

Koret Vision Institute + Beckman Vision Center + Department of Ophthalmology

Fall Annual Report 2008

University of California, San Francisco + That Man May See

Focal Point



Dear Friends,

In recognition of the critical role of private gifts, we focus this issue and annual report on the power of philanthropy and what you make possible when you support our research through That Man May See, our public charity. Our researchers and clinician scientists continue to earn accolades nationally and internationally as they contribute rigorous and insightful research to the field and dedicate their lives to understanding the mechanisms of vision and its varied disorders, a pursuit that ultimately will lead to new therapies for vision loss and blindness.

Congratulations to Dr. David Copenhagen, Dr. Robert Stamper, and Dr. David Sretavan for recent honors that reflect their stellar expertise and commitment. We are also pleased to welcome our two newest faculty members, Dr. Bennie Jeng and Dr. Tina Rutar. These talented clinician scientists have already made significant contributions to their fields and, with the support of the research infrastructure at UCSF, their efforts hold great promise for significant breakthroughs in the future.

We are pleased to be recognized as one of the leading ophthalmology departments in the country. In a very real way, you share this honor with us. We are here to serve you and those who need our care. Thank you for helping us in our



Ophthalmology Insight The Gift of Vision

Spreading Seeds for Innovation

CSF Ophthalmology's vision – preservation and restoration of sight for present and future generations - is ambitious. Glaucoma and macular degeneration lead the list of currently incurable blinding diseases, and blindness and visual disability caused by cataracts, infectious diseases, and other ocular disorders continue to take a huge toll around the world.

Rated among the top ten eye institutions in the United States, UCSF Ophthalmology tackles the greatest challenges. Its renowned medical researchers and clinicians are dedicated to serving today's patients, and

they develop innovative strategies and technologies to transform outcomes for the patients of tomorrow.

Breakthroughs in surgical techniques, diagnostics that allow for early intervention, and promising treatments - the impact of UCSF Ophthalmology on ocular medicine is widely recognized. Private gifts play a key role in achieving excellence, providing a margin of support that allows research and clinical practice to thrive. Philanthropic gifts create a domino effect, leading to greater research opportunities and superior care for patients.

Continued on page 3



William F. Hoyt, MD **UCSF** Alumnus of the Year

search for new solutions.

Sincerely,



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

illiam F. Hoyt, MD, emeritus professor of neuro-ophthalmology, delights in being chosen as UCSF Alumnus of the Year. It's been a long time coming - he graduated from medical school in 1950. On his shelf of honors, this UCSF recognition for "extraordinary

contributions to medicine" will sit next to his Honorary Doctorate of Medicine from Sweden's Karolinska Institute yes, that's home to the Nobel Prize committee.

Over the decades, Dr. Hoyt has earned monikers such as "titan" and "giant of the twentieth century" for his dedicated and brilliant work. He helped to pioneer neuro-ophthalmology, a field that fills a gap between neurology and ophthalmology, and then trained hundreds of residents and fellows in this new subspecialty.

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A PEEK INSIDE:

Meet New Faculty: Drs. Jeng and Rutar





TMMS Annual Report: Marilyn Pratt Reports to Readers

The Research to Prevent Blindness Foundation Partner with UCSF Scientists



Lifetime Achievement Award for Dr. Stamper, Glaucoma Specialist

Cordes Society Prepares to Celebrate 0th Anniversary

UCSF Ophthalmology Welcomes New Faculty

Stephen McLeod, MD, chair of the Department of Ophthalmology, and **Todd Margolis, MD, PhD,** director of the Francis I. Proctor Foundation, lead the faculty in welcoming talented new players who complement and expand existing expertise on the UCSF Ophthalmology team.



Dr. Bennie Jeng – Cornea hen Bennie Jeng, MD, finished his fellowship at the UCSF Department of Ophthalmology and the Proctor Foundation in corneal and external disease, he never envisioned being able to return to the Bay Area. "I had no idea where my career would take me," he says.

In 2003, he accepted a position as Assistant Professor of Ophthalmology at the Cleveland Clinic Lerner College of Medicine in Cleveland, Ohio, where he spent five years refining his expertise with corneal conditions and treatments.

The opportunity to serve as director of UCSF's new Ocular Surface Reconstruction and Keratoprosthesis Program was enticing. "A position like this opens up very seldom," he says. "If I passed it up, I might never get another chance." Dr. Jeng's clinical interests are ocular surface disease and surgical reconstruction, keratoprosthesis, femtosecond laser-assisted penetrating keratoplasty, and surgical management of kertoconus, including intracorneal implants.

With a joint appointment to the Francis I. Proctor Foundation and the Department of Ophthalmology, Dr. Jeng will head the new corneal research program and serve as Chief of Service for the Ophthalmology Department at San Francisco General Hospital. "Dr. Jeng's excellence in teaching as well as his expertise in clinical trials and the management of ocular surface disease make him a tremendous addition to the Department of Ophthalmology and the Proctor Foundation," says Dr. Margolis.

Dr. Jeng's excellence in teaching as well as his expertise in clinical trials and the management of ocular surface disease make him a tremendous addition." – Dr. Todd Margolis

Dr. Jeng will care for patients with ocular surface problems and accelerate his research into ways of healing the ocular surface. "I want to determine what factors help heal the ocular surface – what combination of factors can help heal the eye," he says.

"The patients who require keratoprosthesis, an artificial cornea, are the ones whose corneas don't heal well, so they're not good candidates for transplants. The post-operative management is a challenge, but you can have very gratifying results. I'm interested in the development of materials for making the keratoprosthesis, but also for preventing its need. People tend to underdiagnose the problem, and the condition develops to the point where, by the time I see the patient, I wish I'd seen them sooner."

Dr. Tina Rutar – Pediatric Ophthalmology and Strabismus

xperiencing uncertainty as a welcome adventure comes naturally to Tina Rutar, MD. She has just been appointed to join the Division of Pediatric Ophthalmology and Strabismus. She will also be the director of the new Visual Center for the Child, the pediatric ophthalmology research center and clinic that will be located on the second floor of the Ambulatory Care Center, in proximity to other UCSF pediatric services at 400 Parnassus Avenue.

