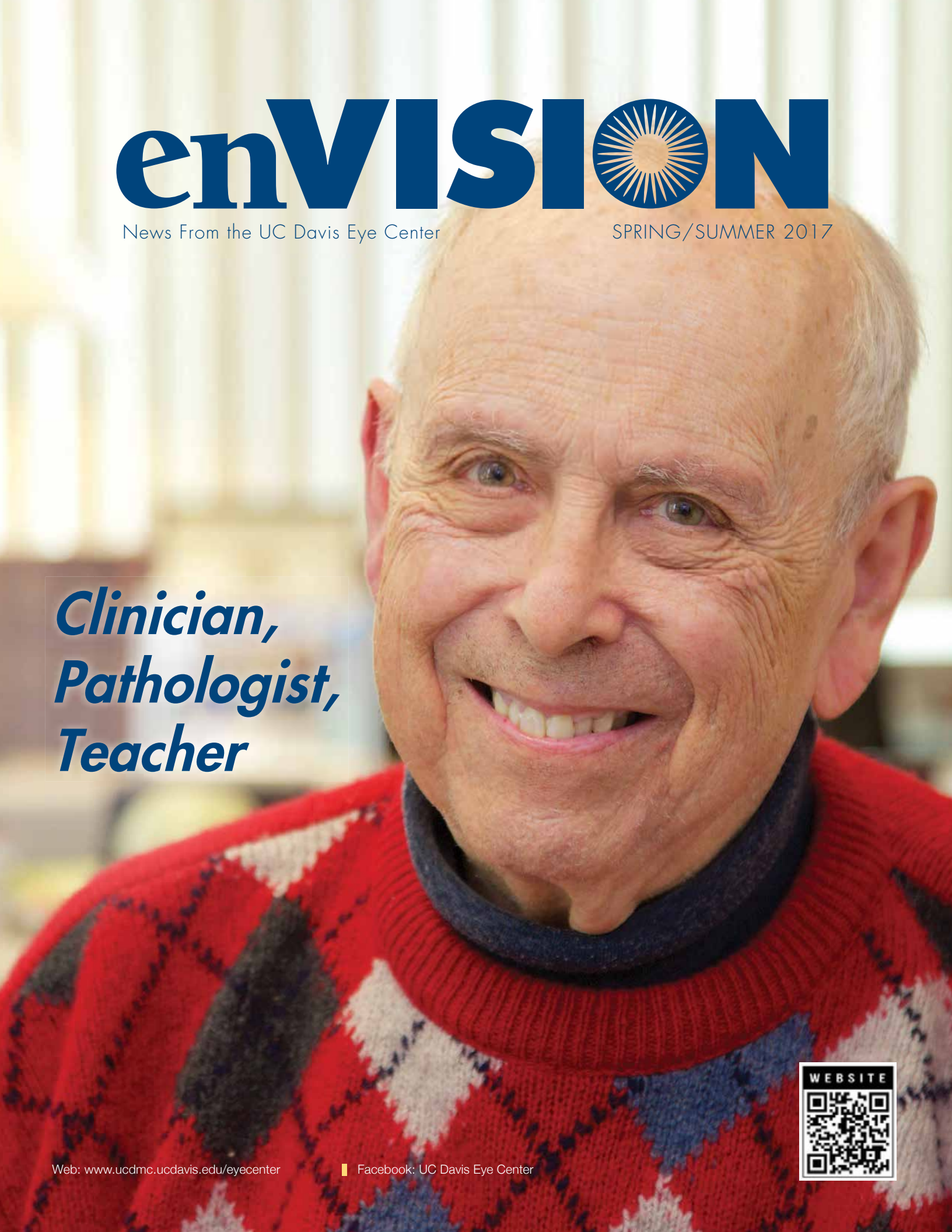
enVISION

News From the UC Davis Eye Center

SPRING/SUMMER 2017



Clinician, Pathologist, Teacher

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UC Davis Eye Center
EXECUTIVE ADVISORY COUNCIL
2016-17

Our Vision

Our vision is to be the world's transformational leader in collaborative vision research and in the development of cures for blinding eye disease from cornea to cortex.

Our Mission

We will realize our vision through pioneering collaborative vision research, providing state-of-the-art, world-class eye care, and training superbly prepared ophthalmologists and vision scientists.

From the Chair's Desk

Several years ago, I received an envelope in the mail from one of my patients with a note indicating that she wished to donate to support eye research in the department.

She was very grateful for the results of a recent eye surgery. In the envelope I found $2.73 in change. I was deeply touched by this gift, because I knew that this patient had given to her limit. Had it been 2.73 million dollars, I would have been no more appreciative. This beautiful gesture made me understand the huge impact that we have on those we are privileged to care for as ophthalmologists. Those of us who work here realize this every day, and it is what continues to inspire us.

As the department has continued to grow, both in size and capabilities, we realize that, to quote Dr. Seuss, "it's not about what it is; it's about what it can become." Our young department is poised on the verge of a new stage in its development—a stage that will bring about an expansion of clinical services and capabilities, broadening of the research effort, and hopefully, a state-of-the-art new facility to house these programs. Our dedicated faculty is focused on making this happen. It will take a lot of hard work and much more than $2.73 to achieve the vision, but with the commitment of our faculty and staff to quality care and excellence in research, the dedication of our alumni, the good counsel of our advisory board, and the allegiance of our patients and our university, we will surely witness a move to greatness.

I thank all of you who have been so important to the Eye Center.

Mark J. Mannis, M.D., F.A.C.S
Fosse Endowed Chair in Vision
Science Research
Professor and Chairman
Department of Ophthalmology & Vision Science
University of California Davis, Eye Center

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is published by the UC Davis Eye Center. For more information about ophthalmology services and vision research at UC Davis, visit our website at: www.ucdmc.ucdavis.edu/eyecenter or call (916) 734-6435.

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ALAN M. ROTH, M.D.

Clinician, Pathologist, Teacher

BY: MARK J. MANNIS, M.D.

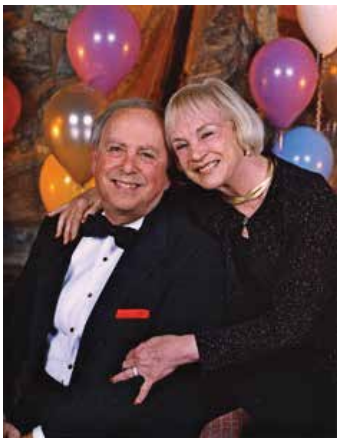
Hunched over the desk in his office, peering into the laboratory microscope—his desk piled with books, journals and glass slides—Alan Roth spent his career exploring the mysteries of eye disease at the cellular level. With a long career as a comprehensive ophthalmologist delivering care to his patients and as an ocular pathologist, determining the causes of disease at the microscopic level, Dr. Roth distinguished himself as *a clinician, as a pathologist, and as a teacher.*

A native of Long Island, New York and the son of an optometrist, Alan Roth was educated in the public school systems in the Bronx and Long Island. After two years of undergraduate school at New York University, he was given the opportunity to enter the school of optometry at Columbia, from which he graduated in 1954. While working as an optometrist in New York City, he had the opportunity to join the armed forces, and he entered the United States Army as an optometrist. Commissioned as a Second Lieutenant, he was eventually stationed at Governor's Island in New York City and practiced optometry there for two years. Then, convinced by a visiting civilian ophthalmologist that he should go to medical school and get his M.D. degree, Dr. Roth matriculated at the medical school of New York State University at Syracuse, where he also met his first wife and married in his sophomore year.

Medical school was followed by a move across country to California, where he completed his internship and a residency in ophthalmology at the Long Beach VA. During his training, he spent time at the Jules Stein Eye Institute at UCLA and rotated through the pathology lab. He met Bob Foos, who was a pathology fellow at the time and was to become the ocular pathologist at Jules Stein. Dr. Roth became Dr. Foos' first fellow-in-training and at the same time completed a three year residency in general pathology. During Roth's fellowship, the Jules Stein Eye Institute opened, and Alan was on the faculty there for a little more than a year.

In 1972, the first full-time chairman of the newly formed Department of Ophthalmology at UC Davis, Jerry Portney, along with Byron Demorest, interviewed Alan and convinced him to join the faculty at the fledgling UC Davis department. The tiny department occupied three rooms in the basement of the main hospital, and Alan had a busy practice that included comprehensive medical and surgical eye care, the training of residents, and, of course, eye pathology.

In 1976, John Keltner joined the faculty and after the untimely death of Dr. Portney, became department chair. In that same year, Alan Roth met his second wife, Barbara—a trained orthoptist from San Francisco who had worked in the offices of Dr. Jampolsky in San Francisco and Dr. Demorest in Sacramento before joining the department at UC Davis as an ophthalmic technician. Barbara and Alan married in 1976 and moved to Carmichael where they lived for the next 28 years.



Alan Roth developed a fine reputation as an ocular pathologist and for many years did his own processing and billing for the practice, eventually turning over the latter to the Department of Pathology at UC Davis. He has been an active member of the Verhoeff Society – the society established in 1947 dedicated to ophthalmic pathology. At home, Alan has been a revered and much respected teacher, training dozens of residents over his career.

"Dr. Roth was always someone on whom you could rely to have an answer for a question. He'd base it on pathology—something cut and dried (so to speak), and his authority was unquestionable."

–ROBERT MILLER, M.D.

"Dr. Roth was very knowledgeable and always approachable. How was I going to learn all of this material? He assured me that it was just time and experience. He wanted us to learn. Across the hospital campus grounds was Dr. Roth's eye pathology lab. Not far, but the stroll outside, on a beautiful Sacramento fall day, set the mood. His office was truly a mad-lab: overflowing, the private space of an eccentric. But he taught us with a calm and friendly presence that made it unforgettable."

–ROB WENDEL, M.D.

Outside of work, Alan and Barbara cultivated their strong interest in opera. Barbara served on the Board of the Sacramento Opera while Alan devoted his efforts to the Merola Opera Program to recruit talented young singers to the field. With special love for Wagnerian opera, Barbara and Alan enjoyed season tickets to both symphony and opera in San Francisco and Sacramento.

When asked about what characterized working at UCD from the infancy of the department through its period of amazing growth, Roth commented, "UC Davis is so collegial and friendly. It has been a joy to work in the Department and I looked forward to coming in every day." He continues to attend Grand Rounds and other educational events regularly.

"I loved walking down the hall at the old Med Center to find Alan behind his always overly cluttered desk to find him listening to classical music, and the sweet smell of his pipe with its delightful aroma just making my day better! He would tell us about driving to the City for the opera, and it stimulated me to pursue culture in my life."

–ROBERT MILLER, M.D.

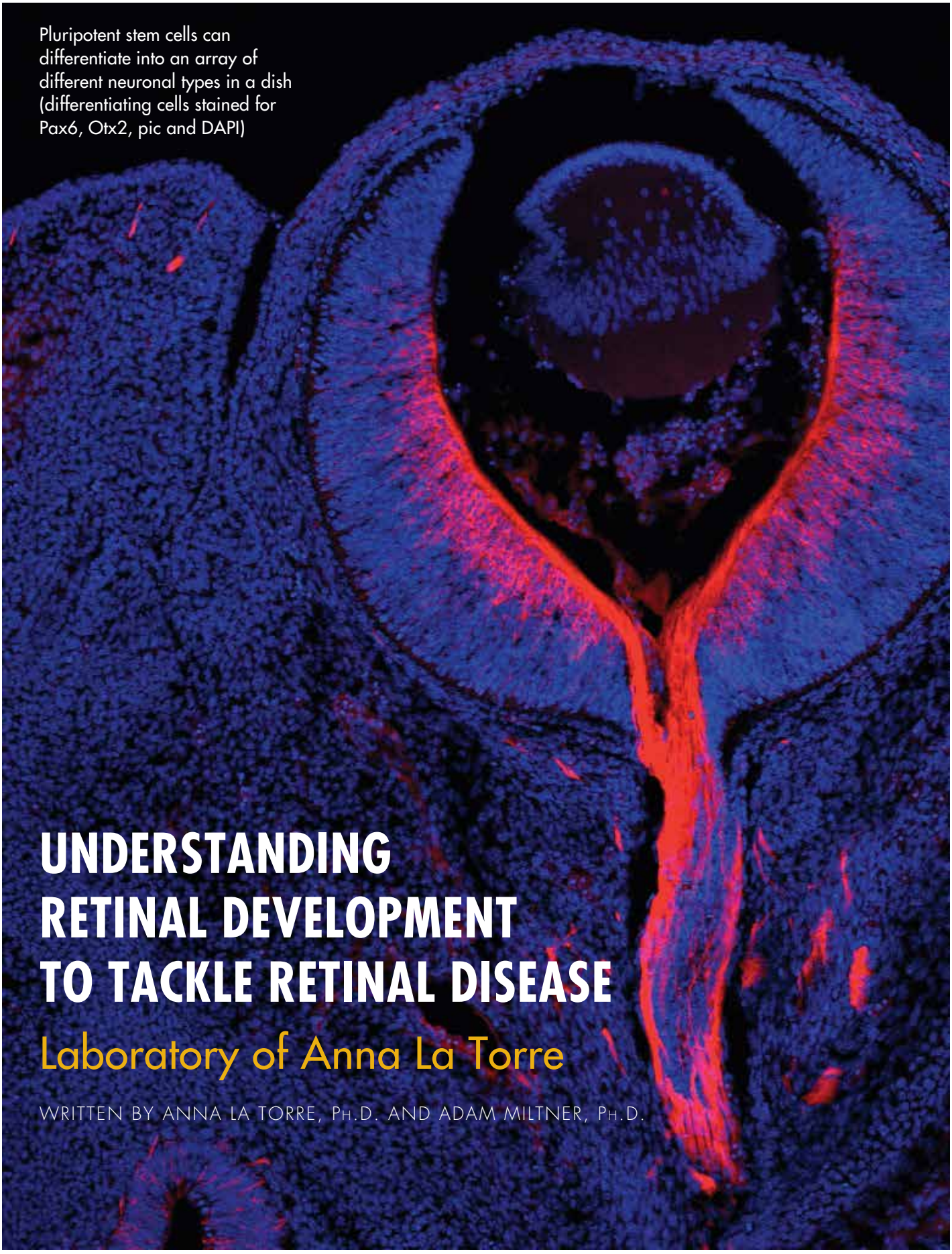
Alan "retired" officially in 1997 but returned to work part time to see patients and serve as a pathologist and teacher. Since Barbara's death in 2014, Alan has continued to devote his time to enjoying music, to watching Giants baseball games, and to travel.

"Without question, Dr. Roth was my favorite faculty to assist me in cataract surgery. While he would never take over the instruments, his amazing ability to use the perfect anatomic reference to explain what he wanted, would be the ultimate guide to a successful case."

–ROBERT MILLER, M.D.

Alan's legacy is a generation of practitioners who worked with him in the path lab, the clinic, and the operating room. He was honored by the residents on the occasion of his retirement with recognition for a lifetime of dedicated and skilled teaching.

Dr. Roth plans to memorialize his career and his life with Barbara by establishing the Alan and Barbara Roth Ophthalmic Pathology Laboratory at UC Davis in the new Eye Center facility with a gift of $500,000. Alan is admired by his friends and colleagues as a teacher, a man of culture, a devoted husband and father, and one of the founding faculty at UC Davis Eye Center. His colleagues and his many students continue to laud a life of teaching, investigation and service.

