawson and Mary McVey John Hall and Rebecca Derrington Estate of Frederick J. Hornbacher Charles W. Leiter, PharmD, and Susan L. Leiter Mort and Marilyn Leiter

Love Family Charitable Fund Kathlyn McPherson Masneri and Arno P. Masneri Fund Stephen D. McLeod, MD, and Marion Faymonville Joe and Margaret Melcher New World Medical, Inc. Francis S. North Foundation Richard and Candace Olsen Robert and Karen Rishwain Arthur and Toni Rembe Rock Massy Safai, MD The Schreck Family Sue and Laurence Spitters

Luminaries (\$5,000+) Luke B. Evnin, PhD, and Deann Wright Robert N. and Candace E. Savoie Cynthia Schuman and Daniel Banks W. Scott Thomas Marilyn and Jack Whitcher

Dream Makers (\$2,500+)

Linda L. Aldrich Gerson P. Bakar and Barbara Bass Bakar Estate of Marion M. Carrington Tim Müller Mary Ann Milias St. Peter Bob and Naomi Stamper

Innovators (\$1,000+) Richard L. Abbott, MD, and Cecilia B. Abbott Lillian Albertsen Fund Anonymous Apple H. Michael Braude Bruce and Suzanne Crocker Rosalind Gray Davis and Robert M. Davis Sue and John Diekman Margaret R. Duflock Mary Ellen and Michael E. Fox Family Foundation A. J. Gillette

Drs. Alex and Chauncy Irvine Arnold Kawano and Sandra Lee Dr. and Mrs. Shiu Y. Kwok Diane M. Luders Farideh L. B. Mehran Todd and Stacey and Joe Melcher Eleanor and Ron Melles Anthony and Lary Lynn Muller Fund of the Community Foundation for Monterey County Owen and E. Toki Oakley John Dagres and Jack Odell Rosanne and Michael Ogles Mauree Jane and Mark W. Perry in honor of Marya Wintroub Virginia M. Ratto Edward C. Shotwell III 1996 Charitable Annuity Lead Trust Judith Good Stearns Scott and Jenny Sykes Theta Delta Xi Alan Vidinsky and Joanne Vidinsky Andrew Zwick

## Koret Vision Research Laboratories + Beckman Vision Center + Proctor Foundation

Facilities of UCSF Ophthalmology

University of California San Francisco Department of Ophthalmology 10 Koret Way, Room K-301 San Francisco, CA 94143-0730 www.ucsfeye.net

Francis I. Proctor Foundation 95 Kirkham Street San Francisco, CA 94143-0944 proctor.ucsf.edu

**HOW TO REACH US** 

**Comprehensive Eye Center** 415.353.2800

Routine eye care, acute care, eye disease referrals

**Eyeglasses & Contact Lenses** 415.476.3100

**Cataract Care** 

415.353.2800, 415.353.8200

**Cornea Care** 415.514.8200

Glaucoma Care 415.514.6920

**Neuro-Ophthalmology** 415.476.7176

**Ocular Oncology Care** 

John and Barbara Glynn

415.514.8722

**Ocular Plastic Surgery** 415.353.2800

**Pediatric Ophthalmology** 415.353.2560

**Proctor Medical Group** 415.476.1442

**Retinal Care** 

415.353.2800

**Vision Correction Surgery Center** 

415.353.2020

Individualized surgery, including LASIK and PRK



esearch Day 2017 brought smiles, awards, and rich dialogue among ophthalmology department faculty, postdoctoral scientists, clinical fellows, and residents. Competing research posters, filled with bright images and precise notations, lined the halls outside the laboratories at the Koret Vision Center, where participants learned about one another's work.

The David and Joyce Copenhagen Prize is awarded annually for the best research paper published by a student or postdoctoral scientist in the Department of Ophthalmology. A faculty panel selected the work of Anton Delwig, PhD, now a senior scientist at SiteOne Therapeutics. As a postdoctoral fellow on Dr. Copenhagen's laboratory team, Dr. Delwig established insights into retinal ganglion cell wiring. The work was published in PLOS ONE (February 2016) as "Retinofugal Projections from Melanopsin-Expressing Retinal Ganglion Cells Revealed by Intraocular Injections of Cre-Dependent Virus." Retinofugal refers to the pathway of the optic nerve to the brain.



Director of Research **Douglas Gould**, **PhD**, announced awards for outstanding posters - one for basic research and one for clinical research. The panel selected posters by postdoctoral fellow Genki Hayashi, PhD, for "TGF-beta Dysregulation in Col4a1-related Cerebral Small Vessel Disease" and first-year resident Lesley Everett, MD, PhD, mentored by Bertil Damato, MD, for "Developing a Novel Documentation System for Retinoblastoma." •

The ophthalmology department's research is supported by grants from the National Institutes of Health, Research to Prevent Blindness, and many friends of That Man May See. To learn more or make a gift, go to www.thatmanmaysee.org.