Among individuals of her generation whom we interviewed, Dr. Rutar was by far the most accomplished."

– Dr. Stephen McLeod

A self-described adventurous multitasker, Dr. Rutar once conducted a study documenting a malaria epidemic in the **Bolivian Andes in primitive** conditions, a trip that included 24 hours of travel by foot, donkey, motorcycle, and ambulance to reach a remote village. She is also an accomplished rock climber. A native of Ljubjana, Slovenia, Dr. Rutar returned there last summer for her wedding. Her husband Martin Stadtmueller is an advertising copywriter.

unpredictability that comes with pediatric ophthalmology. "When you walk into a room, you may interact with an infant or a teenager, and there is an inability to know exactly how the exam is going to unfold," she explains. "Even though pediatricians specialize in eye movement disorders, we also see children with any ocular problem. This combines the variety of problems seen in general ophthalmology with the spontaneity of the special moments you only get to experience in pediatrics."

Dr. Rutar is well prepared for her new position. After receiving her medical degree from Harvard Medical School, she completed an internship in pediatrics at Children's Hospital Boston and a residency in ophthalmology at UCSF. Most recently, she completed a Pediatric Ophthalmology Fellowship at UCLA's Jules Stein Eye Institute where, as a Heed Fellowship recipient, she won the Best Clinical Fellow Research Award. She joins Jonathan C. Horton, MD, PhD, and Creig S. Hoyt, MD, in the Pediatrics and Strabismus Division.

"She is an outstanding individual," says Dr. McLeod. "We had an extensive national search, and there is no question that, among individuals of her generation whom we interviewed, Dr. Rutar was by far the most accomplished. We're happy to welcome her back to UCSF, and we're confident she'll provide outstanding leadership."

Dr. Linda Jeng, Dr. Bennie Jeng's wife, is happy to return to the Bay Area as well. The two met in medical school at the University of Pennsylvania, and she took a year off from her career to join him in the Bay Area during his fellowship. "She really loves being in San Francisco," says Dr. Jeng. A molecular geneticist, Dr. Linda Jeng is working in the Department of Laboratory Medicine at UCSF.

Dr. Rutar's investigative instincts will serve her well as she launches her own vision research and develops her UCSF practice. She also enjoys the

The Gift of Vision

Every gift invested pays off in excellence, and a little funding at the right time can yield impressive dividends. UCSF ophthalmologists are achieving big results with the help of philanthropy.

Leveraging Support for Innovation Micro- and Nanotechnology

"EUREKA projects promise remarkable outcomes that could revolutionize science," says NIH Director Elias A. Zerhouni, MD. UCSF vision researcher **David Sretavan, MD, PhD,** recently received \$1 million through this new program, which supports Exceptional, Unconventional Research Enabling Knowledge Acceleration (EUREKA). This prestigious award for his micro- and nanotechnology work provides ten times his original seed funding of \$100,000, which was provided by an endowment prize from the Jane and Marshall Steel, Jr., Fund for Vision Research at UCSF.

Initial funds allowed Dr. Sretavan to explore new paradigms for nerve repair and do exploratory, proofof-principle studies. "This early support was like the planting of a seed," says Dr. Sretavan. "After a lot of effort, we were able to convert our exploratory studies into more substantial research programs that caught the interest of larger funding agencies."

Injuries to the nervous system, including the optic nerve, result in permanent loss of function and quality of life. Dr. Sretavan's new study explores how advances in micro- and nanotechnology can be used in novel therapy to reverse neurological damage. Conventional approaches attempt to coax damaged nerve cells to regrow their connections; the new work seeks to perform direct microscale repair on severed nerves to restore their function.

> Seed funding culminated in a \$1 million NIH grant for Dr. Sretavan's "exceptional, unconventional" research.

Genetics and Glaucoma

A new \$40,000 award from the Glaucoma Foundation will further another Sretavan research project that got underway with \$20,000 of seed funding from That Man May See. His investigations into how genes affect development of the optic nerve may lead to gene therapies that can alter the course of glaucoma.

Philanthropic gifts create a domino effect, leading to greater research gains and superior care for patients.

"A critical moment in research," says Dr. Sretavan, "is when a scientist comes up with a new idea to pursue but needs support to investigate whether it has merit. TMMS provides much-needed support at this early stage."

Clear Assessment of Retinal Damage

A state-of-the-art retinal camera system, a gift of Bernie Newcomb and the Silicon Valley Community Foundation, has **Jacque Duncan, MD**, and other retinal faculty beaming. The Heidelberg Spectralis HRA + OCT Laser Scanner Camera System is already making a difference in patient treatment.

"Because of the distinctions that the new images allow me to see, I am more accurately assessing retinal deterioration in patients with age-related macular degeneration," reports Dr. Duncan. "It's guiding the treatment plans I prescribe."

With the old system, doctors lacked a sensitive way to measure changes to drusen (fatty deposits under the retina that can kill overlying retinal cells), because drusen and the retinal layer next to it looked so similar on the images generated by the less sophisticated equipment. "Now we can measure very subtle differences in retinal thickness and correlate them with other measurements we are taking for research," says Dr. Duncan. "We hope these new ways of looking at the retina will allow us to find out what exactly is causing vision cells to die in patients with AMD, retinitis pigmentosa, and other retinal degenerative diseases."

Improved Corneal Outcomes New Tools, New Program

A recently developed corneal laser module has been added to the arsenal of surgical tools available to UCSF specialists, thanks to the generosity of Don and Judy McCubbin. This module can help dramatically improve the short- and long-term success of corneal transplants. With this module as its centerpiece, UCSF Ophthalmology is launching a new program to help patients with complex corneal conditions and researchers working to improve patient outcomes.

Continued on page 4

Dr. Jacque Duncan shares her enthusiasm for a new retinal scanning system that helps patients and advances research into macular degeneration. Pictured left to right are Gerry Marshall, Bernie Newcomb, Patsy Schuchardt, and Dr. Duncan.

How Private Gifts Make a Difference in Vision Research

Matt LaVail, PhD



A gap in federal funding created the risk of losing valuable experimental assets that required intensive resources to maintain.