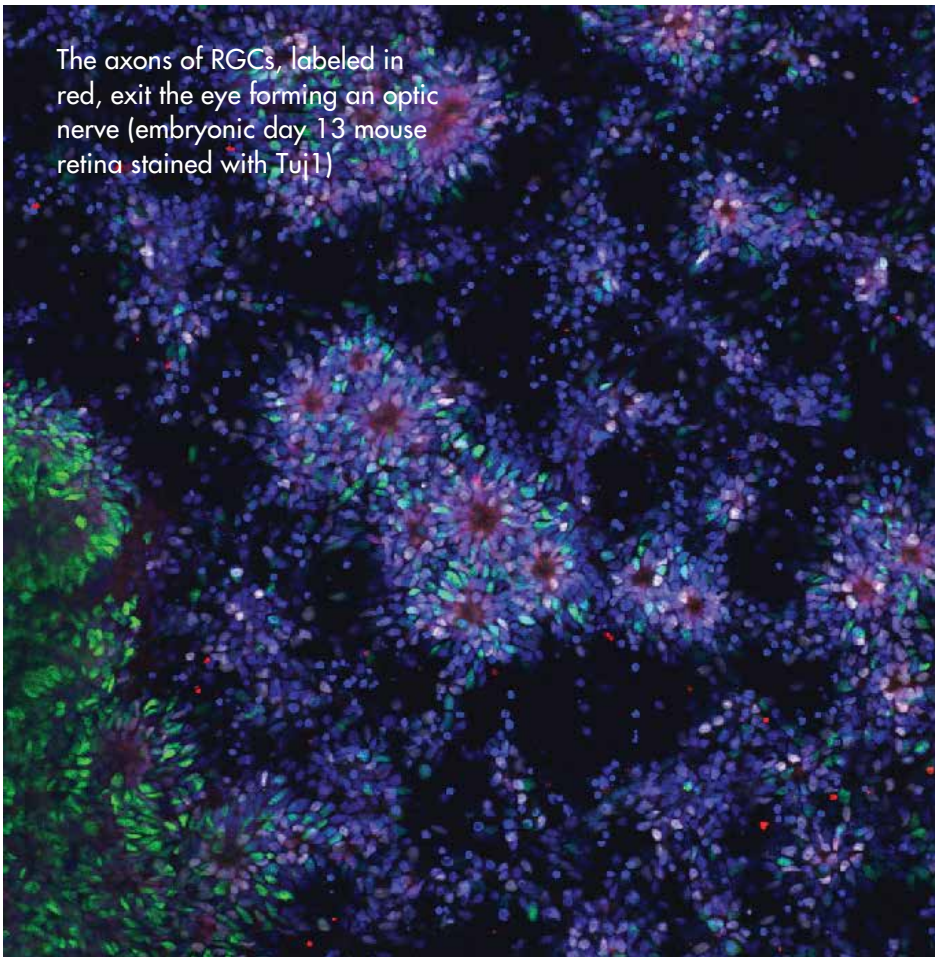


Pluripotent stem cells can differentiate into an array of different neuronal types in a dish (differentiating cells stained for Pax6, Otx2, pic and DAPI)

UNDERSTANDING RETINAL DEVELOPMENT TO TACKLE RETINAL DISEASE

Laboratory of Anna La Torre

WRITTEN BY ANNA LA TORRE, PH.D. AND ADAM MILTNER, PH.D.



The axons of RGCs, labeled in red, exit the eye forming an optic nerve (embryonic day 13 mouse retina stained with Tuj1)

An average of 200,000 photos are uploaded to Facebook every minute and 657 billion photos are uploaded to social media outlets every year. Social media skeptics might be surprised by these whopping numbers but to vision scientists they make perfect sense. Most of the information that the human brain receives is visual and, when our eyes are open, vision accounts for two-thirds of all brain activity. While in other species such as dogs or bats, the senses of smell or hearing are essential; humans are unquestionably visual beings. Sight is our most vital sense to perceive and navigate the world and, as a result, vision loss can have devastating impacts on everyday life.

One of the leading causes of blindness worldwide is a group of diseases collectively called glaucoma. The World Health Organization has determined that over 4.5 million people are legally blind as a result of primary glaucoma, accounting for more than 12% of all global blindness; and the total number of suspected cases of glaucoma is estimated at around 60 million people. Because our society is rapidly aging, these numbers are expected to skyrocket in the next years. Hence, the urgent need for public health action and research to tackle these diseases cannot be overstated.

The ideal tactic for glaucoma would be to avert the onset of the disease by means of preventive treatment before vision is lost. However, these methods either have not been developed or are imperfect and, sadly, many people with glaucoma are affected by a slow but progressive vision loss caused by the deterioration of a specific type of cell in the retina—the retinal ganglion cells. There are a variety of treatment options to control the progression of the disease but the damage to the retinal ganglion cells and the optic nerve, the wire-like nerve fibers that connect the retinal ganglion cells with the brain, is permanent.

In the La Torre laboratory, we investigate the use of pluripotent stem cells to replace the cells damaged in glaucoma. At the beginning of life, embryos are made of pluripotent stem cells, which are cells with extraordinary abilities: they can divide many times to self-renew, but they can also change, differentiate and become any type of cell. During the normal development of an embryo, stem cells rapidly specialize to make all the tissues required to build a human being, including the retina.

For decades, scientists from all over the world have studied the mechanisms that control embryonic development and today we understand many of the processes that orchestrate changes in the stem cells. Stem cells constantly receive instructions from a wide variety of molecules that provide the blueprints to build tissues and organs. The goal of our laboratory is to mimic some of these processes in a petri dish to generate high yields of retinal ganglion cells that could potentially be used for transplantation to replace lost retinal ganglion cells in patients with irreversible vision loss.

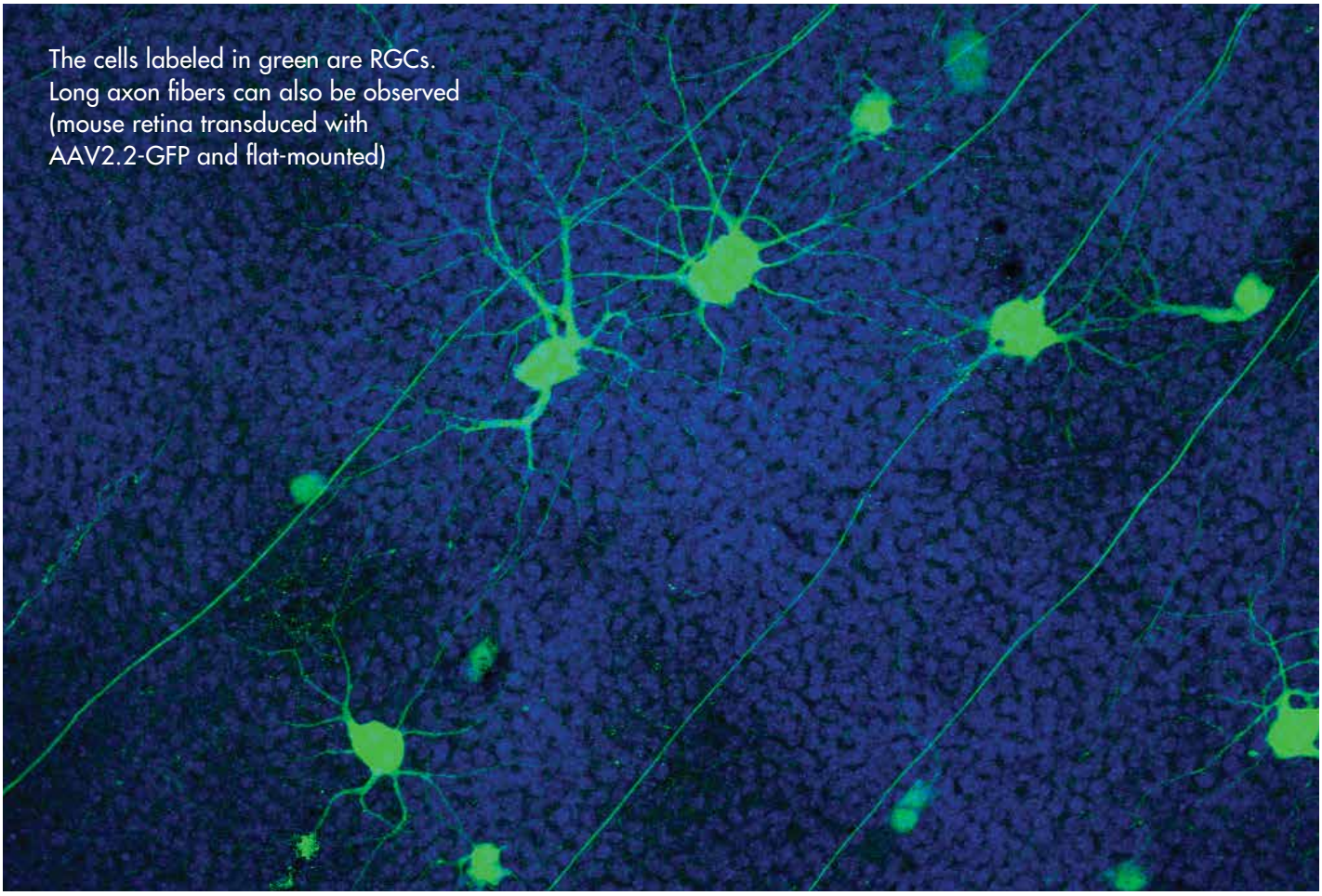
With this goal in mind, we have developed a method that allows us to make "mini-retinas" in a dish. By providing stem cell cultures with specific molecular instructions, the cultured cells are able to differentiate and successfully become retinal cells. These mini-retinas are three-dimensional organized clusters of cells that are small enough that they can be sustained without blood supply but they are large and diverse enough to reproduce many characteristics of a normal retina, including cell composition, layering and physiological properties. These methods allow us to glean novel insights about the development and biology of the healthy retina and also to learn about pathological processes.

In 2006, Nobel Prize winner Shinya Yamanaka and his colleagues identified the conditions that would allow researchers to "reprogram" skin cells into becoming stem cells again. These induced-Pluripotent Stem Cells (iPSCs) can be obtained from the patient's tissues, providing an immune-matched source of pluripotent stem cells, and relieving this technology of many ethical considerations.

In our hands, iPSCs behave exactly like other sources of pluripotent stem cells and the cells that we produce from iPSCs are, in many ways, very similar to the normal retinal cells. Yet our method is far from perfect. One of the main obstacles we face is that many of the cells that we produce are not retinal ganglion cells but other types of retinal cells. However, this is not unexpected since retinal ganglion cells represent only a small fraction of all the cells in a human retina.

To overcome this problem, we are working together with other researchers at the UC Davis Center for Vision Science (CVS). In particular, we collaborate with Dr. Nadean Brown and Dr. Thomas Glaser (Department of Cell Biology and Human Anatomy), who are world-leading experts in the genetic mechanisms that control the production of retinal ganglion cells during mammalian development. The underlying idea of this collaborative effort is that a better understanding of the molecules and signals that control retinal ganglion cell differentiation could help us devise better stem cell protocols to ultimately increase the number of retinal ganglion cells that we make in a petri dish. Promising results from our lab indicate that adding some of the molecules that naturally drive retinal development in the media that we use to grow the cells could indeed improve the efficiency of the method.

These technologies are the first necessary step to offer glaucoma patients hope for a cure, and while it is our belief that stem cell transplantation therapies will prove valuable for glaucoma and many other retinal diseases, a critical step in the development of these treatments will be to test the ability of the cells to integrate in the patient's retina after transplantation.



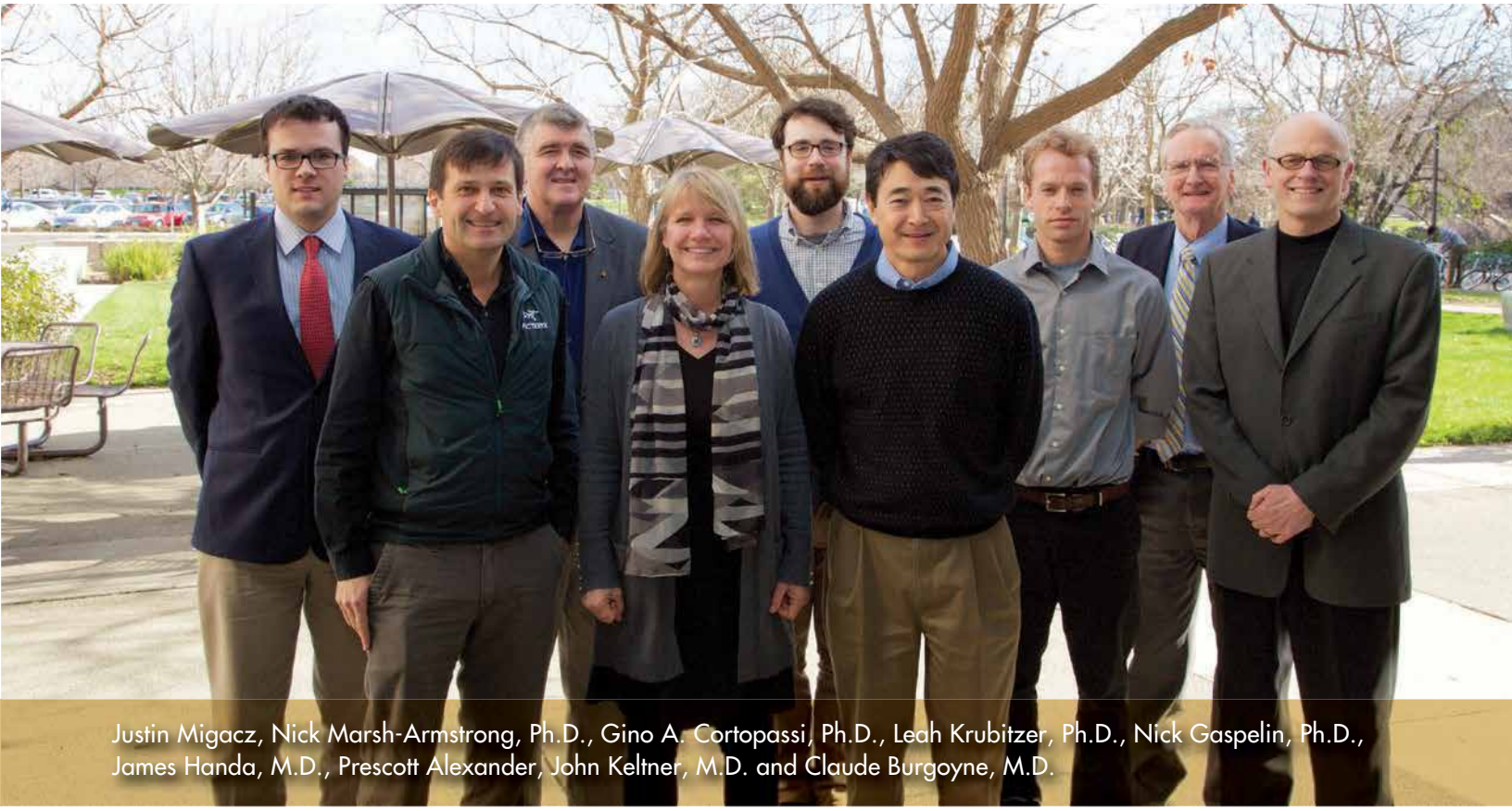
The cells labeled in green are RGCs. Long axon fibers can also be observed (mouse retina transduced with AAV2.2-GFP and flat-mounted)

During development, the axons (or wiring fibers) of the retinal ganglion cells take an incredible journey to exit the retina, form an optic nerve, and establish connections to specific regions of the brain. Cell replacement therapies will only be successful if the transplanted cells can restore this connectivity. Currently, we still do not know if the cells that we produce in the lab will be able to accomplish this complex task or if they will need further engineering.