## **Research Presentations**

Evan Feinberg, PhD (Department of Anatomy) Closing the Loop from Eye to Behavior

Matilda Chan, MD, PhD Analysis of MMP12 (Matrix Metalloproteinase) in Laboratory and Human Corneas

Saidas Nair, PhD Genetics of Glaucoma

Yvonne Ou, MD Dismantling Inner Retina Circuitry in Experimental Glaucoma

Thuy Doan MD, PhD Clinical Applications of High-throughput Genetic Sequencing

**Ari Green, MD** Measuring Therapeutic Response in the Visual System in Laboratory Models of Demyelinating Disease (Neuroophthalmology)

Rachel Care (Neuroscience Graduate Student) Functional Plasticity in Adult Retina After Selective Cone Death

Jacque Duncan, MD Dysflective Cones

Erik Ullian, PhD Synaptic Strength and Binocular Competition in the Developing Visual System

That Man May See is a 501(c)3 public charity. Its mission is to raise funds for the dedicated faculty of UCSF Ophthalmology to make possible breakthroughs in vision research, state-of-the-art patient care, educational opportunities for residents and fellows, and community service.

To make a gift of cash or securities, go to www.thatmanmaysee.org/donate or call 415.476.4016 or email tmms@vision.ucsf.edu. Checks are payable to That Man May See.

## That Man May See

10 Koret Way, Box 0352 San Francisco, CA 94143-0352 tmms@vision.ucsf.edu VISIONS is a publication of the Department of Ophthalmology at UCSF and is produced by That Man May See.

## **Editorial Board**

Robert B. Bhisitkul, MD, PhD Douglas R. Gould, PhD Thomas M. Lietman, MD Yvonne Ou, MD

## Сору

Becky Jennings Kathleen Rydar

#### **Managing Editor Becky Jennings**

**Editorial** Molly Boylan Jim Philips Kathleen Rydar

## Design

Ikkanda Design Group Donna Beilock Anat Rodan

## **Photography**

Fernanda Albarracin Nicolas Gutierrez Tom Kubik Margo Moritz Marc Olivier Le Blanc Heidi Schumann Genevieve Shiffrar Trish Tunney

Arrowhead Graphix Bruce Mayfield

For a free subscription to VISIONS magazine, please call 415.476.4016 or go to www.thatmanmaysee.org/news/ visions-magazine

To receive or cancel further fundraising communications from the Department of Ophthalmology or That Man May See, please contact: Records Manager

Department of Ophthalmology, UCSF Box 0248

San Francisco, CA 94143-0248

Printing

## Faculty News Legacy of Progress and Hope

he Department of Ophthalmology is pleased to announce a new lecture honoring glaucoma specialist Jorge Alvarado, MD, upon his retirement. The Jorge A. Alvarado, MD, Lecture will feature a distinguished vision scientist brought to UCSF each year to share findings that push the field of glaucoma forward.

#### A Great Teacher

Yvonne Ou, MD, and Ying Han, MD, PhD, are glaucoma specialists who follow in Dr. Alvarado's footsteps. Inquisitive, sharp, and no-nonsense, Dr. Alvarado is a consummate clinician scientist."

- Dr. Yvonne Ou

They deeply value his mentorship, his body of research, and his lasting impact.

"Inquisitive, sharp, and no-nonsense, Dr. Alvarado is a consummate clinician scientist dedicated to understanding the



cell biology of glaucoma and advancing treatments for patients," says Dr. Ou.

"I have learned so much from him," adds Dr. Han. "He taught me not only how to better serve my patients but also how to come up with valuable research questions to address clinical problems. He continues to be my role model."

#### **Lasting Influence**

Dr. Alvarado established that glaucoma patients exhibit loss of trabecular meshwork cells, pinpointing a cause of abnormal intraocular pressure. More recently, his examination of cytokines secreted by endothelial cells and intercellular junction disassembly after treatment provided insights with implications for surgical approaches.

His seminal work, Histology of the Human Eye, which Dr. Alvarado co-authored as a medical student with Michael Hogan, MD (former chair of the UCSF Department of Ophthalmology), continues to be a definitive resource on human eye anatomy.

## **Selected Awards**



2017 UCSF Health Exceptional Physician Award David Hwang, MD, Cornea specialist

This marks the first time that this honor was awarded to an ophthalmology clinician scientist.



2017 UCSF Pathways to Discovery Mentor Award Alejandra de Alba Campomanes, MD, MPH, Pediatric specialist

Dr. de Alba Campomanes was recognized for her outstanding mentorship of a UCSF medical student undertaking public health research for the first time.