That Man May See (TMMS) provided

\$62,000 in bridge funds to save the assets and allow Dr. LaVail's retinal degeneration research to continue. Less than two years later, he was awarded a \$600,000, five-year grant from the NIH that got his research back on solid footing.

"Without those bridge funds, we and the entire vision research community would have lost this valuable resource that provides the most important models for therapeutic research on inherited and age-related retinal degenerations," says Dr. LaVail.

David Copenhagen, PhD



Retinal research was hampered by equipment that could only measure cell responses one at a time.

A \$72,000 award from a research endowment

allowed Dr. Copenhagen to purchase a multi-electronic array to record activity from dozens of retinal cells simultaneously.

"With the array, I can see a pattern of responses and get a lot more data from the experiment," explains Dr. Copenhagen. "The success of those preliminary experiments provided invaluable data to compete successfully for a subsequent NIH grant."

Jennifer LaVail, PhD

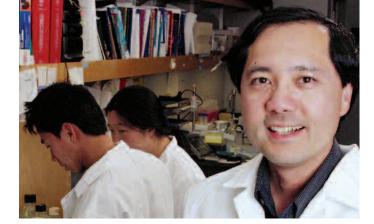


A long track record of NIH funding for research into how herpes simplex viruses cause corneal lesions was unexpectedly interrupted,



on strategies to block transport of the virus.

"TMMS gave me enough to keep going for a year," reports Dr. LaVail. With the help of other faculty members, she revised her grant application and developed new experiments, and her new request was approved.



Seed funding helped Dr. David Sretavan launch innovative research that has garnered a prestigious award and \$1 million to accelerate his efforts.

The Gift of Vision Continued from page 3

The new program attracted **Bennie Jeng, MD,** a specialist in corneal reconstruction, to direct the program. (See "New Faculty," page 2.) Dr. Jeng's expertise enables UCSF to become the third site on the West Coast to provide advanced keratoprosthesis (implantation of an artificial cornea).

Opacity of the cornea is a leading cause of blindness, and corneal replacement by transplant or prosthesis is often the only treatment. Most common corneal transplants involve a straight-sided plug being taken from the donor cornea and sutured into a same-size hole in the recipient's cornea. However, such a straight-sided cut provides little surface area for healing, and this is where the new laser module makes a difference. "Nothing is as precise as these lasers," says Dr. Jeng. "You can make any shape cut you want, almost like a dovetail in woodworking—whatever shape is strongest for the wound construction. It allows for a stronger graft in the long term."

Artificial Corneas Solve Problems

As with all tissue transplants, corneal transplants carry the risk of rejection and failure. In some individuals, corneal transplants just don't work very well, and doctors sometimes prescribe powerful immuno-suppressive medications in an attempt to help a transplant succeed. "I will in most circumstances opt to implant an artificial cornea to avoid giving patients these powerful anti-rejection drugs," says Dr. Jeng.

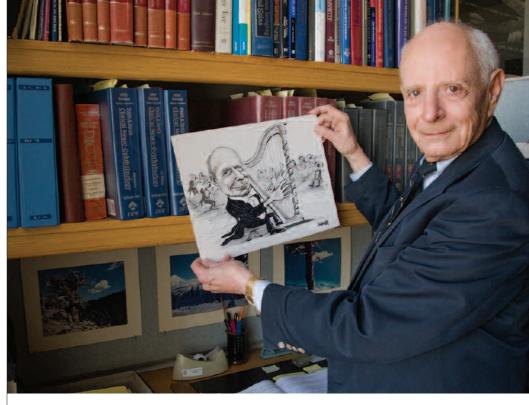
Artificial corneas are extremely expensive and, because they are experimental, must be paid for by the patient. "Donations that supplement the cost of the devices can essentially allow us to reverse blindness," explains Dr. Jeng. Finding more effective and possibly less expensive materials for artificial corneas is one of Dr. Jeng's goals.

The McCubbins also provided funds for an automated keratome, which will aid corneal surgeons in correcting severe myopia.

New Labs Expand the Search for Cures

The Peierls Foundation provides support to researchers exploring inflammatory and infectious diseases at UCSF's Francis I. Proctor Foundation. "It's crucial to have initial startup funding to get a new project off the ground," says **Nisha Acharya, MD.** This year, the Peierls Foundation helped Dr. Acharya advance her research on tuberculosis-related uveitis. (See "Helping the World to See," Summer 2008.) Dr. Acharya was able to draw upon a Peierls Foundation gift to buy Quantiferon blood tests, a more accurate test for exposure to TB than the standard skin test. "It gives fewer false positives," explains Dr. Acharya. "The test was approved by the Center for Disease Control this year, but it's not yet being performed in India, the site for this research program. We're setting that up."

The Peierls Foundation also helped **Nancy McNamara, PhD,** to establish Proctor's Molecular and Cellular Laboratory. There she pursues research on the response of epithelial cells (such as mucous membranes at the surface of the eye) to environmental injury and immunological diseases. She now has a grant from the National Eye Institute to study autoimmune-mediated dry eye disease. The American Cancer Society also supports her work, providing funds to study the transformation of normal lung epithelial cells to tumor cells in response to cigarette smoke. "Seed money from the Peierls Foundation provided me with the time and resources to obtain key preliminary data necessary for grant eligibility," says Dr. McNamara.



Dr. Hoyt compares his role as a neuro-ophthalmologist to that of a harpist in a fine orchestra.

UCSF Alumnus of the Year Continued from page 1

He likes to say that he is like the harpist in an orchestra. "Every fine orchestra needs one, but not all the time," he says with a smile. The same thing holds true in an ophthalmology practice – one neuro-ophthalmologist adds his or her esoteric knowledge to the expertise of the group. The neuro-ophthalmologist acts as a diagnostic consultant, with treatment generally falling to neurology and neurosurgery. Only one neuro-ophthalmologist may be needed, but that one must be gifted.