To answer this important question, we teamed up an exceptional group of engineers, biologists and clinicians led by Dr. Edward Pugh (Department of Cell Biology and Human Anatomy and Department of Physiology and Membrane Biology). Dr. Pugh, Dr. Robert Zawadzki and other scientists have worked relentlessly to launch the UC Davis RISE Eye-Pod Facility. This facility allows us to apply cutting-edge, non-invasive imaging technology to track the cells after transplantation.

With this new technology, we can test and visualize, for the first time, whether the retinal ganglion cells that we generate in the laboratory are able to reach the right layer in the retina, establish connections with the retinal circuitry and grow axons towards the brain.

Currently, treatments for glaucoma only slow down retinal ganglion cell death, but cannot reverse vision loss. By studying natural development we believe that we will be able to devise tools that we can use to produce donor retinal ganglion cells in a petri dish, without the need of donor tissue. By combining iPSC technology, the expertise of world-class vision researchers at UC Davis, and our collective knowledge of retinal development, we hope that one day the reality of reversing vision loss with retinal cell transplants is no longer a hypothesis, but a reality.



Justin Migacz, Nick Marsh-Armstrong, Ph.D., Gino A. Cortopassi, Ph.D., Leah Krubitzer, Ph.D., Nick Gaspelin, Ph.D., James Handa, M.D., Prescott Alexander, John Keltner, M.D. and Claude Burgoyne, M.D.

Center for Vision Science Symposium

BY: PAUL FITZGERALD, PH.D.

The UC Davis Center for Vision Science held its annual symposium on January 6, 2017. The symposium is a day-long event which features the vison research of UC Davis faculty, postdoctoral fellows, and graduate students, as well as keynote speakers from other universities.

The day began with a tribute to Larry Hjelmeland, Ph.D., who retired after more than 30 years as a UC Davis Ophthalmology faculty member. The opening two presentations were given by Cynthia Toth, M.D. and James Handa, M.D., who conducted research in Dr. Hjelmeland's lab while residents in Ophthalmology. Both have gone on to extraordinary careers as Clinician Scientists. Dr. Toth is the Joseph A.C. Wadsworth Professor of Ophthalmology and the Professor of Biomedical Engineering at the Duke Eye Center. Dr. Handa is currently the Robert Bond Welch Professor of Ophthalmology at the Wilmer Eye Institute, Johns Hopkins School of Medicine.

Top: Anna Hjelmeland, Larry Hjelmeland, Ph.D., and Mary Kay Hjelmeland

Middle: Larry Hjelmeland Lecture

Bottom: Mary Kay Hjelmeland, David Katz, Ph.D., Anna Hjelmeland, Cynthia Toth, M.D., Larry Hjelmeland, Ph.D., Gerard Lutty, Ph.D., and Reena Sehgal

UCD presenters included Professors Leah Krubitzer, Gino Cortpassi, postdoctoral scholar Nick Gaspelin, Ph.D., and graduate students Prescott Alexander and Justin Migacz. The day closed out with a presentation by Nicholas Marsh-Armstrong, Ph.D., our most recent addition to the list of Vision Research faculty and UC Davis, whose positon was created through the generosity of Ernest Tschannen. Professor Claude Burgoyne, M.D., from Oregon Health Sciences University gave the John Keltner M.D. lecture, entitled "From Biomechanics to Proteomics – Toward the Mechanisms of Axonal Insult in Glaucoma." The quality and innovation embodied in the research presented highlights on the reason why UC Davis has climbed so high in national rankings of Vision Research programs. A day of presentations about the cutting-edge research conducted by members of the Vision Science community never fails to inspire and energize all who attended.

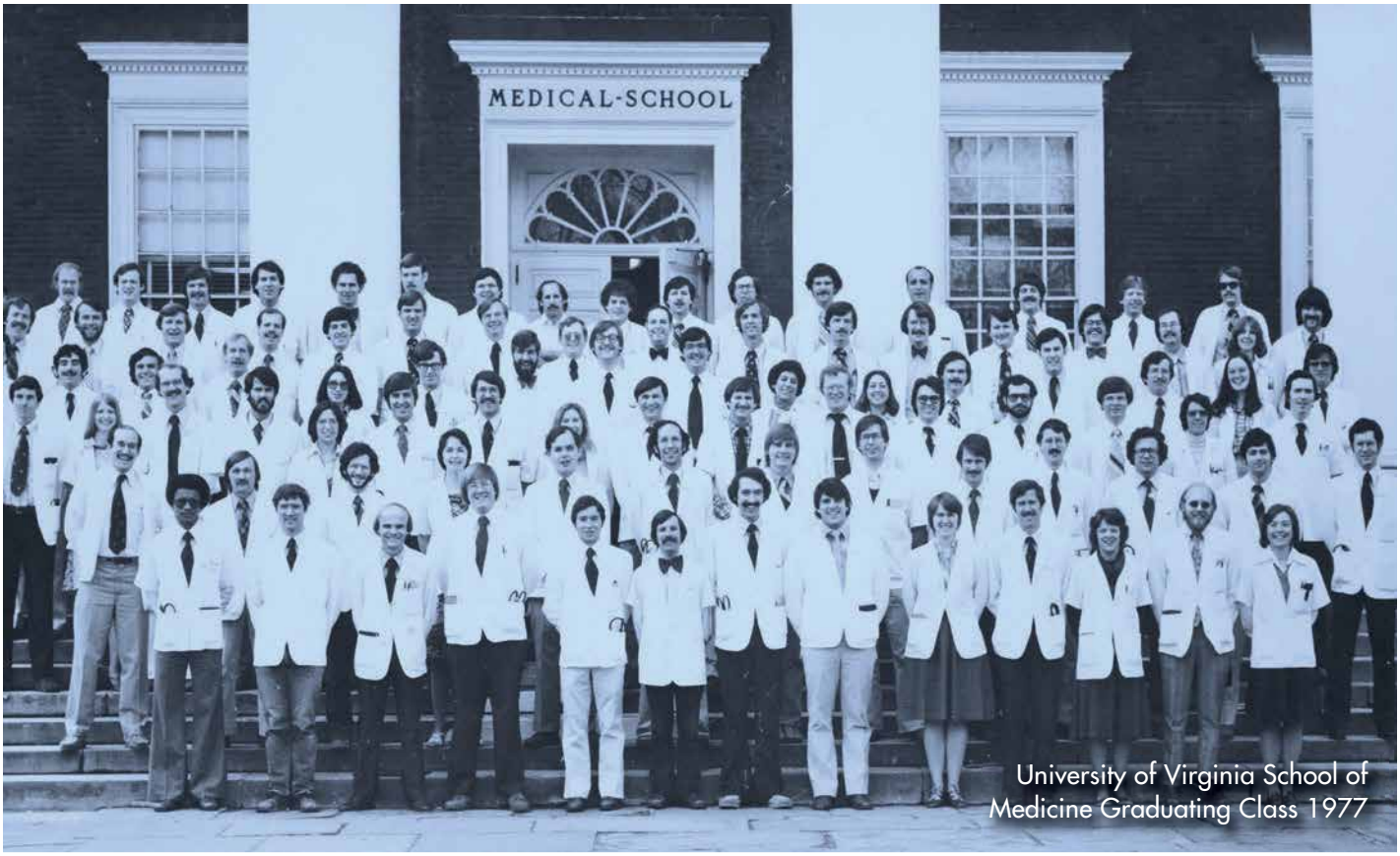
Tyrone Glover, M.D. and Thomaysa Glover

Tyrone Glover, M.D.

BY: ERIN J. BAUER

From Smithfield, Virginia to the UC Davis Eye Center Clinic, Dr. Tyrone Glover has left a mark on this world and the many lives he affected through his service, time and surgical talents. For more than 27 years, the Eye Center residents have benefited from Dr. Glover's dedication to educating and training the next generation of ophthalmologists. As a member of our volunteer clinical faculty (VCF), Dr. Glover spends hours each month teaching Eye Center residents surgery techniques and excellence in patient care, and provides aspiring ophthalmologists with exposure to a career path outside of academic medicine. Dr. Glover has been the recipient of the William Briggs Teaching Award for providing exceptional training and dedicated service to the department for 25 years. He is also a two time recipient of the VCF Outstanding Clinical & Surgical Teaching Award (1994, 2014). Easily and decisively, Dr. Glover has been an inspirational fixture amongst the VCF and a dear friend to the faculty.

Dr. Glover was very generous to give us more of his time and sat down for an interview to shed light on his career, family, and how he became part of the clinical faculty at the Eye Center.



University of Virginia School of Medicine Graduating Class 1977

- **Birthplace?**

I was born and reared in Smithfield, Virginia; the "Ham Capital of the World." Sacramento has been home to me and my family since 1989. You could say I've gone from "Ham Town" to "Sac Town."

- **Tell us about your family:**

My father worked at the Norfolk Naval Shipyard, and my mom worked at Smithfield Foods, a Fortune 500 Company in this town of < 10,000 residents. Although not college-educated, they encouraged me and promoted and supported my education. My uncle was a biochemist, which probably ignited my interest in science. I met my wife, Thomaysa, while attending Hampton University, and we married during our senior year at Hampton. Thomaysa is an educator and retired school board trustee. She served two four-year terms on the San Juan Unified Board with Jim Livingston (who is well known in the department) and served one term with the Sacramento County Office of Education. She has always been there to support me throughout my career. Together, we have two "30 something" sons and one grandson. My first son was born the second year of my residency and the second was born six months after my residency. Our eldest son and his wife are private practice lawyers in Denver and our youngest son works part time. He has an accounting degree and is studying computer science.

- **When did you first become interested in medicine?**

I always had an interest in science, but it wasn't until I was a junior in high school when I considered a career in medicine. My chemistry teacher asked if I ever thought about being a doctor. The seed was sown. After I graduated salutatorian, I went on to college and majored in biology. I spent a summer at Duke University Medical Center doing of all things, bladder cancer research. That solidified my decision to go to medical school. After college, I went to medical school at the University of Virginia and graduated as the only African American Student

in my class of 135. It was disconcerting to be the only student of any color, but not surprisingly, that pattern has followed me throughout my career. I completed a flexible internship and ophthalmology residency at Brooke Army Medical Center in San Antonio, Texas.

When did you first become interested in ophthalmology?

When I was in my second year of medical school I was leaning towards a cardiology career. Early in my third year, I did an elective rotation in ophthalmology and met Dr. Harry Flynn, who at that time was the Chief Resident at UVA. He became a mentor and inspiration to me. My career path changed literally overnight. To my delight, I would cross paths again with Dr. Flynn at Brooke Army Medical Center where he was one of the retina attendings. He is now the J Donald M Gass Distinguished Chair & Professor at Bascom Palmer. I also had 14 weeks of experience in ophthalmology before starting my residency. I learned that ophthalmology is a cottage industry; everyone I encountered was incredibly kind. Dr. Charles Leone Jr., M.D., our oculoplastic attending was also very influential on my career and desire to pursue oculoplastics as my specialty. Dr. Leone was highly skilled, a true gentleman and a fine attending. The Chair of our department was John Shock, who I considered a genius. He was extraordinarily smart but did not lord it over others. He would find retinal holes that no one else could see! He was also Bascom Palmer trained.

I hadn't thought about this before; seems to be a connection between Virginia and ophthalmology:

- Harry Flynn: UVA medical school and residency
- Tyrone Glover: UVA medical school
- Harinder Chahal, UVA medical school
- Charles Leone, UVA undergrad

Did anyone try and discourage you from specializing in ophthalmology?

I had a rheumatologist faculty advisor in medical school who told me he was disappointed in me for wanting to be "just an eyeball doctor." He handed me a book titled, "Ophthalmic Manifestations of Systemic Vascular Disease." He said, "Remember, it's all connected." I've kept that book on my bookshelf as a reminder.

What was the first surgery you performed?

My first surgery in residency was a blepharoplasty. I spent two months in plastic surgery as a medical student and as an intern and had done a lot of blepharoplasties, so for me it was easy. I always had an interest in art so plastics was a good fit for me. Furthermore it allowed me to be creative and think outside the box. I love the variety of cases. And, ophthalmology, I learned, was the perfect blend of surgery and medicine.

Can you share with us your career path?

During medical school I received the Army Health Professions Scholarship, which paid full tuition, books, equipment and fees, plus a small monthly stipend. With this I incurred a minimum three-year obligation to serve. So following residency, I spent three years in Frankfurt, West Germany at the 97th General Army Hospital as a Major and Assistant Chief of Ophthalmology. We left in 1984 and moved to United States Military Academy at West Point, New York, where I was the Chief of Ophthalmology at the Keller Army Hospital. After a year of treating cadets and retirees, I moved on to do a fellowship in Ophthalmic Plastic and Reconstructive Surgery at the Massachusetts Eye and Ear Infirmary under Arthur S. Grove, Jr., a brilliant surgeon and exceptional teacher. After I completed my fellowship, I spent three years as the Chief of the Oculoplastics Service at Brooke Army Medical Center. Dr. Mary O'Hara, now Director of the Pediatric Ophthalmology Services at the Eye

Center, and her husband Dr. William Lloyd, and I all knew each because of our training and teaching assignments at Brooke. I was also very proud of the fact that during my three years teaching, three of my residents went on to do fellowships in Oculoplastics. Two went to Mass Eye & Ear and one to Wills. After completing 12 years of active duty at the rank of Lieutenant Colonel and teaching/researching for three years I retired and joined Kaiser in Sacramento. I retired in 2013 after practicing at Kaiser for 24 years.

- **What is the most interesting medical case you have encountered?**

I thought I had seen it all until I saw a little girl in Haiti several weeks ago with anthrax involving her entire face and eyelids. The Haitian doctors knew more about how to treat it than I did. I was astounded but he was nonplussed.

- **What brought you to Sacramento?**

Besides my wife's brother who lived in Stockton, CA, we had no family living in California. But, I was being actively recruited by Kaiser Permanente in Sacramento, and they gave me an offer I couldn't refuse. Prior to moving to Sacramento, my knowledge of the city was limited to the King's coach at the time, Bill Russell, and later Ralph Sampson, a King's player who was a star at UVA. He remains the tallest human being I've seen up close.

- **How did you get involved with the Eye Center?**

I always enjoyed teaching and was introduced to the VCF at the Eye Center by Dr. Craig Berris, who had been a member of the VCF for about nine years. After speaking with Craig, I reached out to Dr. Mannis and soon started coming to the Cannery Building 1-2 times a month from 1 PM – 5 PM using my vacation time. When Dr. Keltner, who was the chair of the department at the time, learned I was using my vacation time to serve on the clinical faculty, he wrote a letter to my Physician in Chief and I was given "teaching time" to fulfill my commitment to UC Davis. When I started on the VCF, there were no faculty members who specialized in oculoplastics and reconstructive surgery. So, the residents would also rotate through my office to get some exposure and experience.

- **What does your average day look like as a VCF?**

I arrive at the clinic around 1 PM and join the resident—typically first year residents assigned to work with me that day. Some days we finish seeing patients in the clinic awaiting care, but most days we head straight to the hospital, review the cases and develop a game plan for rounding. The hospital is a maze so I depend on them to lead me around. It's a good 10,000 step work-out, so it keeps me in shape.