## **Selected Publications**

## **Basic Science**



C Khuc E, Bainer R, Wolf M, Clay SM, Weisenberger DJ, Kemmer J, Weaver VM, Hwang DG, Chan MF. Comprehensive characterization of DNA methylation changes in Fuchs endothelial corneal dystrophy. PLOS ONE. 2017 Apr 6.

Martersteck EM, Hirokawa KE, Evarts M, Bernard A, Duan X, Li Y, Ng L, Oh SW, Ouellette B, Royall JJ, Stoecklin M, Wang Q, Zeng H, Sanes JR, Harris JA. Diverse central projection patterns of retinal ganglion cells. Cell Reports. 2017 Feb 21.



Anastassov IA, Wang W, **Dunn** FA. Synaptogenesis and synaptic protein localization in the postnatal development of rod bipolar cell dendrites in mouse retina. Journal of Comparative Neurology. 2017 May 25.

Mechanisms. 2017 Apr 1.

dissection of anterior segment dysgenesis caused by a Col4a1 mutation in mouse. Disease Models &

Marion J. Gould DB. Genotype-phenotype correlations in pathology caused by collagen type IV alpha 1 and 2 mutations. Matrix Biology. Jan 2017.

Economides JR, Adams DL, Horton JC. Normal correspondence of tectal maps for saccadic eye movements in strabismus. Journal of Neurophysiology. 2016 Dec 1.

Retallack H, Di Lullo E, Arias C, Knopp KA, Laurie MT, Sandoval-Espinosa C, Mancia Leon WR, Krencik R, **Ullian EM**, Julien Spatazza J, Pollen AA, Mandel-Brehm C, Nowakowski TZ, Kriegstein AR, DeRisi JL. Zika virus cell tropism in the developing human brain and inhibition by azithromycin. Proceedings of the National Academy of Sciences USA. 2016 Dec 13.

## Clinical Research

#### **Department of Ophthalmology**

Wolf M, Maltseva I, Clay SM, Pan P, Gajjala A, **Chan MF.** Effects of MMP12 on cell motility and inflammation during corneal epithelial repair. Experimental Eye Research. 2017 Jul.

Vallabh NA, Sahni JN, Parkes CK, Czanner G, Heimann H, **Damato B.** Two-year patientreported outcomes following treatment of uveal melanoma. Eye (London). 2016 Dec.

Ho V, Hussain R, Czanner G, Sen J, Heimann H, **Damato B.** Porous versus nonporous orbital implants after enucleation for uveal melanoma: a randomized study. Ophthalmic Plastic & Reconstructive Surgery. 2016 Nov 17.



Schallhorn JM, Schallhorn SC, Hettinger KA, Venter JA, Pelouskova M, Teenan D, Hannan SJ. Outcomes and complications of excimer laser surgery in patients with collagen vascular and

other immune-mediated inflammatory diseases. Journal of Cataract and Refractive Surgery. 2016 Dec.

Lowry EA, Hennein L, Han, Y. Comparison of surgical outcome after Ahmed valve implantation for patients with and without fluocinolone intravitreal implant (Retisert). Journal of Glaucoma. 2017 Jul.

#### **Proctor Foundation**



Dr. Nisha Acharya

Doan T, Acharya NR, Pinsky BA, Sahoo MK, Chow ED, Banaei N, Budvytiene I, Cevallos V, Zhong L, Zhou Z, **Lietman** TM, DeRisi JL. Metagenomic DNA sequencing for the diagnosis of intraocular infections. Ophthalmology. 2017 May 16.

Prajna NV, Krishnan T, Rajaraman R, Patel S, Srinivasan M, Das M, Ray KJ, O'Brien

KS, Oldenburg CE, McLeod SD, Zegans ME, Porco TC, Acharya NR, Lietman TM, Rose-Nussbaumer J. Effect of oral voriconazole on fungal keratitis in the Mycotic Ulcer Treatment Trial II: A randomized clinical trial. JAMA Ophthalmology. 2016 Dec 1.

Doan T, Arzika AM, Ray KJ, Cotter SY, Kim J, Maliki R, Zhong L, Zhou Z, Porco TC, Vanderschelden B, Keenan **JD, Lietman TM.** Gut microbial diversity in antibiotic-naive children after systemic antibiotic exposure: A randomized controlled trial. Clinical Infectious Diseases, publication of the Infectious Diseases Society of America. 2017 Apr 11.

Browne EN, Rathinam SR, Kanakath A, Thundikandy R, Babu M, Lietman TM, Acharya NR. A Bayesian analysis of a randomized clinical trial comparing antimetabolite therapies for non-infectious uveitis. Ophthalmic Epidemiology. 2016 Dec 16.