Looking Deeply

Rafael Rufi-Mendoza, MD, a Venezuelan fellow of Dr. Hoyt's, describes his mentor's approach: "Deciphering hieroglyphs has been his passion – the educated ear guiding the appropriate question, the simple physical test outshining the latest technical gadget, the precise and timely indication of a test that surfaces an as-yet-obscure diagnosis, or even his insistence on a particular disease or process repeatedly denied by imaging studies....'Watch the details, they can spoil the whole,' he said to me so many times."

Neil Miller, MD, a renowned neuro-ophthalmologist who spent a year at Dr. Hoyt's elbow, says that Dr. Hoyt "has the unique ability to look beyond what everybody thinks they know and look at things no one has seen before."

These doctors, renowned in their own right, pinpoint the process of an intense and meticulous intellect. As a young man, Dr. Hoyt knew he needed to find a career path that would provide "something for my hands and something for my head." The son of a doctor, he decided he would be well suited to ophthalmology because it combined surgical practice with intellectual challenge.

Learning and Leading

After World War II, Dr. Hoyt earned his medical degree at UCSF. After a year in Austria on a Fulbright Fellowship, he buckled down to a year of formative study with the legendary Frank B. Walsh, MD, at Johns Hopkins University. This mentor shaped Dr. Hoyt's specialization in neuro-ophthalmology. He then returned to UCSF, where he was offered an interesting position: joint appointments to the Department of Neurosurgery and the Department of Ophthalmology. This unique opportunity to work closely with neurosurgeons paid dividends as his understanding of the field deepened. He established neuro-ophthalmology on the West Coast, starting his research and teaching unit from one end of a nurses station counter.

Funding Partnerships Provide Hope

UCSF ophthalmologists are deeply engaged in bringing solutions to their patients. They pursue many pathways to understand the visual system more completely, seeking new and refined strategies for disease intervention. Federal health agencies may supply the lion's share of funding, but it is in partnership with committed individuals and private foundations that UCSF Ophthalmology truly reaches its full potential. New technologies hold promise, but they are costly as well. Significant support is needed to unravel the secrets of the major causes of blindness and to save sight for millions

of people around the world. •

Dr. Nancy McNamara established the Molecular and Cellular Laboratory at the UCSF Proctor Foundation with the help of the Peierls Foundation. Her efforts are now supported by grants from the National Institutes of Health.



Impact on Thousands

In the 1960s, Dr. Hoyt co-authored *Clinical Neuro-Ophthalmology*, third edition, with his mentor Dr. Walsh. The tome revolutionized the field – and Dr. Hoyt's career. This seminal work identified numerous disorders for the first time; it also made the field accessible to young physicians and created enormous interest in neuro-ophthalmology.

The book attracted neurologists and ophthalmologists who wanted to learn more. Dr. Hoyt leveraged the impact of his opportunity to teach by engaging students who would teach others, expanding the field. He eventually trained 71 fellows, 60 of whom became professors scattered worldwide. He became a teacher of teachers.

Continued on page 11

ANNUAL REPORT



Dear Friends of That Man May See,

Our board of directors is pleased to provide you with this annual report of That Man May See for fiscal year 2007-2008. We are delighted with your involvement and interest in addressing vision loss and blindness. We especially want to thank you for supporting the vision research of a most gifted and dedicated faculty. Ophthalmology at the University of California, San Francisco, brings hope to so many who suffer from the most challenging eye disorders.

We are pleased this year with the growth of our annual fund, welcoming new contributors and deepening the involvement of those engaged with us over time. Many of our most generous friends have supported us for over 20 of our 37 years, and we salute these longevity donors for all they make possible. In gratitude for all you do, I want to highlight the value of financial gifts that help us move research speedily from the laboratory to clinical application. When you make a contribution to That Man May See, you help us fund, for example:

- Research to fight macular degeneration and glaucoma
- Treatment and study of preventable blindness around the world
- New equipment that refines diagnosis and improves treatment
- Innovative projects that hold great promise for discovery
- Sustained research efforts between government grant cycles
- Community outreach to share the findings of our vision scientists with those we serve

Please join us in celebration of a year of generous contributions that make a difference in the lives of others. Thank you for being a part of the TMMS family.

Sincerely,

Marilyon TII. Pratt

Marilyn Pratt ⁴ Chair, Board of Directors That Man May See, Inc.

That Man May See Raises \$5 Million

he vision for the Department of Ophthalmology and the Francis I. Proctor Foundation at UCSF depends on contributions from generous friends, who ensure the margin of excellence. That Man May See (TMMS) raises funds to make possible breakthroughs in vision research, state-of-theart patient care, educational opportunities for residents and fellows, and community service.

In the recently concluded fiscal year, June 30, 2008, gifts from private sources reached \$5 million. And the board of That Man May See solidified plans to increase the pace of its work. Greater support will be sought to fight glaucoma, macular degeneration, cataracts and corneal disease, infectious and inflammatory eye diseases, and the range of serious vision challenges that affect infants and children. Serving the local community and impacting world vision is the mission of UCSF researchers.

Unrestricted gifts to the Opportunities Fund stimulated new

Thank You for Endowments

Endowed Professorships and Chairs

Professorships and chairs provide sustained support for research and clinical faculty. Jean Kelly Stock

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Dexter C. Tight Macular Degeneration Endowed Research Fund

Endowed funds raised by That Man May See are managed by the UCSF Foundation and the UC Regents.

research efforts this year, with nearly \$1.5 million in seed funding. Each project represents the potential for high-impact results that provide the building blocks toward breakthroughs.

As UCSF Ophthalmology strives for continuing excellence, private philanthropy will be counted on to help recruit and retain the most talented faculty and provide state-of-the-art facilities and equipment. Endowments also remain a priority, providing a steady stream of funding despite fluctuations in state and government sources of support.

That Man May See prides itself on keeping its overhead low so that funds can be used where they are needed most, urgently moving new diagnostics and therapies from laboratory bench to patient care.