- **What has made our residents stand out to you over the years?**

Many of the residents have stood out as exceptionally bright, caring physicians. I developed a special bond with Bill Rosen, who spent as much as six weeks at Kaiser learning plastics while he was a resident at the UCD Eye Center. Bill went on to Dartmouth and did an informal fellowship in plastics. We continue to stay in touch and I tried to be a resource to Bill as he started his professional career. We enjoyed touring New Orleans together the last time the Academy meeting was there in 2014. I'm also very pleased to have worked with Hari Chahal, M.D., who is our first UCD Eye Center resident to do a formal, ASOPRS-approved fellowship in oculoplastics. I had the pleasure of working with Denise Satterfield, Anne Khong, Loan Tran, Jane Galustian and Daniel Rich on multiple cases. I also remember Esther Kim, who was very talented and did many surgeries while a resident. Quite a few of the residents have gone on to practice at Kaiser so that keeps us connected.


Tyrone Glover, M.D. and UC Davis residents

After 27 years, what keeps you involved as a member of the VCF?

I like being around bright, inquisitive people. Mark and the crew have done an excellent job in selecting our residents. I also love seeing the sparkle in their eye as they begin their formal training. The residents remind me that what we are doing is important. It's easy to become jaded or cynical as one ages in the profession. I learn a great deal from each of them, particularly on the medicine side of the profession. We also get to discuss career plans, practice settings, burnout and life in general. I have made some friends who are part of the VCF—James Ruben, Bob Miller and JP Perlman—to name a few.

What do you do when you're not at the Eye Center?

I have been involved with the Capital Medical Society (local affiliate of the National Medical Association) for a very long time and have been president since 2012. We work closely with MAPS (UCD Undergrads) and SNMA (UCD Medical School) in a mentoring capacity. I offered many shadowing opportunities in my office through MAPS when I was practicing. The students often come from disadvantaged backgrounds and are underrepresented in the medical profession. Hopefully, one of these bright, young students will pursue a career in ophthalmology and add to the diversity of the Eye Center. I am also involved with NEPO and the CMA Council of Health Professions and Quality of Care. In the past I've worked with Dr. Frank Sousa conducting interviews as part of the School of Medicine admission selection committee.

Let me rephrase the last question. What do you do for fun?

Travel! My wife and I love traveling and experiencing other cultures—Africa, Europe, South America, Central America, Hawaii, Mexico and the Caribbean. I am also a member of two men's book clubs so I am constantly reading, and I enjoy skiing and really bad golf! I also travel to Haiti each year with four other surgeons to volunteer at the Hôpital Sacré Coeur in Milot, Haiti through the CRUDEM Foundation. We see more than 600 patients in one week, and it is always challenging, yet a rewarding experience. I plan to go again next year.

What do we do particularly well in our training program and at the Eye Center?

I am very impressed with the quality of the eye team here at UC Davis. Mark Mannis has recruited a very diverse field of smart, talented leading edge clinicians and scientists. I am blown away by their presentations at the Annual Napa Scientific Symposium! Dr. Mannis must be extremely proud. The residents benefit directly from their love of teaching, enthusiasm, knowledge and surgical abilities. It's important that we prepare the next generation of ophthalmologists for the tsunami of baby boomers that will soon arrive at our shores. The residents here see a lot of patients and they do more cataract surgeries than most programs in the country so I think we are well prepared.

What are your hopes for the training program in the future?

Continue to do what we are doing and see a lot of patients. The first year residents spend a lot of time doing clinical work and could benefit from more time for didactic study. On the other hand, we do learn from our patients and the more you see, the more you know. Once you know it, you can see it. I am very impressed by the residents. They are walking, talking Wikipedias.

It was a pleasure getting to know Dr. Glover more and learn about his life story. Of course, we only scratched the surface on Dr. Glover's professional and personal achievements and his many contributions to the profession and to the community. I hope you all have the opportunity to meet Dr. Glover during a clinic visit, Eye Center event or at a symposium. We thank Dr. Glover for his outstanding commitment to our residents, patients and to the faculty at the Eye Center. Our program flourishes because of talented and compassionate people like Dr. Glover.

Tyrone Glover, M.D. and Thomaysa Glover

Teaching the Ophthalmologists of Tomorrow: VOLUNTEER CLINICAL FACULTY

BY: NANDINI GANDHI, M.D.

At the UC Davis Eye Center, our core faculty is complemented by 24 volunteer clinical faculty (VCF) who take time from their own bustling practices to teach our residents. Our VCF's are central to the educational mission of UC Davis, allowing us to provide our residents with diverse and well-rounded training that extends far beyond the walls of the Eye Center. Our VCF volunteer at least 20 hours a year for medical student or resident teaching at the eye center, though most spend upwards of 50 hours per year involved in direct teaching of our trainees. Some are alumni of the residency program, others are friends of the department from our community; all are dedicated to teaching the next generation of eye physicians and surgeons.

Our VCF volunteer their time in countless ways: many spend half days staffing our busy outpatient and inpatient consult service, providing invaluable support and educational guidance to our (exhausted and infinitely grateful) first year residents. Our current consult resident told me that he was able to perform several minor procedures with the volunteer faculty last week alone, and that he now feels more confident in his skills going forward. Others host residents in their own practices, allowing them to participate in the care of their own patients, and allowing the residents a rare window into different models of healthcare delivery. We are also grateful to those faculty who spend time lecturing in our Basic Science Series and who proctor our hands-on skills sessions with first year residents at the beginning of their training. Finally, several of our VCF proctor and oversee our student-run free clinics, contributing to the education of our medical students and to the health of our community.

I asked some of the residents to tell me the first words that came to mind when I said the words "Volunteer Clinical Faculty." Their responses were:

"Awesome"
"Godsend"
"Amazing"
"Love them"

"The very best addition to our program, ever." (That's more than a few words, but this particular resident literally could not help herself.)

The residents' words truly say it all. We are fortunate to have such a dedicated and committed group of volunteer faculty as a part of our department, and appreciate their central role in educating, guiding and mentoring our future ophthalmologists.

Dr. Yiu Goes to Washington

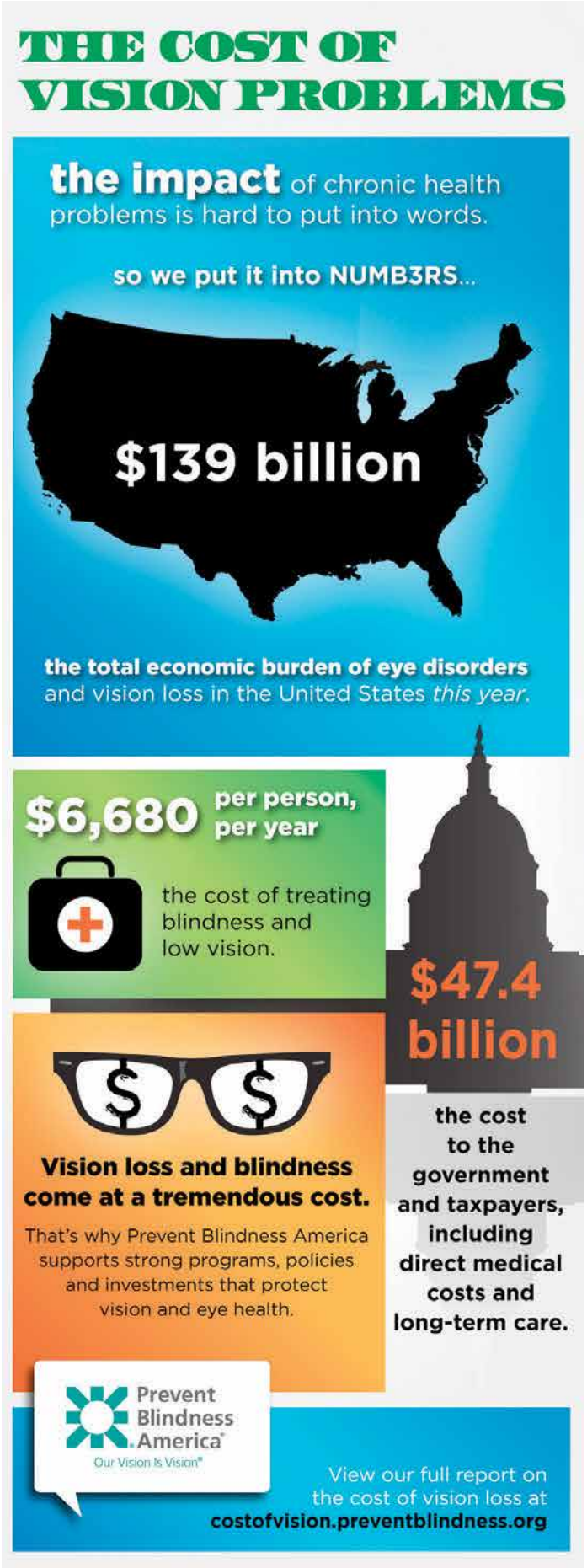
UC DAVIS CLINICIAN-SCIENTIST SELECTED TO BRIEF CONGRESS ON VISION RESEARCH

BY: HOLLAND ADAMS

The cost of blindness is staggering. In 2014, the total economic burden of vision loss in the U.S. was $145 billion, and is projected to grow to $373 billion by year 2050. The first wave of the 78 million Baby Boomers started turning age 65 in 2010, with 10,000 Americans turning age 65 each day who are at risk for age-related eye diseases. The direct medical costs of vision disorders are the fifth highest after heart conditions, cancers, emotional disorders and pulmonary diseases. Yet, within the National Institutes of Health, the National Eye's Institute's (NEI) funding is only $675 million, less than half-of-one percent of the annual cost of treating vision loss. In the past two decades, NEI-sponsored vision research has improved the lives of millions through advances in ocular surgery and development of new medical therapies for eye conditions. In 2013, Congress, in efforts to control the national debt, issued an unprecedented budget sequestration that resulted in $11.1 billion cuts in Medicare and $1.5 billion reduction in the NIH budget. NIH director Francis Collins, M.D., Ph.D. said, "I worry desperately this means we will lose a generation of young scientists." Grant applications are already funded at half their historic rate, and with the budget cuts, the chances of approval are expected to decrease even more, threatening the future of vision research.

Glenn Yiu, M.D., Ph.D., an Assistant Professor and retina specialist at UC Davis, was among 22 scientists selected by the National Alliance for Eye and Vision Research (NAEVR) as an "Emerging Vision Scientist" to update congress on vision research last fall, and to promote additional support for future researchers over a two-day event. On December 14, 2016, Dr. Yiu attended a congressional briefing on macular degeneration, then presented his NIH-funded research on developing novel drug delivery systems for the eye at a reception attended by NEI director Paul A. Sieving, M.D., Ph.D., AEVR Board President Peter McDonnell, M.D., and Research to Prevent Blindness President Brian Hofland, Ph.D. Also in attendance was **Yao Liu, M.D.,** who is an alum of the UC Davis Eye Center, and currently a glaucoma specialist and researcher at University of Wisconsin. The next day, Dr. Yiu visited Congressional delegation offices, including the offices of Congresswoman Doris Matsui and Senator Barbara Boxer, to promote research funding for the next budget cycle, adding his unique perspective from vision research. His visit to the Senator's office was joined by a delegation from UC San Diego as well.

"I am honored to represent UC Davis and young vision scientists from around the country to highlight the important role of eye research in developing new therapies for vision loss and blindness," said Dr. Yiu. "We are living in an exciting time when translational work in gene therapy and stem cells is just beginning to show signs of promise in patients with age-related macular degeneration, diabetic retinopathy, and inherited retinal conditions." But, he said, "we are also at a critical point where junior researchers are having increasing difficulty securing the time and support needed to move



this important field forward." As a clinician-scientist, Dr. Yiu spends part of his time providing medical care for patients with retinal disorders, but also runs a research laboratory, where his work includes advanced ocular imaging of the vasculature in the eye, as well as novel gene editing and drug delivery strategies for retinal diseases like macular degeneration. He explains, "Saving vision is not just about being able to read a book or watch TV; it's about independence and the ability to care for one self."

After four fiscal years, the NEI budget has grown minimally while its purchasing power has continued to decline due to biomedical inflation. "As our population gets older, the economic burden of vision loss from age-related eye diseases will continue to grow," said Dr. Yiu. "Our lawmakers should be made aware of the importance of supporting our next generation of vision scientists. By partaking in advocacy, I hope to help ensure the future of vision research and our ability to find new cures for our patients."

For more information, visit:

http://costofvision.preventblindness.org

http://www.eyeresearch.org

Emerging Vision Scientists

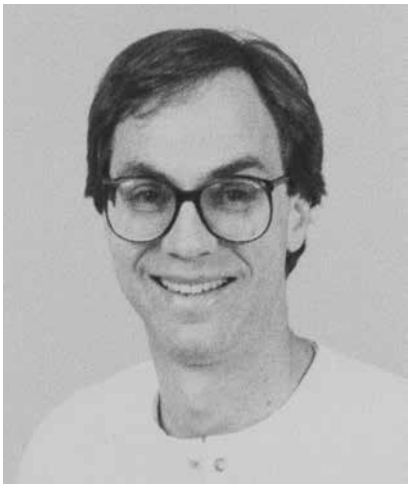
Emerging Vision Scientists

Yao Liu, M.D. and Glenn Yiu, M.D., Ph.D.

Paul A. Sieving, M.D., Ph.D.

WILLIAM "BILLY" ROSEN, M.D.

Physician *and* Musician



BY: MARK J. MANNIS, M.D.

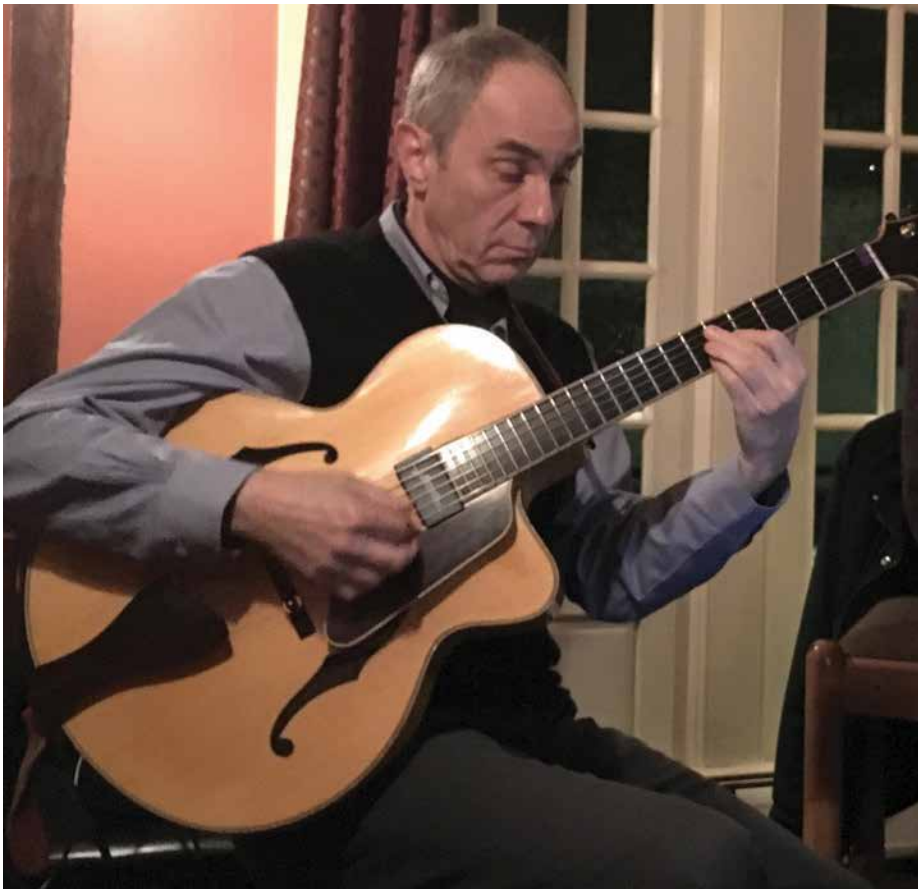
The sounds of a jazz combo in the New Hampshire night may lead you to the Billy Rosen Quintet, a group that plays standard jazz tunes, Gershwin, Cole Porter, Brazilian jazz and swing, and is led by our own friend and alumnus who is now retired from a successful career in ophthalmology at Dartmouth-Hitchcock Medical Center.