Jirawison C, Liu Y, Surasit K, Maningding E, Kamphaengkham S, Ausayakhun S, Heiden D, Margolis TP, Gonzales JA, Acharya NR, Keenan JD. Fundus findings in a series of patients with extrapulmonary tuberculosis in Thailand. British Journal of Ophthalmology. 2017 Jun.



Dr. Tom Lietman

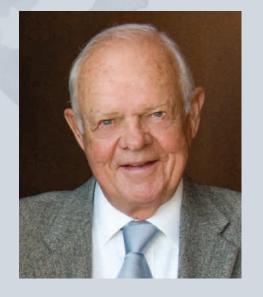
Amza A, Kadri B, Nassirou B, Cotter SY, Stoller NE, Zhou Z, Bailey RL, Mabey DC, Porco TC, Keenan JD, Gaynor BD, West SK, Lietman TM. A clusterrandomized trial to assess the efficacy of targeting trachoma treatment to children. Clinical Infectious Diseases, publication of the Infectious Diseases Society of America. 2016 Dec 12.

# In Memoriam

Stacy Mettier – A Visionary

tacy was a beloved figure in the Department of Ophthalmology and a personal friend of so many," recalls Department Chair Stephen D. McLeod, MD. "We remain deeply indebted to him for his leadership in establishing That Man May See."

Throughout his professional life and retirement, Stacy Raymond Mettier Jr., MD, made a difference in the lives of others through his patient care, leadership, teaching, and devotion to the Department of Ophthalmology. Born



Stacy greatly advanced private funding to accelerate sight-saving research."

- Kathleen Rydar

in 1927, Stacy was a fourth-generation San Franciscan who completed medical school and his ophthalmology residency at UCSF. Stacy's wife Nancy was the love of his life. Happily married for 68 years, the Mettiers established the Dr. and Mrs. Stacy R. Mettier Jr. Endowed Chair in Ophthalmology through a bequest to That Man May See.

**Co-Founder of That Man May See** With Samuel Kimura, MD, Stacy launched a public charity in 1971 to raise research funds to benefit patients worldwide. Over the years, Stacy served as That Man May See's president, board chair, and director.

"Stacy greatly advanced private funding to accelerate sight-saving research," says Kathleen Rydar, president of That Man May See. Stacy is also fondly remembered by generations of UCSF medical students and residents whom he mentored as a clinical professor.

## SIGHTINGS









## **GROUNDBREAKING CELEBRATIONS**

Celebrating the new UCSF Center for Vision Neuroscience brought together UCSF dignitaries, ophthalmology faculty, and That Man May See leaders and friends.

A reception for Andrew and Cecilia Yau honored lead donors for a new endowed Professorship in Pathology.

- 1 John de Benedetti, Dr. Stephen McLeod, Jeff Farber, Chancellor Sam Hawgood, Tom Baruch, Bernie Newcomb, Don McCubbin, Ruth Hoffman, Dr. Creig Hoyt, and Dr. Tom Lietman
- 2 Ophthalmology clinical staff Christi Elniff and Ursula O'Keeffe
- 3 Bruce Hart and Margaret Ames
- 4 Angus McLean, Jenny McLean, and Albert Schreck





- 5 Dr. Nita and Mani Subramanian with Dr. Stephen McLeod
- 6 Bernie Newcomb and Gerry Marshall
- 7 Andrew Yau with Dr. Michele Bloomer (first holder of the new professorship) and Dr. Nita Subramanian
- 8 Dr. John Gonzales, Dr. Thuy Doan, Lily Huang, and Dr. Nisha Acharya (Dr. Ronald Melles in background)









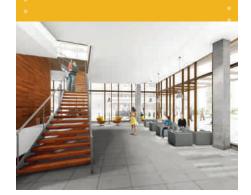


NON-PROFIT ORG. U.S. POSTAGE PAID SAN FRANCISCO, CA Permit No. 8285

## Help save sight and save lives.

## Make a gift at www.thatmanmaysee.org











# There Is Only One... Class of 2020!

his year's new residents held concurrent internships in UCSF General Surgery over the past year, working with a range of surgical specialists and building a tight-knit cohort.

- 1 Neel Dave Pasricha, MD MD: Duke University College: Johns Hopkins University, BA Birthplace: New Delhi, India
- 2 Jonathan Li, MD MD: University of Pennsylvania College: Princeton University, BA Birthplace: Madison, WI
- 3 Frances Wu, MD MD: University of California, San Diego College: Harvard University, BA Birthplace: Austin, TX
- 4 Lesley Everett, MD, PhD
  MPhil: University of Cambridge, Epidemiology
  MD and PhD: University of Michigan, Human Genetics
  Birthplace: Redmond, WA
- 5 Bethlehem Dessalegn Mekonnen, MD MD: Yale University College: Meredith College, BS, BA Birthplace: Addis Ababa, Ethiopia