"Vision is a gift," says Kathleen Rydar, president of That Man May See, "and our contributors make the difference." •

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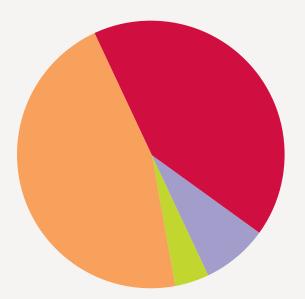
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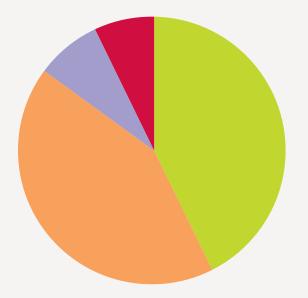
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A N N U A L R E P O R T

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Sources of Funds Donations and new pledges	Direct to TMMS \$2,099,420	Via Other UCSF Entities* \$198,107	Total \$2,297,527	% 46%
from Individuals Donations and new pledges from Corporations and Foundations 	\$1,635,387	\$484,284	\$2,119,671	42%
Bequests and Trusts Earnings on Deposited Funds	\$151,272 \$197,423	\$274,259	\$425,531 \$197,423	8% 4%
Total Revenue	\$4,083,502	\$956,650	\$5,040,152	100%

*Board of Regents & UCSF Foundation

Application of Funds	Actual	%
Research, Education, Patient Care, and Community Service:		
Dispersed Funds	\$2,163,068	43%
Committed Funds	\$2,141,951	42%
Fundraising	\$382,269	8%
Management and Administration	\$352,864	7%
Total Expenses	\$5,040,152	100%

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Research to Prevent Blindness Awards Consistent Funding Bears Fruit



• ozens of research projects are underway at UCSF Ophthalmology, all ultimately aimed at preservation of vision and restoration of sight. Smoothing the road through the ups and downs of government budgets and funding cycles is Research to Prevent Blindness (RPB). Over the past ten years, RPB has awarded \$2.9 million to UCSF Ophthalmology in the form of 10 shared grants and 19 prizes for individual researchers. RPB is a major supporter of vision research at leading scientific institutions in the United States. Its awards are based on the recommendations of a highly regarded scientific advisory panel.

Consistency Speeds Progress

The consistency of RPB's awards to UCSF Ophthalmology researchers has translated into consistent scientific productivity, which is crucial for moving innovative findings from the laboratory to the clinic, where patients can benefit. RPB funds have supported research that resulted in significant scientific accomplishments, including work that has the potential to

- improve treatment outcomes for patients with age-related macular degeneration,
- lead to new therapeutic targets and reparative therapies for glaucoma,
- reduce the risk of inflammation following cataract surgery, and
- help develop controlled local chemotherapy for retinoblastoma, thereby reducing systemic toxicity in children.

This year, Department Chair **Stephen McLeod**, **MD**, is using a \$110,000 gift from RPB to support the Mazzocco Microsurgical Laboratory. The laboratory offers microsurgical instrumentation and surgical facilities for all ophthalmology faculty, and it provides the sole research venue for some.

Advances in Glaucoma Research

Neurobiologist **Erik Ullian, PhD,** has made advances in his glaucoma work with the help of a \$200,000, four-year Career Development Award from RPB that was granted in 2006. These awards are given to support promising junior faculty in basic research. In August, a paper by Dr. Ullian and his colleagues was the cover article in the *Journal of Neuroscience*. Their study looks at how communication paths are formed in the developing retina.

"The RPB grant has been critical," Dr. Ullian says. His concept, for a method of looking at ganglion cells and their connections, had not yet been published when RPB identified him as a promising vision scientist. At that time, the concept was too unproven to qualify for funding from the National Institutes of Health.

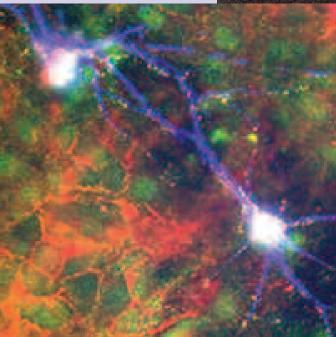
Dr. Ullian and his colleagues were able to use his novel approach to identify key signals among cells. This is a step toward developing reparative therapies for glaucoma. "The RPB funds allowed us to develop the method, and now we are examining how to extend it to a more therapeutic paradigm," he says.

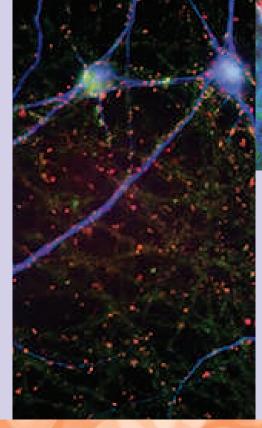
Research to Prevent Blindness Awards since 1998

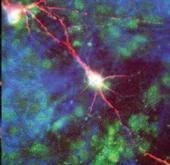
Shared Faculty Awards for Department of Ophthalmology \$1,080,000

Dr. Erik Ullian's glaucoma research has progressed with the support of a \$200,000 Career Development Award from RPB.









Retinal ganglion cells require signals from neighboring cells in the retina to form and receive synapses.

Individual Faculty Awards

Career Development Awards	
Nisha Acharya, MD	\$200,000
Emmett T. Cunningham, MD, PhD, MPH	\$165,000
Thomas M. Lietman, MD	\$180,000
Hilary E. Beggs, PhD	\$200,000
Jacque L. Duncan, MD	\$200,000
Erik M. Ullian, PhD	\$200,000
Special Scholars Awards	
David Krizaj, PhD	\$50,000
Erich C. Strauss, MD	\$50,000
Lew R. Wasserman Merit Awards	
Jonathan C. Horton, MD, PhD	\$55,000
Joan M. O'Brien, MD	\$55,000
Thomas M. Lietman, MD	\$60,000
David W. Sretavan, MD, PhD	\$55,000

Physician-Scientist Awards Joan M. O'Brien, MD Daniel M. Schwartz, MD Jacque L. Duncan, MD	\$55,000 \$55,000 \$60,000
Senior Scientific Investigator Awards Matthew M. LaVail, PhD Todd P. Margolis, MD, PhD Julie L. Schnapf, PhD	\$60,000 \$65,000 \$75,000
International Research Scholar Award Kyoh-Ichi Takahashi, PhD	\$2,000

Faculty News



Richard L. Abbott, MD

Invited Speaker and Chairman: Evidence-based medicine scientific program, World Ophthalmology Congress, Hong Kong, China

The World Ophthalmology Congress attracted more than 10,000 ophthalmologists from around the globe. Dr. Abbott organized the Evidence-Based Medicine program, which consisted of three symposia

covering topics in retina, glaucoma, and clinical practice guidelines development. Dr Abbott serves as chair of the Evidence-based Clinical Guidelines Committee for the International Council of Ophthalmology and is involved in teaching the development of evidence-based clinical guidelines throughout Asia and Latin America.