A native of Pittsburgh, PA, Billy graduated from the University of Pittsburgh in 1970 and completed a master's degree in mathematics at UCLA. The first phase of his career was 12 years as a math teacher at Pierce College in Woodland Hills, CA. During this period, he authored or co-authored no fewer than seven mathematics textbooks. Even then, though, he wanted to be a guitarist and carved out time to learn jazz as well as classical guitar. Plagued by recurring tendonitis, however, Billy was forced to stop playing guitar and decided to pursue a career in medicine. He would stop playing guitar for 20 years.

He was accepted at UC Davis and began medical school in 1985. In 1990, he entered the first class of the four-year residency program in ophthalmology pioneered by the department here. During his years at the Eye Center, he spent time with Tyrone Glover and Craig Berris—both accomplished oculoplastic surgeons in the community—and found his clinical niche in that

specialty, later also doing a mini-fellowship in oculoplastics at Moorfields Eye Hospital in London, UK.

After completing his residency training, Billy took an academic position at Dartmouth-Hitchcock Medical Center, affiliated with Dartmouth College in New Hampshire. There he built a career in general ophthalmology with a an emphasis on oculoplastic surgery and, gradually, concentrated on the oculoplastic practice, becoming a certified member of the American Society of Ophthalmic Plastic and Reconstructive Surgery in 2004. Dr. Rosen finished the last five years of his career as Section Chief of Ophthalmology.



But the music would not go away. After successful hand surgery in 1999, Billy took up the guitar once again while continuing to practice medicine, first playing just for himself and then in restaurants. One of his patients happened to be at a restaurant the evening before Dr. Rosen was to perform his surgery for thyroid ophthalmopathy. Billy was playing guitar there that evening. The next morning, before going into the operating room, the patient said to Billy: "When I saw you playing last night, I knew everything would be OK."

In 2002, neck surgery necessitated his decreasing ophthalmic practice to half time, and he stopped doing surgery. The half days that he did not work became devoted once again to the guitar, his hands now well suited for playing. Then, in 2007, he founded the Billy Rosen Quartet, later to become a quintet (keyboard, guitar, bass, saxophone, drums). The group plays for the pure pleasure of it—performing for benefits and in local galleries, restaurants and clubs.

Music and medicine have been inseparable parts of Billy's life. He quips: "Instead of being an eye doctor who plays guitar, I am actually a guitarist who plays eye doctor."

Billy's two children are Josh, who works in social media, and Emma, who is a paralegal in New York City. Billy has retained close ties to the Eye Center and had regularly attended the Napa Symposium each year. His recorded music has played in the background during many a corneal transplant at UC Davis.

While Billy Rosen used talented hands to provide skilled surgical care as an ophthalmologist, the guitar under his nimble fingers has nurtured his soul.

From musician, to mathematician, to physician and back to musician, the cycle of Billy Rosen's career has been one of music and medicine inextricably intertwined.

SOCIETY FOR THE BLIND

Active Aging with Vision Loss

BY: SHARI ROESELER
Executive Director, Society for the Blind

Vision loss happens to families, not just individuals. If you have a parent, spouse, other family member, or friend who is experiencing vision loss, your first inclination is likely to want to comfort and support them. Most of us want our loved one to be able to remain independent, capable and full of life.

Vision loss is a serious public health concern. Today it is estimated that 7 million Americans over age 65 have severe vision loss, and that number is expected to double by 2030. Our growing senior population wants to stay active and independent. They want to remain in their own homes. Active aging is their goal and vision loss does not have to be a barrier.

At Society For The Blind, we offer a program tailored just for older adults who want to learn to stay active despite vision loss. Each month our Senior IMPACT Program offers an 8-day immersion retreat where older adults learn how to navigate with a long white cane, and engage in cooking and other activities of daily living by utilizing adaptive tools and non-visual techniques. They receive training on how to use accessible features of their smart phones and tablets so they can stay in touch with family and friends, and they learn basic Braille so they can label medications, clothes and other key items in their homes. For those who live farther away or who have mobility issues, we bring the training to their home.

Society also provides Vision Rehabilitation Therapy (VRT) at our Low Vision Clinic. Working with our VRT specialist, the patient learns how to use his or her remaining vision so he or she can once again engage in activities like reading, cooking, playing cards and going for walks. Our Vision Rehabilitation Therapist is able to see patients in our clinic as well as in the patient's home.

Ongoing support groups at Society offer older adults and their families and caregivers the opportunity to share their experiences, discuss challenges and identify ways to support active aging with vision loss. Support groups are offered monthly in English and Spanish.

Active Aging for someone with vision loss is possible and Society For The Blind is here to make sure older adults in the Sacramento region can stay active and independent. For more information about Society's Senior IMPACT Program, please contact us at **916-452-8271**.

Senior IMPACT Program

Vision Rehabilitation Therapy

Sierra Donor Services Eye Bank

an extraordinary commitment to science, health and hope

Comfortable work environment to encourage collaboration

More Opportunities to Serve our Communities

Sierra Donor Services (SDS) and Sierra Donor Services Eye Bank (SDSEB) grew exponentially over the past few decades. Many years ago, they began carefully searching for a new location that would enhance their mission to save and restore lives before outgrowing their Natomas location. Seeking to centralize all California operations and allow the sister organizations to operate in a state-of-the-art, cost effective facility was a lofty goal. Locating the perfect West Sacramento 16,000-square-foot building, they embarked on a two-year complete renovation project. This new facility was designed to optimize performance, both from a scientific and technological perspective, as well as be a beautiful space configured to provide every opportunity for collaborative, progressive and ever-expanding work.

Sleek and modern design for innovation and creativity

Monica Johnson, Executive Director-Sierra Donor Services

Clinical wing exceeds all safety and regulatory standards

ISO 7 clean room with laminar flow hoods

Preparing a cornea for DMEK– Chris Conwell, CEBT, Ocular Processing Coordinator

SDS and SDSEB are driven by a team of professionals who are passionate about assuring that quality grafts are delivered to meet surgical needs and enhance the lives of patients. The agencies have always been trendsetters, encouraging employees and technicians to reach the highest levels of certifications possible and promoting from within whenever possible. The eye bank takes particular pride that almost the entire staff are Certified Eye Bank Technicians (CEBT)- the highest level of certification in the eye banking industry. New team members are encouraged and supported to reach that level as part of their onboarding process.

With the move now in the rear-view mirror, SDS and SDSEB have opened an exciting new chapter of innovation. The clinical facility allows more opportunities to aid physicians in transforming patients' lives with new processes and techniques. The entire clinical space exceeds all safety and regulatory standards in tissue and eye banking with multiple environments for processing tissue grafts: ISO Class 5 and ISO Class 7 Clean Rooms and Laminar Flow Hoods. On-site operating suites for recovery of tissues and a state-of-the-art instrument sterilization department complete the new space for SDS.

A large portion of the clinical wing is dedicated to the SDSEB operations. Expansion of the eye bank's services will include a phlebotomy program to draw blood samples that will be used to create autologous serum dye drops to treat a variety of eye conditions. Expanded laboratories will accommodate cross-training of technicians and allow SDSEB to host wet-labs in conjunction with the Eye Bank Association of America and other partners.

If you would like to learn more about Sierra Donor Services or SDS Eye Bank, please feel free to reach out to us at **916-567-1600**.

TAKING A SWING FOR SIGHT

BY: DEREK LEDDA

"Keep your eye on the ball!" That's an old saying that fits Lions Clubs International's latest undertaking to support the UC Davis Eye Center's mission: to provide the highest possible quality of patient care, to conduct pioneering research on the visual system and its disorders, and to train outstanding eye care professionals while also pursuing its own mission to serve the needs of the blind and visually impaired. Golf anyone? On Saturday, September 16, 2017 the local Lions and many of the Eye Center's supporters will be teeing it up at the Lions Education Foundation's (LEF's) annual golf tournament at the beautiful Rancho Murieta Golf Course to benefit youth related Lions club projects in the greater Sacramento region and the UC Davis Eye Center's programs for pediatric ophthalmology.

Each year, the local Lion 1st Vice District Governor decides who will receive a portion of the funds raised at the subsequent tournament held in his year as District Governor. LEF's beneficiaries in past years have included "Autism Speaks" and the "Juvenile Diabetes Research Foundation". For the Lion year 2017-2018, 1st Vice District Governor Nick McNicholas has selected the UC Davis Eye Center to be LEF's beneficiary. Although LEF will do the planning and provide all the volunteers needed to put on the tournament, the UC Davis Eye Center's Executive Advisory Council, especially Council members Binda Mangat, Kathy Howard, Mike Ammerman and Derek Ledda, will be actively involved in promoting support for the fundraiser by recruiting golfers and soliciting donations and sponsorships. Anyone who chooses not to play golf or to be a sponsor can support the event by making a donation in any amount or by attending the tournament luncheon, where representatives of the Eye Center will speak on the Center's amazing work and extraordinary achievements. The tournament presents Eye Center supporters with a wonderful opportunity to not only help fund the Center's critical programs that preserve or restore children's sight, but to also have a relaxing day of fun and fellowship.

The Lions Education Foundation's golf chairperson, Lion Andy Anderson, and his committee, are already hard at work organizing what will be needed for tournament day and encouraging Lion members and clubs to register to play and to make donations. Donations to the LEF, which is

a 501(c)(3) non-profit, are tax deductible. The Eye Center Advisory Council is also reaching out to the Center's supporters to recruit golfing foursomes at $125 per golfer and to solicit sponsorships at various levels from $500 to $10,000. The key to the tournament's success is for Center supporters to already start forming golfing teams or be willing to be a sponsor or to solicit sponsors. Possibly the most well-known advocate for the blind, Helen Keller, said that "The only thing worse than being blind is to have sight and no vision." The UC Davis Eye Center and the District 4-C5 Lions have committed to working together to pursue their common vision of preventing blindness, helping the visually impaired and restoring sight. Join the Lions and the Eye Center at the tournament to celebrate sight and the Lions' 100 years of humanitarian service.

For more information on registering golfers, becoming a sponsor or attending the tournament luncheon, please contact:

Holland Adams-Lattin
Development Analyst, UC Davis Eye Center
(916) 734-6435 | hradams@ucdavis.edu

Lions Education Foundation

2017 District 4-C5

LEF Golf Tournament

HOSTED BY THE LIONS EDUCATION FOUNDATION

UCDAVIS EYE CENTER

WHEN:	**SATURDAY, SEPTEMBER 16, 2017**
WHERE:	**RANCHO MURIETA GOLF CLUB** **7000 ALAMEDA DR.** **RANCHO MURIETA, CA**
TIME:	**REGISTRATION: 11:00 AM** **SHOTGUN START: 1:00 PM**
COST:	**$125 per Golfer**

TICKETS INCLUDE DINNER, LONGEST DRIVE CONTEST, CLOSEST-TO-THE PIN CONTEST & RANGE BALLS

Sponsorship Opportunities

$5,000—Eagle Sponsor
$2,500—Platinum Sponsor
$1,000—Gold Sponsor
$750—Silver Sponsor
$500—Bronze Sponsor
$250—Green Sponsor (only 18 flags)
$100—Tee Box Sponsor (only 36 signs)

FOR MORE INFORMATION CONTACT PDG ANDY @ 916.687.8133

Proceeds will benefit the Lion's Education Foundation and the UC Davis Eye Center

William Kohl M.D. Award

JOHNATHAN LU, M.D.

Johnathan Lu and Carolyn Potts
(Dr. William Kohl's granddaughter)

BY: JOHNATHAN LU, M.D.

I want to express my sincere thanks to Ann Kohl, her family and the UC Davis Eye Center for the honor of the inaugural William Kohl Medical Student Research Award and Presentation. I was truly humbled and appreciative to receive it.

Dr. Kohl was a key figure in the growth of the UC Davis Ophthalmology department, and was particularly known for valuing medical students and their learning. As a final year student, I see the award as a continuation of this spirit. The award encourages students to develop their intellectual curiosity in ophthalmology and helps support research that may contribute to the field of vision care. The opportunity to present my work in front of the department and community at the 5th Annual Resident & Alumni Research Symposium was one of the most educational and meaningful experiences I had in medical school.

I would especially like to commend Dr. Susanna Park, my research mentor, for her guidance and teaching that made this honor possible. I would also like to thank Dr. Mark Mannis for his unwavering support of medical students at the UC Davis Eye Center. In the future I also look forward to contributing in any way I can to the success of ophthalmology students at UC Davis.

SCHERMER AFP & CAAA

BY ERIN J. BAUER

Michael Schermer, M.D. (RS'76) was the 2016 honoree for the Outstanding Volunteer Fundraiser Award presented by the California Capital Chapter of the Association of Fundraising Professionals (AFP) in conjunction with National Philanthropy Day on November 16. The award is presented to an individual, couple, or family that has demonstrated exceptional leadership skills in coordinating groups of volunteers for major fundraising projects of one or more non-profit organizations. The recipient must demonstrate exceptional skills coordinating and motivating volunteers for the benefit of charitable institutions and a personal commitment to the advancement of philanthropy.

On February 3, 2017 at the annual Cal Aggie Alumni Association Awards Gala, Dr. Schermer received the 2017 CAAA Distinguished Achievement Award, which honors a UC Davis graduate whose professional, personal and community service accomplishments since graduation reflect exemplary and outstanding performance, achievement and service to UC Davis and the community.

"I've been very proud to be part of the UC Davis Eye Center as a former resident, and it's been a joy to watch it grow in size and prestige over the years," Schermer said. "Our future is even brighter with Ernest Tschannen's recent gift to name the UC Davis Eye Center building, which will help establish a brick and mortar building devoted exclusively to eye care."

In addition to Schermer's service to UC Davis, he conducts volunteer eye surgery overseas and for the past 25 years has hosted a large group of blind and visually impaired Sacramentans for a day at the California State Fair – a tradition he refers to as "a party for the senses."

"I really enjoy volunteering in the community and the day at the state fair is my favorite day of the year," Schermer said. "You've got to picture this: blind people driving bumper cars. I love having the opportunity to witness their laughter and smiles. It's the most fun."

Dr. Schermer is passionate, results-driven and consistently follows through on his commitments to the UC Davis Eye Center. The only surprising element of Dr. Schermer being selected for these awards out of numerous nominations—the most either category has received—was his own surprise when selected as the recipient. For his countless contributions to the Eye Center and to the blind and visually impaired in our community and throughout the globe, we celebrate these honors presented to Dr. Schermer.

ERNEST TSCHANNEN RECEIVES AFP'S OUTSTANDING BENEFACTOR AWARD

Nick Marsh-Armstrong, Ph.D., Julie Freischlag, M.D., Ernest Tschannen, Mark Mannis, M.D., and Michele Lim, M.D.

Outstanding Benefactor Award

The National Philanthropy Day Awards Program, hosted by the Association of Fundraising Professionals California Capital Chapter (AFPCCC), recognizes and pays tribute to outstanding achievements by individuals, corporations, foundations, and nonprofit organizations whose philanthropy creates significant impact on the quality of life in the California Capital region. Awards are presented at the National Philanthropy Day Awards Luncheon, which was held on November 16, 2016, at the Hyatt Regency Sacramento. Because of the rare and special magnitude of Mr. Tschannen's gift, the local AFP chapter created an award that can be activated to recognize "above and beyond" philanthropists when they emerge. At the 2016 luncheon, Ernest Tschannen received the Outstanding Benefactor of the Year award, which was the first year the award was presented to an honoree in the California Capital region.

UC DAVIS
EYE CENTER

DONOR RECOGNITION RECEPTION

FEBRUARY 16, 2017


1

2

ON FEBRUARY 16, more than 100 donors, faculty, staff and UC Davis Health System leadership gathered to celebrate the impact of philanthropy on the cutting-edge research and clinical care delivered at the UC Davis Eye Center. We are grateful for those who were able to attend and also want to express our sincere gratitude for those donors who were not with us that evening—thank you for your tremendous support and commitment to the UC Davis Eye Center.


3


4


5

Photo 1: Shelly Schermer, Michael Schermer, M.D. and Alan Roth, M.D.

Photo 2: Michele Lim, M.D. and Denise Osegueda

Photo 3: RoseMary Williams and Wanda Brown

Photo 4: Ann Kerr, Judy Mannis and Barbara Arnold, M.D.

Photo 5: Mark Mannis, M.D., Ernest Tschannen and Rita Wilcox birthday announcement

Photo 6: Ivan Schwab, M.D., David Warren, Ph.D and Mark Schaal

Photo 7: Northern California Lions Sight Association

Photo 8: Rita Wilcox and Ernest Tschannen

Photo 9: Robert Dale, Bonnie Dale and Mark Mannis, M.D.

Photo 10: David Motes, Phyllis Christopher, Mark Mannis, M.D. and Gene Christopher

UC DAVIS
EYE CENTER

DONOR RECOGNITION RECEPTION

FEBRUARY 16, 2017


11


12

Photo 11: Michael Schermer, M.D., Sonia Miller and Robert B. Miller, M.D.

Photo 12: Joy McKee and Rita Wilcox

Photo 13: Gil Alvarado and Binda Mangat

Photo 14: Glenn Yiu, M.D., Ph.D., Gloria Gibbons and Dennis Gibbons


13


14

Photo 1: Susanna Park, M.D., Ph.D., Cynthia Toth, M.D., Melissa Tong, M.D. and Rory Allar, M.D.

Photo 2: Mark Mannis, M.D., John Dragievich, M.D. and Daniel Lee, M.D.

Photo 3: Clarissa Tendero, M.D. and Bonnie Quiroz, M.D.

ALUMNI, VCF & FRIENDS RECEPTION
Chicago, Illinois

We had a strong turnout this year at our American Academy of Ophthalmology Alumni, VCF and Friends Reception in Chicago. The event, held at the Radisson Blu Aqua Hotel on Sunday, October 16, 2016, was a great opportunity for alumni to come together and visit with faculty, staff, current residents and fellows. Thank you for your support and the enhanced experience you've provided for our resident and fellow training programs. We look forward to celebrating with you all in New Orleans in the fall.

Photo 4: Richard Bernheimer, M.D., Chris Serdahl, M.D., Barbara Arnold, M.D. and Linda Margulies, M.D.

ALUMNI, VCF & FRIENDS RECEPTION

Chicago, Illinois

Photo 6: Jolene Rudell, M.D., Ph.D., David Chu, M.D. and Neil Farbman, M.D., J.D.

Photo 7: Eric Gross, M.D., Lisa Nijim, M.D., Mark Mannis, M.D., and Frank Garcia-Ferrer, M.D.

Photo 8: Kingsley Oakfor, M.D., Ilana Traynis, M.D., Vivien Lien, M.D. and Harry Chahal, M.D.

Photo 9: Yao Lu, M.D. and James Brandt, M.D.

Photo 10: Neil Farbman, M.D., J.D. and Erich Gross, M.D.

Photo 11: Kingsley Oakfor, M.D., Senad Osmanovic, M.D., Ilana Traynis, M.D. and Sam Abbassi, M.D.

Photo 12: Mark Mannis, M.D. and Elad Moisseiev, M.D

Photo 13: Roma Patel, M.D. and David Chu, M.D.

Photo 14: Shawna Perlman, JP Perlman, M.D., Chris Serdahl, M.D. and Clarissa Tendero, M.D.

Photo 15: Bhupinder Dhillon, Chris Johnson, Ph.D., Nancy Keltner and John Keltner, M.D.

GRATITUDE | PROGRESS | HOPE

With gratitude to the following donors who have provided sustaining support to the UC Davis Eye Center since inception.

TSCHANNEN SOCIETY

Gifts of $2,500,000 and above

Ernest E. Tschannen

2020 SOCIETY

Gifts of $1,000,000 and above

Research To Prevent Blindness
The Estate of Natalie A. Fosse
Lanie Albrecht Foundation
David R. Motes and Charlene Woodward

CHAIRMAN'S COUNCIL

Gifts of $500,000 and above

Allergan, Inc.
Ted and Melza M. Barr
Wylda H. Nelson, M.D.
Alan Roth, M.D.

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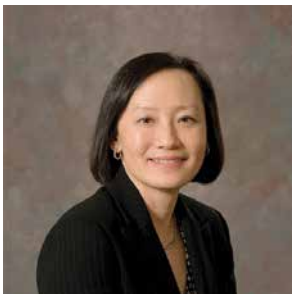
Mark J. Mannis, M.D., F.A.C.S.
Fosse Endowed Chair in Vision Science Research
Professor and Chairman, Cornea and External Disease
Research Interests:
Corneal transplant technology, eye and skin diseases, and artificial corneas

James D. Brandt, M.D.
Vice Chair of International Programs and New Technology
Director, Glaucoma Service
Professor, Glaucoma
Research Interests:
Nanotechnology for innovation in glaucoma treatments



Michele C. Lim, M.D.
Vice-Chair and Medical Director
Professor, Glaucoma
Research Interests:
Glaucoma patient compliance focusing on medication adherence

FACULTY

Annie K. Baik, M.D.
Associate Professor, Glaucoma
Veterans Administration Mather
Research Interests:
Emerging glaucoma surgical techniques, patient education

Jeffrey J. Caspar, M.D.
Director, Residency Program
Professor, Comprehensive Ophthalmology and Refractive Surgery
Research Interests:
Cataract surgery after refractive surgery and new techniques for cataract extraction

Nandini Gandhi, M.D.
Associate Director, Residency Program
Assistant Professor, Pediatric Ophthalmology and Strabismus
Research Interests:
International ophthalmology and curriculum development

John L. Keltner, M.D.
Chair Emeritus
Research Director
Distinguished Professor, Neuro-Ophthalmology
Research Interests:
The effects of multiple sclerosis and cancer on vision

Roma Patel, M.D., MBA
Chief of Ophthalmology and Eye Care Division
Sacramento Veterans Affairs Hospital
Assistant Professor of Ophthalmology
UC Davis Eye Center
Research interests: New models of eye care delivery, Glaucoma surgical advances

Vivian Lien, M.D.
Clinical Assistant Professor of Ophthalmology
Sacramento Veterans Affairs Hospital
Assistant Professor of Ophthalmology
UC Davis Eye Center
Research interests: Anterior Segment Reconstruction and Complex Cataract Surgery Techniques

Esther S. Kim, M.D.
Director, Comprehensive and Optometric Services Professor, Comprehensive Ophthalmology and Ophthalmic Pathology.
Research Interests: Improvement of technology in cataract surgery

Jennifer Li, M.D.
Associate Professor, Cornea, External Disease and Refractive Surgery
Research Interests: Endothelial keratoplasty and keratoprosthesis surgery

Lily Koo Lin, M.D.
Associate Professor, Oculoplastic Surgery.
Research Interests: Improvement of aging eyelids and the relationship between the orbit, globe and trauma

Linda J. Margulies, M.D.
Professor, Vitreo-retinal Disease, Veterans Administration
Research Interests: New treatment for age-related macular degeneration

Lawrence S. Morse, M.D., Ph.D.
Director, Retina Service Professor, Vitreo-retinal Surgery and Uveitis.
Research Interests: Treatment for diabetic retinopathy and age-related macular degeneration

Ala Moshiri, M.D., Ph.D.
Assistant Professor, Vitreo-retinal Surgery
Research Interests: Genetic diseases

Mary A. O'Hara, M.D., F.A.C.S., F.C.A.P.
Director and Professor Pediatric Ophthalmology and Strabismus Service.
Research Interests: Development of new technology in pediatric strabismus

Susanna S. Park, M.D., Ph.D.
Professor, Vitreo-retinal Surgery
Research Interests: Age-related macular degeneration, proton beam treatments, and stem cell therapies

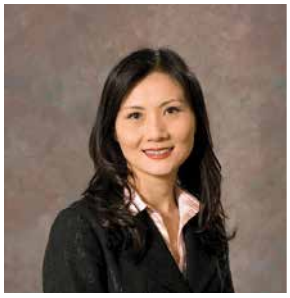
Ivan R. Schwab, M.D., F.A.C.S.
Director, Cornea and External Disease Service, Professor Emeritus, Cornea and Uveitis
Research Interests: Limbal stem cell transplants and comparative anatomy

Glenn C. Yiu, M.D., Ph.D.
Assistant Professor, Vitreo-retinal Surgery
Research Interests: Neuro-regeneration, retinal cell biology, ocular imaging

OPTOMETRISTS

Thomas B. Barnes, O.D., M.S., F.A.A.O.
Principal Optometrist

Melissa Barnett Erickson, O.D., F.A.A.O.
Principal Optometrist



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Senior Optometrist

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Hai Tong, O.D.
Senior Optometrist

ORTHOPTIST

Tania Hashmi, B.Med.Sci.
Orthoptist

VISION SCIENCES

Nick Marsh Armstrong, Ph.D.
Associate Professor,
Research Interests:
Basic cellular, molecular and developmental biology of retinal ganglion cells relevant to glaucoma

Edward N. Pugh, Jr., Ph.D.
Professor, Cell Biology and Human Anatomy Physiology & Membrane Biology
Ophthalmology
Research Interests:
Retinal photoreceptors and color vision

Marie E. Burns, Ph.D.
Professor, Retinal Physiology
Research Interests:
Photo transduction, photoreceptor adaptation, and protein movement

Paul FitzGerald, Ph.D.
Professor, Cell Biology and Human Anatomy
Director, Center for Vision Sciences
Research Interests:
The role of intermediate filaments in the biology of the ocular lenses

Mark S. Goldman, Ph.D.
Associate Professor, Neuroscience
Research Interests:
Computer models of eye movement

Leonard Hjelmeland, Ph.D.
Professor Emeritus, Molecular & Cellular Biology
Ophthalmology
Research Interests:
Senescence of retinal pigment epithelium

Andrew T. Ishida, Ph.D.
Professor, Neurobiology, Physiology & Behavior
Research Interests:
Modulation of retinal ganglion cell excitability

Zeljka Smit-McBride, Ph.D.
Research Scientist
Vitreoretinal Research Lab
Research Interests:
Genomics and epigenetics of aging and age-related eye diseases, age-related macular degeneration and diabetic retinopathy

Christopher J. Murphy, D.V.M., Ph.D.
Professor, Comparative Ophthalmology
Research Interests:
Bio-physical cueing and modulation of cell behaviors

Gary D. Novack, Ph.D.
Visiting Professor
Pharmacology and Ophthalmology
Research Interests:
Development of new therapeutics, Patient adherence and performance, Regulatory Affairs

VISION SCIENCES CONTINUED

Vivek J. Srinivasan, Ph.D.
Assistant Professor, Biomedical Engineering
Research Interests: Retinal and Optic Nerve Imaging, Blood Flow and Metabolism

John S. Werner, Ph.D.
Distinguished Professor, Visual Psychophysics
Research Interests: Color and spatial vision, normal aging and age-related disease, retinal and optic nerve imaging

Charles E. Thirkill, Ph.D.
Adjunct Professor Emeritus, Immunology & Biology
Research Interests: Ocular immunology

Robert J. Zawadzki, Ph.D.
Associate Researcher
Research Interests: High Resolution, Retinal and optic nerve imaging techniques

Sara Thomsey, DVM, Ph.D.
Associate Professor of Comparitive Ophthalmology
Research Interests: Corneal wound healing, Glaucoma, Ocular pharmacology, Antiviral therapy for FHV-1, Large animal models of ophthalmic disease

Min Zhao, M.D., Ph.D.
Professor, Dermatology and Ophthalmology
Institute for Regenerative Cures
Research Interests: Electrically stimulating cell migration in corneal wound healing and neuron regeneration

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Clinical Retina Fellow

Neil Farbman, M.D., J.D.
Clinical Cornea Fellow

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Sophia Wong, M.D.
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Third Year Resident

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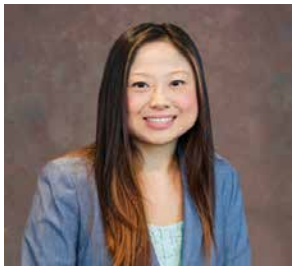

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Jennifer Ling, M.D.
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DEPARTMENT OF CHEMISTRY
COLLEGE OF BIOLOGICAL SCIENCES

Li C, Lim S, Braunewell KH, **Ames JB**. Structure and Calcium Binding Properties of a Neuronal Calcium-Myristoyl Switch Protein, Visinin-Like Protein 3. PLoS One. 2016 Nov 7;11(11):e0165921. doi: 10.1371/journal.pone.0165921.

Turner M, Anderson DE, Rajan S, Hell JW, **Ames JB**. Chemical shift assignments of the C-terminal EF-hand domain of α-actinin-1. Biomol NMR Assign. 2016 Apr;10(1):219-22. doi:10.1007/s12104-016-9670-2.

Wang Y, Xiao W, Zhang Y, Meza L, Tseng H, Takada Y, **Ames JB**, Lam KS. Optimization of RGD-Containing Cyclic Peptides against avβ3 Integrin. Mol Cancer Ther. 2016 Feb;15(2):232-40. doi: 10.1158/1535-7163.MCT-15-0544.

Lim S, Peshenko IV, Olshevskaya EV, Dizhoor AM, **Ames JB**. Structure of Guanylyl Cyclase Activator Protein 1 (GCAP1) Mutant V77E in a Ca2+-free/Mg2+-bound Activator State. J Biol Chem. 2016 Feb 26;291(9):4429-41. doi: 10.1074/jbc.M115.696161.

Lim S, Yu Q, Rockwell NC, Martin SS, Lagarias JC, **Ames JB**. 1H, 13C, and 15N chemical shift assignments of cyanobacteriochrome NpR6012g4 in the green-absorbing photoproduct state. Biomol NMR Assign. 2016 Apr;10(1):157-61. doi: 10.1007/s12104-015-9657-4.

Yu Q, Lim S, Rockwell NC, Martin SS, Clark Lagarias J, **Ames JB**. 1H, 15N, and 13C chemical shift assignments of cyanobacteriochrome NpR6012g4 in the red-absorbing dark state. Biomol NMR Assign. 2016 Apr;10(1):139-42. doi: 10.1007/s12104-015-96538.

MELISSA BARNETT, OD.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Barnett, M. Multifocal scleral lenses – a panacea for presbyopia? Optometry Today (UK). December 2016.

Barnett, M. Managing Sjögren Syndrome. The systemic autoimmune condition can have serious ocular consequences. *Advanced Ocular Care*. October 2016.

Barnett, M, Woo, S, Messer, B. Ocular Surface Disease and Contact Lenses: An Additional Effective Strategy in Treatment. *Eye Witness. Publication of the Contact Lens Society of America*. Fall 2016. Volume 18, Number 4.