Cynthia S. Chiu, MD

Recognition: Samuel J. Kimura Award for Excellence in Teaching

The ophthalmology residency program has awarded Dr. Chiu its top honor. As Assistant Residency Director, her contributions to the education of residents include a yearlong weekly lecture series on comprehensive ophthalmology and ophthalmic surgery, as well as

topic lectures on cataract surgery, eye trauma, and optics. She also teaches cataract surgery at UCSF and San Francisco General Hospital. In addition, Dr. Chiu gives lectures for the broader medical community on general ophthalmology principles.



J. Brooks Crawford, MD

Publication: Char, DH, Crawford, JB. 2008. Orbital invasion despite topical anti-metabolite therapy for conjunctival carcinoma. *Graefe's Archive for Clinical and Experimental Ophthalmology*, 246:459-61.

This article demonstrates some of the pitfalls of an emerging treatment for malignant tumors of the conjunctiva.



Shan C. Lin, MD

Robert L. Stamper, MD

Appointment: Chair of the Ophthalmic Technology Assessment Committee (OTAC), Glaucoma Section, of the American Academy of Ophthalmology

The OTAC serves as the Academy's expert committee for the assessment of diagnostic and therapeutic technologies. Its reports

are published in the *Journal of Ophthalmology*, and are considered the Academy's official position papers on the selected topics. These reports educate the ophthalmic community on the best practices according to evidence-based research. Dr. Lin has served on this committee as a member for the past six years and has assisted in the creation of seven reports.



Invited Lectures: New approaches to the diagnosis of glaucoma, Neuroprotection, and New surgical approaches to glaucoma. Peruvian Glaucoma Society, Lima, Peru

Dr. Stamper was the invited international speaker for the second meeting of the Peruvian Glaucoma Society. Speaking

to glaucoma experts and general ophthalmologists over a three-day period, he discussed new diagnostic technologies for evaluating the optic nerve structure and for assessing visual function; lectured on how potential new therapies such as gene manipulation can preserve optic nerve function in glaucoma; and updated Peruvian ophthalmologists on recent innovations in glaucoma surgery, both through discussion and hands-on surgical demonstration.

Ariah Schwartz, MD In Memorium

n internationally recognized leader in eye surgery, Ariah Schwartz, MD, died in August 2008 at the age of 89. He attended medical school at UCSF before joining the service during World War II. The love of his life was his wife Pauline, whom he met in his first class at UC Berkeley and married three months later.

In 1955, after a residency at UCSF and a fellowship at Harvard with Dr. Charles Schepens, the founder of modern retinal surgery, Dr. Schwartz returned to UCSF. He established the Retinal Surgery Unit of the Department of Ophthalmology and served as director until 1966. (**Dan Schwartz, MD,** its current director, is his son.) Dr. Schwartz taught at UCSF for almost 50 years and helped train more than 150 residents. In 1993, the alumni-faculty honored him as the Distinguished Alumnus of his UCSF Medical School class.

In the 1970s, following a visit to Israel, Dr. Schwartz established a retinal fellowship to bring an Israeli ophthalmologist to the Bay Area for training in modern retinal surgery. Dr. Schwartz then helped establish a retinal surgical unit in Tel Aviv. For his work in Israel, Dr. Schwartz was honored with the Dr. Landau Award in Ophthalmology. Dr. Schwartz had a busy private practice in Burlingame and was also active in the community, serving as a board member for several health-related nonprofit groups.

Speakers who shared remembrances at Dr. Schwartz's memorial service included Dr. Elliot Rapaport, Allan Brotsky, Dr. Alex Irvine, Dr. Devron Char, Dr. John Whitcher, Dr. Hubert Marcus, and his son Dan.

The family asks that donations in Dr. Schwartz's memory be directed to That Man May See, Department of Ophthalmology, 10 Koret Way, Box 0352, San Francisco, CA, 94143-0352.

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Thomas R. Baruch Joins Board of That Man May See

hat Man May See welcomes Thomas R. Baruch to its board of directors. Mr. Baruch is founder and managing director of the San Francisco-based CMEA Ventures, a venture capital firm with a focus on life sciences, high technology and energy, and materials investments. He honed his "early-stage" investment skills at Battelle Development Corporation, Exxon Corporation and New Enterprise Associates where he was a Special Partner.

He founded CMEA Ventures to pursue a lifelong interest with how investment discipline and strategy can nurture investment success in the application of exponential new technologies, such as Moore's Law and genomics, to building breakthrough companies that will transform markets. Mr. Baruch holds an engineering degree from Rensselaer Polytechnic Institute and a Juris Doctor degree from Capital University. He is a registered patent attorney and is also a member of the Board of Trustees of Rensselaer Polytechnic Institute and the Board of Trustees of the Berkeley Institute for Synthetic Biology (BISB). He serves on many public and private corporate boards.

His wife, Johanna, is an artist, who has served on the accessions committee of the San Francisco Museum of Modern Art. Mr. Baruch became interested in That Man May See through **Todd Margolis, MD, PhD,** director of the Francis I. Proctor Foundation for Research in Ophthalmology.

UCSF Alumnus of the Year Continued from page 4

His fellows worked at a large table in his office, rather than in isolation. "I enjoyed this kind of community relationship with the young doctors, where conversations and questions were always open. I lived in a fish bowl, but I enjoyed it," says Dr. Hoyt.

> Dr. Hoyt became a teacher of teachers, making an impact around the world.

With the support of his fellows, he authored 274 published papers. His students became his family, and he takes a father's pride in their enormous accomplishments. (See "Think Global, Train Local," *Visions*, Summer 2008.) He feels privileged to have worked with ophthalmologists and neurologists from Japan to Spain and Russia to Venezuela.