Barnett M, Scleral Lenses: Understanding Applications and Maximizing Success. Guest Editor. Supplement for *Contact Lens* Spectrum. October 2016.

Barnett, M, Toabe, M. Scleral Lens Care and Handling for Scleral Lenses: Understanding Applications and Maximizing Success. Supplement for Contact Lens Spectrum. October 2016.

Bergmanson, JPG, **Barnett, M.**, Naroo, SA. Scleral gas permeable lenses have come of age. *Contact Lens and Anterior Eye*. August 2016. 39:2016 247-248.

Barnett, M. Sclerals for OSD: Utilization of Scleral Lenses for Ocular Surface Disease. *Contact Lens Spectrum*. July 2016.

Barnett, M. Screen for Lid Hygiene. Optometric Management. July 2016.

Barnett, M. Keratoconus: When to Fit Contact Lenses Versus Refer for Surgery. *Contact Lens Spectrum*. June 2016.

Caffery, B, Harthan, J, Acs, M, **Barnett, M**, Edmonds, C, Johnson-Tong, L, Maharaj, R, Papinski, D, Pemberton, B, Srinivasan, S. The Correlation of Corneal Staining with Age and Years of Disease in Sjogren's Syndrome. Poster ARVO May 2016.

Barnett, M, Lien, V, Li, JY, Durbin-Johnson, B, Mannis, MJ. Use of Scleral Lenses and Miniscleral Lenses After Penetrating Keratoplasty. *Eye Contact Lens*. 2016 May;42(3):185-9.

Barnett, M. Promote Specialty Contact Lenses. *Optometric Management*. May 2016.

Mickles, C. **Barnett, M.** Simple Tips for Troubleshooting Sclerals. *Review of Cornea & Contact Lenses*. April 2016.

Barnett, M. Diagnosing Dry Eye - Simple and advanced tools help uncover the signs and symptoms of this common condition. *Optometric Management*. February 2016.

REBECCA BELLONE, PH.D.

DEPARTMENT OF POPULATION HEALTH AND REPRODUCTION
SCHOOL OF VETERINARY MEDICINE

Scott ML, John EE, **Bellone RR**, Ching JC, Loewen ME, Sandmeyer LS, Grahn BH, Forsyth GW. Redundant contribution of a Transient Receptor Potential cation channel Member 1 exon 11 single nucleotide polymorphism to equine congenital stationary night blindness. BMC Vet Res. 2016 Jun 21;12(1):121. doi: 10.1186/s12917-016-0745-1.

JAMES D. BRANDT, M.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Vinod K, **Brandt JD**, Gedde SJ, Feuer WJ, Shi W; Tube Versus Trabeculectomy Study Group.. Tube Fenestration in the Tube Versus Trabeculectomy Study. Ophthalmology. 2016 Oct;123(10):2260-2. doi: 10.1016/j.ophtha.2016.04.055. No abstract available.

Brandt JD, Sall K, DuBiner H, Benza R, Alster Y, Walker G, Semba CP. Six-Month Intraocular Pressure Reduction with a Topical Bimatoprost Ocular Insert: Results of a Phase II Randomized Controlled Study. Ophthalmology. 2016 Aug;123(8):1685-94. doi: 10.1016/j.ophtha.2016.04.026.

Budenz DL, Feuer WJ, Barton K, Schiffman J, Costa VP, Godfrey DG, Buys YM; Ahmed Baerveldt Comparison Study Group (**Brandt JD** for UC Davis) Postoperative Complications in the Ahmed Baerveldt Comparison Study During Five Years of Follow-up. Am J Ophthalmol. 2016 Mar;163:75-82.e3. doi: 10.1016/j.ajo.2015.11.023.

MARIE E. BURNS, PH.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE
DEPARTMENT OF CELL BIOLOGY AND HUMAN ANATOMY
COLLEGE OF BIOLOGICAL SCIENCES

Burns ME, Levine ES, Miller EB, Zam A, Zhang P, Zawadzki RJ, Pugh EN Jr. New Developments in Murine Imaging for Assessing Photoreceptor Degeneration In Vivo. Adv Exp Med Biol. 2016;854:269-75. doi: 10.1007/978-3-319-17121-0_36.

GINO CORTOPASSI, PH.D.

DEPARTMENT OF MOLECULAR BIOSCIENCES
SCHOOL OF VETERINARY MEDICINE

Song L, Yu A, Murray K, **Cortopassi G**. Bipolar cell reduction precedes retinal ganglion neuron loss in a complex 1 knockout mouse model. Brain Res. 2016 Dec 24. pii: S0006-8993(16)30840-X. doi: 10.1016/j.brainres.2016.12.019. [Epub ahead of print]

Datta S, Tomilov A, **Cortopassi G**. Identification of small molecules that improve ATP synthesis defects conferred by Leber's hereditary optic neuropathy mutations. Mitochondrion. 2016 Sep;30:177-86. doi: 10.1016/j.mito.2016.08.002.

PAUL FITZGERALD, PH.D.

DEPARTMENT OF CELL BIOLOGY AND HUMAN ANATOMY
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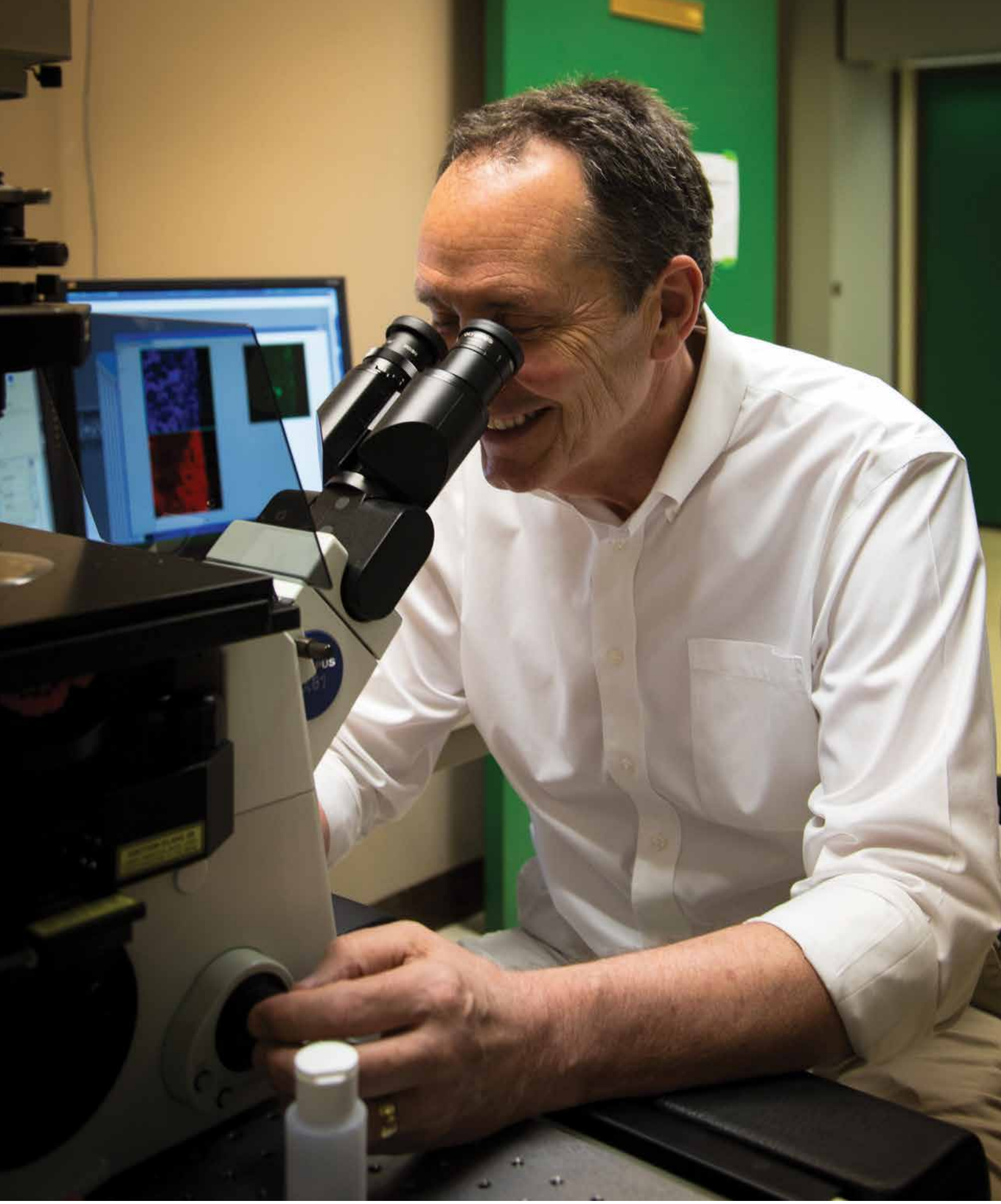
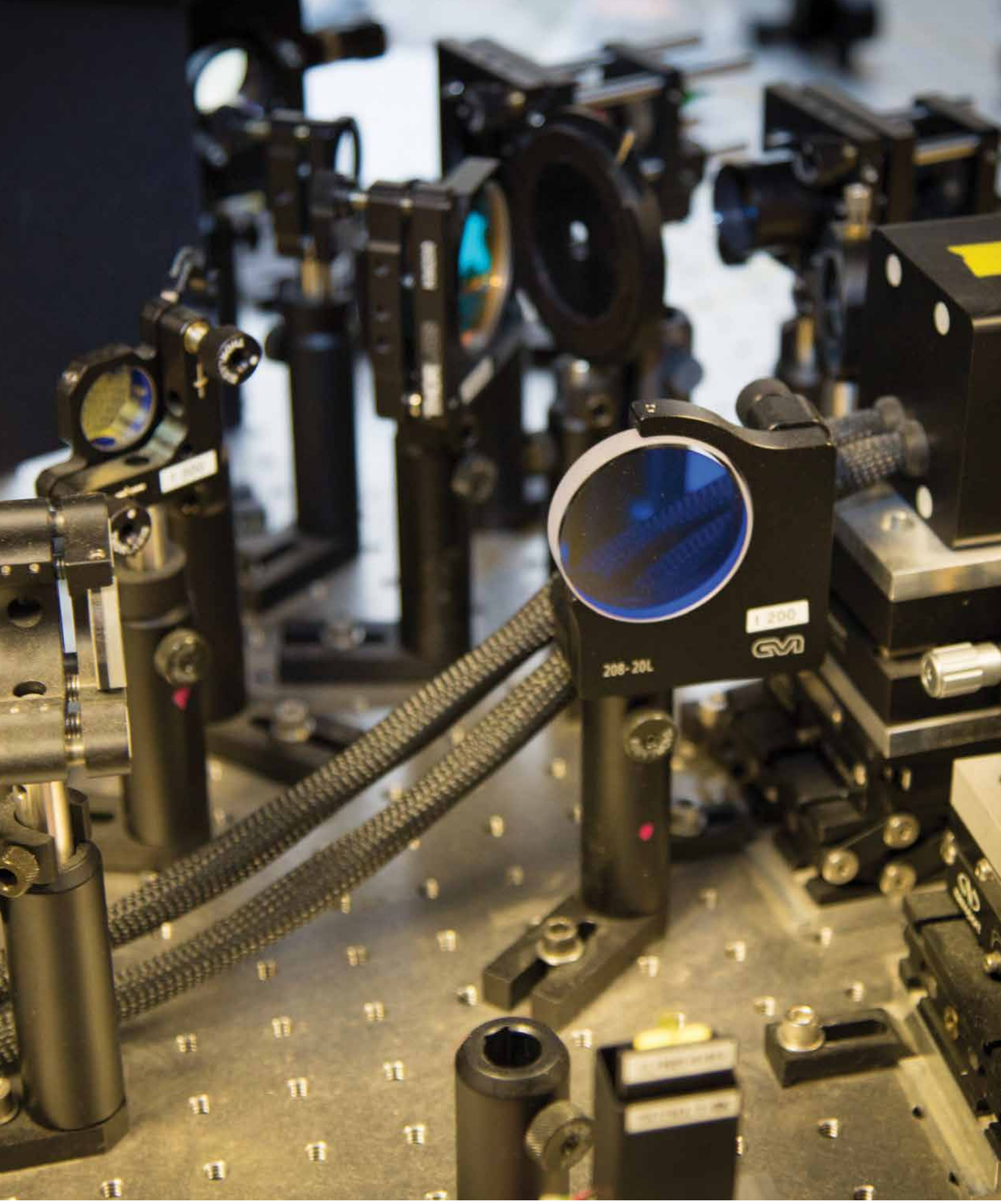
SCHOOL OF MEDICINE

FitzGerald P, Sun N, Shibata B, Hess J. Lens epithelial expression of the Type VI Intermediate Filament Proteins CP49 and filensin Mol Vis. 2016 Aug 6;22:970-89. eCollection 2016.

Cheng C, Nowak R, Biswas S, Lo WK, **FitzGerald P**, Fowler V. Tropomodulin 1 regulation of actin is required for the formation of large paddle protrusions between mature lens fiber cells, IOVS 1;57(10):4084-99

Liu L, Hess J, Sahu I, **FitzGerald P**, McCarrick R, Lorigan G. Probing the Local Secondary Structure of Human Vimentin with Electron Spin Echo Envelope Modulation (ESEEM) Spectroscopy Journal of Physical Chemistry. J. Phys. Chem. B, 2016, 120 (48), pp 12321–12326




208-20L
GVI

JOY JIA GENG, PH.D.

DEPARTMENT OF PSYCHOLOGY
CENTER FOR MIND AND BRAIN

Lee, J. and **Geng, JJ** (2016). Idiosyncratic patterns of representational similarity in prefrontal cortex predict attentional performance. Journal of Neuroscience. DOI: https://doi.org/10.1523/JNEUROSCI.1407-16.2016.

Van Diepen, R., Miller, L., Mazaheri, A.*, **Geng, JJ.*** (2016). The role of alpha activity in spatial and featured-based attention. eNeuro. doi: 10.1523/ENEURO.0204-16.2016. *shared senior authorship

NANDINI G. GANDHI, M.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Gandhi NG, Jones SK, Freedman SF. Icare ONE Home Tonometry in Children With and Without Known Glaucoma. J Glaucoma. 2016 Feb;25(2):e66-9. doi: 10.1097/IJG.0000000000000257.

LEONARD M. HJELMELAND, PH.D.

DEPARTMENT OF OPHTHALMOLOGY & VISION SCIENCE
SCHOOL OF MEDICINE

Smit-McBride Z, Moisseiev E, Modjtahedi SP, Telander DG, **Hjelmeland LM**, Morse LS. Comparison of In Vivo Gene Expression Profiling of RPE/Choroid following Intravitreal Injection of Dexamethasone and Triamcinolone Acetonide. J Ophthalmol. 2016;2016:9856736. doi: 10.1155/2016/9856736.

Hunter AA 3rd, Smit-McBride Z, Anderson R, Bordbari MH, Ying GS, Kim ES, Park SS, Telander DG, Dunaief JL, **Hjelmeland LM,** Morse LS. GSTM1 and GSTM5 Genetic Polymorphisms and Expression in Age-Related Macular Degeneration. Curr Eye Res. 2016;41(3):410-6. doi: 10.3109/02713683.2015.1016179.

STEVEN R. HOLLINGSWORTH, D.V.M.