Laurels and Lessons

The William F. Hoyt Endowed Chair, held by Jonathan Horton, MD, PhD, was established in 1996 as an appropriate tribute by faculty, alumni, patients, That Man May See, and Dr. Hoyt's students and colleagues around the world. Dr. Hoyt continues to provide "harp lessons" to residents and fellows, though he has relinquished his clinical practice and his fellows program.

Travel to international meetings allows him to encourage, advise, and stay in touch with his many protégés. He has made his impressive library of optic disc photos freely available online at the Neuro-Ophthalmology Virtual Education Library, extending his teaching into the future. You can learn more about these fascinating images of the optic disk at http://ucsfeye.net/visions.shtml or by searching the Internet for "Hoyt collection." •

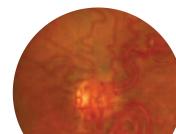
The Teacher Continues to Learn

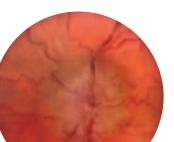
The evolution of Bill Hoyt's work, as seen through his teachings and numerous scientific articles, has pointed out quite clearly that human knowledge is almost always provisional – simple hypotheses exposed to reflection and critical revision over time.

I still remember the three-tome third edition of his *Clinical Neuro-Ophthalmology*, written in collaboration with Frank B. Walsh. "The Book" as his students call it with reverential admiration, stands in his library literally packed with strikeouts, deletions, and scribbled side notes, highlighting what once was deemed truthful but no longer is. This reminds me of Don José Ortega y Gasset's admonition: "When you teach, don't forget to teach how to doubt what you are teaching."

- Rafael Rufi-Mendoza, MD













This optic disk is normal. Compare it with the diseased and damaged optic disks above. You can learn which image indicates liver disease and which indicates a brain hemorrhage at http://ucsfeye.net/visions.shtml

Disease and the Optic Disk

The optic nerve links our eyes to our brains. Optic pathways in the brain are intimately linked with the eyes, so disorders within the cranium often express themselves in the eyes, providing diagnostic clues. Patients with intracranial issues frequently have visual symptoms – blurriness or limited field of vision, for example – due to destruction or pressure on some portion of the optic pathways. Neuro-ophthalmologists are trained to diagnose many of these disorders. Some familiar disorders that can be diagnosed by neuro-ophthalmologists include multiple sclerosis, cerebral tumor, aneurysm, and brain hemorrhage.

VISIOIS Fall 2008

<u>SIGHTINGS</u>















That Man May See New Faculty Reception

1 TMMS boardmember Paul Gomory and Béatrice Gomory were hosts at a reception for new UCSF Ophthalmology faculty members. Here **Jonathan Horton**, **MD**, **PhD**, and **Béatrice Gomory** are flanked by guests **Terry Whitney** (left) and **Walter Conway**.

2 New faculty member **Tina Rutar**, **MD**, and her husband **Martin Stadtmueller** are welcomed by **Vivienne** and Kimun Lee.

3 TMMS honorary board member **Ted Tight** meets new faculty member **Bennie Jeng**, **MD**.

Residents Graduation Day

4 Assistant Residency Director **Cynthia Chiu**, **MD** (left), joins second-year residents **Marielle Young**, **MD**, and **Jennifer Taylor**, **MD**, in congratulating the new graduates.

⁵ Graduating residents of the class of 2008. Pictured left to right are Alejandra de Alba, MD, MPH; Julie Chen, MD; Mark Penessi, MD, PhD; Jesse Biebesheimer, MD; and Michael Yoon, MD.

6 After the graduation ceremony in the beautiful Kalamonovitch Library (Parnassus campus) Shan Lin, MD, Residency Director (left), talks with Robert Stamper, MD, Tien-An Yang, MD, PhD; and Jorge Alvarado, MD.

Goodbye to Kim Ross

8 *Kim Ross,* administrative analyst, dedicated her career to the faculty at UCSF. She will continue her ophthalmology work at the Association for Research in Vision and Ophthalmology.

Staff Appreciation Day – UCSF Ophthalmology

⁹ At the 2008 Staff Appreciation Day, the first annual Yvonne Alden Award was given to surgical technician **Tomás Hernandez** (left). The new award, which will honor an outstanding staff member each year, is named as a memorial tribute to Yvonne Alden, who was a UCSF Ophthalmology technician leader and inspiration to all staff during her more than 20-year career in the department. Her husband **Norman Mattox** (right) joined Dr. Jorge Alvarado in presenting the award at the ceremony.

7 Julie Chen, MD, shares her achievement with infant son Philip Lee, as Shan Lin, MD, presents her residency diploma.

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, and educational opportunities for residents and fellows.

To make a gift of cash or securities, go to www.ucsfeye.net/tmms/shtml or contact Danielle Pickett at 415.476.4016 or pickettd@vision.ucsf.edu. Checks are payable to That Man May See.

That Man May See

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Dr. Robert Stamper Lifetime Achievement Award

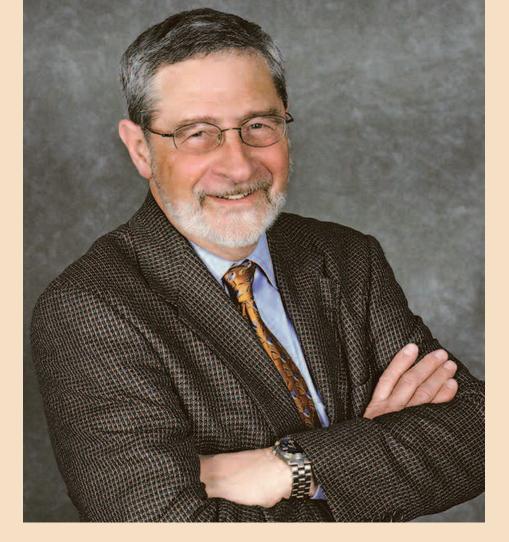
he study and treatment of glaucoma is a life's work for Robert Stamper, MD. A beloved clinician and meticulous scientist, he has long been a participant in the American Academy of

Dr. Stamper was one of the founding members of the AAO's Glaucoma EyeCare Project, which provides free diagnosis and initiation of treatment when indicated for those at high risk

It is my great pleasure to share what I have learned about glaucoma with colleagues and future ophthalmologists."

– Dr. Robert Stamper

Ophthalmology (AAO). He has just been awarded the professional society's Lifetime Achievement Award, given to those who have devoted their energy to furthering the goals of the academy – improving public health and supporting excellence in the profession. "It is my great pleasure to share what I have learned about glaucoma with colleagues and future ophthalmologists," he says. for glaucoma. He has assisted in the development of the AAO professional book series on glaucoma and written monographs on intraocular lenses. He has served as chair of the Allied Health Committee, which develops training materials for those individuals who assist ophthalmologists in their offices and the operating room. He has contributed to the work of a number of other committees.



For the last 30-plus years, he has taught many courses to other ophthalmologists on how to perform glaucoma surgery, how to manage complications arising from that surgery, and glaucoma diagnostic techniques and medical treatment at the AAO annual meetings. •

Recent Gifts to That Man May See

Thank you for generous contributions and pledges for vision research, teaching, community outreach, and patient care received between July 1, 2008, and October 15, 2008.*

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*Due to space restrictions, only gifts of \$250 and greater are listed.

50TH ANNIVERSARY of the Frederick C. Cordes Eye Society

Thursday and Friday, April 2-3, 2009

Scientific Meeting Program: Giannini Auditorium at the Bank of America Building 555 California Street, San Francisco

Gala Dinner Banquet: Stanford Court Hotel, spouses encouraged!

To make a reservation or for more information, members of the Cordes Society should email **cordes@vision.ucsf.edu**.

Note: The 2009 Cordes meeting will immediately precede the American Society of Cataract & Refractive Surgery (ASCRS) annual meeting, which opens in San Francisco on Saturday, April 4.

Special Events Mark Cordes Society's 50th Anniversary

2009 marks the golden anniversary of the Frederick C. Cordes Eye Society, the alumni association for graduates of residency and fellowship programs at UCSF Ophthalmology. The society is organizing special events for its annual spring meeting in San Francisco.

Plans are underway for a full day of scientific presentations by luminary graduates and a gala dinner banquet. The April 2 and 3 meeting will be an opportunity for members to hear from out-of-town alumni and to reflect on the collective accomplishments of the Cordes Society on the national and international stage.

"Fifty years is a proud achievement for our UCSF ophthalmology alumni society," says Cordes Society President **David Chang, MD**. "I invite all Cordes alumni to attend this special anniversary event to honor three special faculty mentors – Drs. Creig Hoyt, Alex Irvine, and John Stanley – and to celebrate with the entire UCSF ophthalmology family."

Dr. David Copenhagen Engineer-Turned-Physiologist Wins Alcon Award

or his seminal contributions to scientific understanding of the fundamental mechanisms that enable the eye to "see" and to develop properly, David Copenhagen, PhD, has been awarded the 2008 Alcon Research Award. The Alcon Research Institute, composed of all the Alcon Research Prize winners, convenes an annual meeting of these major contributors to ophthalmology and the visual sciences with the goal of advancing understanding of and solutions for ocular health.

After attaining his bachelor's degree in electrical engineering at Stanford University and working for two years on the design of a proton atom smasher, David Copenhagen returned to graduate school at UC Berkeley. There he focused his analytical and engineering skills to study and learn about the physiology of the retina.

Following completion of his PhD and publication of his research work, Dr. Copenhagen the retina. He and his colleagues have made pivotal discoveries of the neurochemicals used by retinal neurons to communicate with one another. These studies have led to an understanding of how the interconnections

Dr. Copenhagen has made pivotal discoveries of the neurochemicals used by retinal neurons to communicate with each other.

joined the lab of Dr. Kenneth Brown, an eminent visual physiologist at UCSF, for further postdoctoral training. Upon completion of his postdoctoral research project, which proved to be the source for several high-impact scientific articles, he was appointed assistant professor in the Departments of Ophthalmology and Physiology at UCSF.

Dr. Copenhagen's research focuses on the neurobiology of

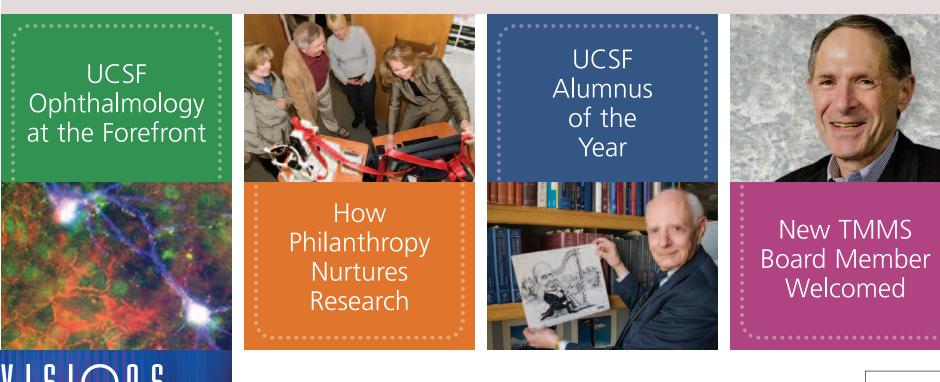
between the 100 million neurons in the retina function as a biological "computer."

Recently Dr. Copenhagen and his colleagues discovered that the retinal "computer" circuits are not all wired together from the time that the eye forms in the embryo, but that instead they mature slowly after birth. Most strikingly, the normal development of some of these cellular-level communications networks requires light and



visual images. Basically, many circuits in the retina have to be trained during infancy to link together correctly.

His laboratory work has been funded continuously by grants from the National Institutes of Health and with the generous help of additional funds from That Man May See. He has trained numerous students and postdoctoral fellows who have gone on to establish their own research careers. The Alcon Research Award includes a \$100,000 cash prize and is one of the most prestigious awards one can receive as a vision scientist. Dr. Copenhagen directed the greater portion of his award to That Man May See to further research in ocular disease. •





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