DEPARTMENT OF SURGICAL AND RADIOLOGICAL SCIENCES
SCHOOL OF VETERINARY MEDICINE

Lau RK, Moresco A, Woods SJ, Reilly CM, Hawkins MG, Murphy CJ, **Hollingsworth SR**, Hacker D, Freeman KS. Presumptive keratoglobus in a great horned owl (Bubo virginianus). Vet Ophthalmol. 2016 Jul 31. doi: 10.1111/vop.12413. [Epub ahead of print]

JOHN L. KELTNER, M.D., EMERITUS

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Cello KE, **Keltner JL**, Johnson CA, Wall M; NORDIC Idiopathic Intracranial Hypertension Study Group. Factors Affecting Visual Field Outcomes in the Idiopathic Intracranial Hypertension Treatment Trial. J Neuroophthalmol. 2016 Mar;36(1):6-12. doi: 10.1097/WNO.0000000000000327.

Wall M, Johnson CA, Cello KE, Zamba KD, McDermott MP, **Keltner JL**; NORDIC Idiopathic Intracranial Hypertension Study Group. Visual Field Outcomes for the Idiopathic Intracranial Hypertension Treatment Trial (**IIHTT**). Invest Ophthalmol Vis Sci. 2016 Mar;57(3):805-12. doi: 10.1167/iovs.15-18626.

JENNIFER Y. LI, M.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Ali M, Raghunathan V, **Li JY**, Murphy CJ, Thomasy SM. Biomechanical relationships between the corneal endothelium and Descemet's membrane. Exp Eye Res. 2016 Nov;152:57-70. doi: 10.1016/j.exer.2016.09.004. Review.

Horikawa T, Thomasy SM, Stanley AA, Calderon AS, **Li JY**, Linton LL, Murphy CJ. Superficial Keratectomy and Conjunctival Advancement Hood Flap (SKCAHF) for the Management of Bullous Keratopathy: Validation in Dogs With Spontaneous Disease. Cornea. 2016 Oct;35(10):1295-304. doi: 10.1097/ICO.0000000000000966.

Thomasy SM, Cortes DE, Hoehn AL, Calderon AC, **Li JY**, Murphy CJ. In Vivo Imaging of Corneal Endothelial Dystrophy in Boston Terriers: A Spontaneous, Canine Model for Fuchs' Endothelial Corneal Dystrophy. Invest Ophthalmol Vis Sci. 2016 Jul 1;57(9):OCT495-503. doi: 10.1167/iovs.15-18885.

MICHELE C. LIM, M.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Budenz DL, Feuer WJ, Barton K, Schiffman J, Costa VP, Godfrey DG, Buys YM; Ahmed Baerveldt Comparison Study Group (**Lim MC, PI for UC Davis**) Postoperative Complications in the Ahmed Baerveldt Comparison Study During Five Years of Follow-up. Am J Ophthalmol. 2016 Mar;163:75-82.e3. doi: 10.1016/j.ajo.2015.11.023.

Prum BE Jr, **Lim MC**, Mansberger SL, Stein JD, Moroi SE, Gedde SJ, Herndon LW Jr, Rosenberg LF, Williams RD. Primary Open-Angle Glaucoma Suspect Preferred Practice Pattern(®) Guidelines. Ophthalmology. 2016 Jan;123(1):P112-51. doi: 10.1016/j.ophtha.2015.10.055.

Prum BE Jr, Herndon LW Jr, Moroi SE, Mansberger SL, Stein JD, **Lim MC**, Rosenberg LF, Gedde SJ, Williams RD. Primary Angle Closure Preferred Practice Pattern(®) Guidelines.Ophthalmology. 2016 Jan;123(1):P1-P40. doi: 10.1016/j.ophtha.2015.10.049.

Prum BE Jr, Rosenberg LF, Gedde SJ, Mansberger SL, Stein JD, Moroi SE, Herndon LW Jr, **Lim MC**, Williams RD. Primary Open-Angle Glaucoma Preferred Practice Pattern(®) Guidelines. Ophthalmology. 2016 Jan;123(1):P41-P111. doi: 10.1016/j.ophtha.2015.10.053.

STEVEN J. LUCK, PH.D.

DEPARTMENT OF PSYCHOLOGY
CENTER FOR MIND AND BRAIN

Erickson, M. A., Albrecht, M. A., Robinson, B. M., **Luck, SJ**, & Gold, J. M. (in press). Impaired suppression of delay-period alpha and beta is associated with impaired working memory in schizophrenia *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

Gaspelin, N., Leonard, C. J., & **Luck, SJ** (in press). Suppression of Overt Attentional Capture by Salient-But-Irrelevant Color Singletons. *Attention, Perception, & Psychophysics*.

Kwon, M.-K., Setoodhenia, M., Baek, J., **Luck, SJ**, & Oakes, L. M. (in press). The development of visual search in infancy: Attention to faces versus physical salience. *Developmental Psychology*.

Luck, SJ, & Gaspelin, N. (in press). How to Get Statistically Significant Effects in Any ERP Experiment (and Why You Shouldn't). *Psychophysiology*.

Sawaki, R., Kreither, J., Leonard, C. J., Kaiser, S. T., Hahn, B., Gold, J. M., & **Luck, SJ** (in press). Hyperfocusing on goal-related information in schizophrenia: Evidence from electrophysiology. *Journal of Abnormal Psychology*.

Tas, A. C., **Luck, SJ**, & Hollingworth, A. (in press). The Relationship between Visual Attention and Visual Working Memory Encoding: A Dissociation between Covert and Overt Orienting. *Journal of Experimental Psychology: Human Perception and Performance*.

Bengson, J. J., & **Luck, SJ** (2016). Effects of strategy on visual working memory capacity. P*sychonomic Bulletin & Review*, 23, 265-270.

Kappenman, E. S., & **Luck, SJ** (2016). Best Practices for Event-Related Potential Research in Clinical Populations. Biological Psychiatry: *Cognitive Neuroscience and Neuroimaging*, 1, 110-115.

Kappenman, E. S., **Luck, SJ**, Kring, A. M., Lesh, T. A., Mangun, G. R., Niendam, T., Ragland, J. D., Ranganath, C., Solomon, M., Swaab, T. Y., & Carter, C. S. (2016). Electrophysiological evidence for impaired control of motor output in schizophrenia. *Cerebral Cortex*, 26, 1891-1899.

Tanner, D., Norton, J. J., Morgan-Short, K., & **Luck, SJ** (2016). On high-pass filter artifacts (they're real) and baseline correction (it's a good idea) in ERP/ERMF analysis. *Journal of Neuroscience Methods*, 266, 166–170.

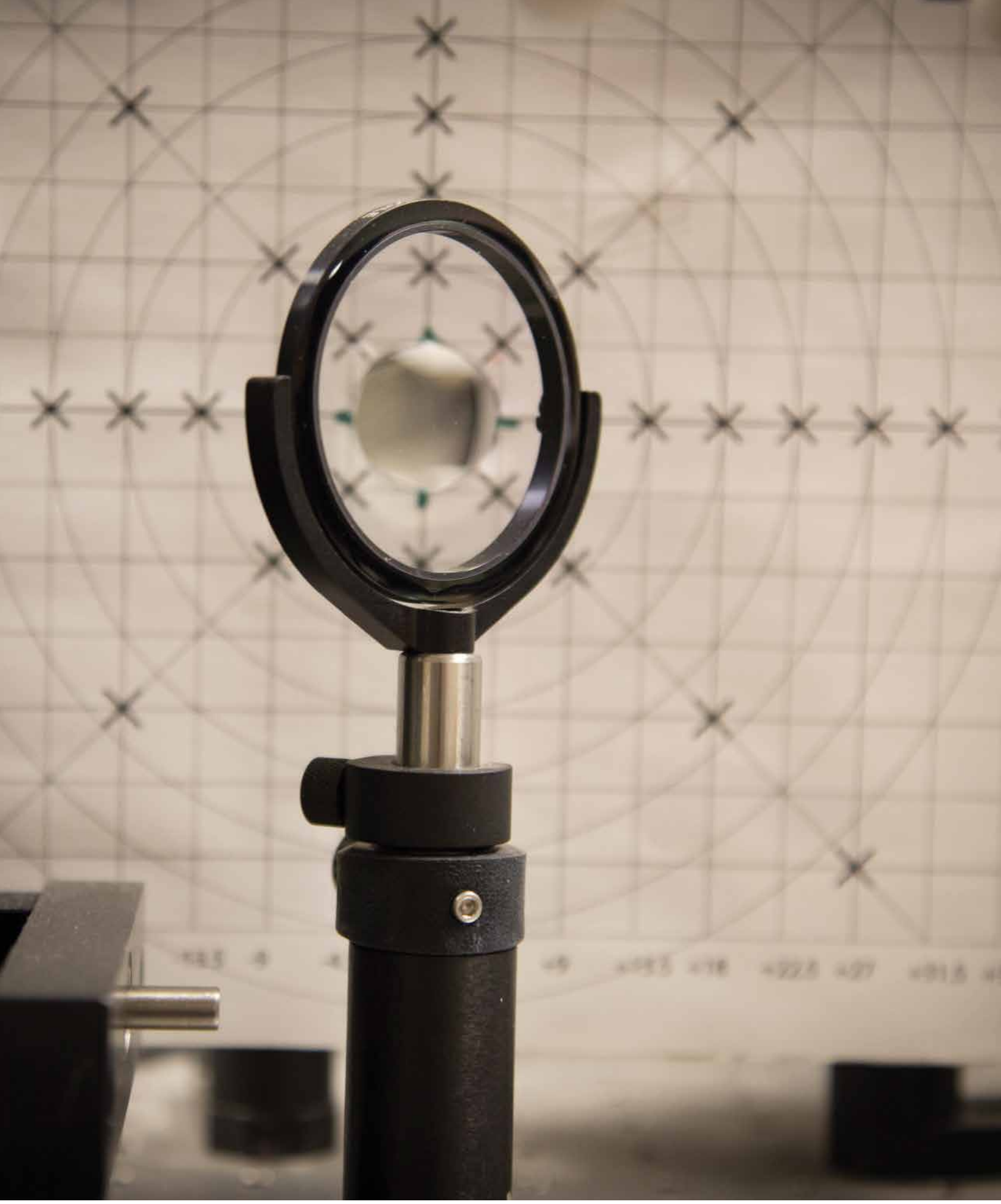
DAVID J. MAGGS, PH.D.

DEPARTMENT OF SURGICAL & RADIOLOGICAL SCIENCES
SCHOOL OF VETERINARY MEDICINE

Sebbag L, Park SA, Kass PH, **Maggs DJ**, Attar M, Murphy CJ. Assessment of tear film osmolarity using the TearLabTM osmometer in normal dogs and dogs with keratoconjunctivitis sicca. Vet Ophthalmol. 2016 Oct 20. doi: 10.1111/vop.12436. [Epub ahead of print]

Thomasy SM, Shull O, Outerbridge CA, Lim CC, Freeman KS, Strom AS, Kass PH, **Maggs DJ**. Use of oral famciclovir for treatment of spontaneous ocular, respiratory or dermatologic disease attributed to feline herpesvirus type-1 in 59 client-owned cats. *J Am Vet Med Assoc*. 2016, Sept 1; **249(5)**:526-538.

Smith KM, Strom AR, Gilmour MA, LaDouceur E, Reilly CM, Byrne BA, Affolter VK, Sykes JE, **Maggs DJ**. Utility of antigen testing for the diagnosis of ocular histoplasmosis in 4 cats: A case series and literature review. *J Feline Med Surg*. 2016 Aug 15. pii: 1098612X16662310. [Epub ahead of print].



Sebbag L, Thomasy SM, Woodward AP, Knych HK, **Maggs DJ**. Pharmacokinetic modeling of penciclovir and BRL42359 in plasma and tears so as to optimize oral famciclovir dosing recommendation. *Am J Vet Res*. 2016 (Aug);**77(8)**:833-845.

Beckwith-Cohen, B, Dubielzig RR, **Maggs DJ**, Teixeira LBC. Feline epitheliotrophic mastocytic conjunctivitis in 15 cats. Vet Pathol. *2016:54(1);141-146.*

Tusler CA, Good KL, **Maggs DJ**, Zwingenberger AL, Reilly CM. Histologic and computed tomographic characterization of nonpathologic intrascleral cartilage and bone in the domestic goat (*Capra aegagrus hircus). Vet Ophthalmol*. 2016 Jun 2. doi: 10.1111/vop.12391. [Epub ahead of print].

Lyons LA, Creighton EK, Alhaddad H, Beale HC, Grahn RA, Rah HC, **Maggs DJ**, Helps CR, Gandolfi B. Whole genome sequencing in cats identifies new models for blindness in AIPL1 and somite segmentation in HES7. *BMC Genomics*. 2016 Mar 31;**17(1)**:265.

Komaromy A, Abrams K, Heckenlively J, Lundy S, **Maggs DJ**, McPhee Leeth C, Mohan Kumar PS, Petersen-Jones S, Serreze D, van der Woerdt A. Sudden acquired retinal degeneration syndrome (SARDS) - A review and proposed strategies towards a better understanding of pathogenesis, early diagnosis, and therapy. *Vet Ophthalmol*. 2016 Jul;**19(4)**:319-31.

Wiggans KT, Reilly CM, Kass PH, **Maggs DJ**. Histologic and immunohistochemical predictors of clinical behavior for feline diffuse iris melanoma. *Vet Ophthalmol*. 2016 Jul;**19(S1)**:44-55.

Sebbag L, Reilly CM, Eid R, **Maggs DJ**. Goblet cell density and distribution in cats with clinically and histologically normal conjunctiva. *Vet Ophthalmol* 2016 Jul;**19(S1)**:38-43.

Berryhill E, Thomasy SM, Kass PH, Reilly CM, Good KL Hollingsworth SR, **Maggs DJ**, Magdesian G, Pusterla N. Comparison of corneal degeneration and calcific band keratopathy from 2000 to 2013 in 69 horses. *Vet Ophthalmol. 2016 Jan 15. doi: 10.1111/vop.12338. [Epub ahead of print].*

MARK J. MANNIS, M.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Li JY, Choulakian M, Ramos S, **Mannis MJ**. Single-pass microkeratome system for eye-bank DSAEK tissue preparation: Is stromal bed thickness predictable and reproducible? Cornea;January;35(1):95-9

Strom AR, Cortés DE, Rasmussen CA, Thomasy SM, McIntyre K, Lee SF, Kass PH, **Mannis MJ**, Murphy CJ. In vivo evaluation of the cornea and conjunctiva of the normal laboratory beagle using time- and Fourier-domain optical coherence tomography and ultrasound pachymetry. Veterinary Ophthalmology;January;19(1):50-6

Strom AR, Cortés DE, Thomasy SM, Kass PH, **Mannis MJ**, Murphy CJ. In vivo ocular imaging of the cornea of the normal female laboratory beagle using confocal microscopy.Veterinary Ophthalmology;January;19(1);63-7

Barnett M, Lien V, Li JY, Durbin-Johnson B, **Mannis MJ**. Use of Scleral Lenses and Miniscleral Lenses After Penetrating Keratoplasty. Eye & Contact Lens;May;42(3);185-9

Moisseiev E, **Mannis MJ**. Evaluation of a Portable Artificial Vision Device Among Patients With Low Vision. JAMA Ophthalmology;July;134(7):748-52

LAWRENCE S. MORSE, M.D., PH.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Smit-McBride Z, Moisseiev E, Modjtahedi SP, Telander DG, Hjelmeland LM, **Morse LS**. Comparison of In Vivo Gene Expression Profiling of RPE/Choroid following Intravitreal Injection of Dexamethasone and Triamcinolone Acetonide. J Ophthalmol. 2016;2016:9856736. doi: 10.1155/2016/9856736.

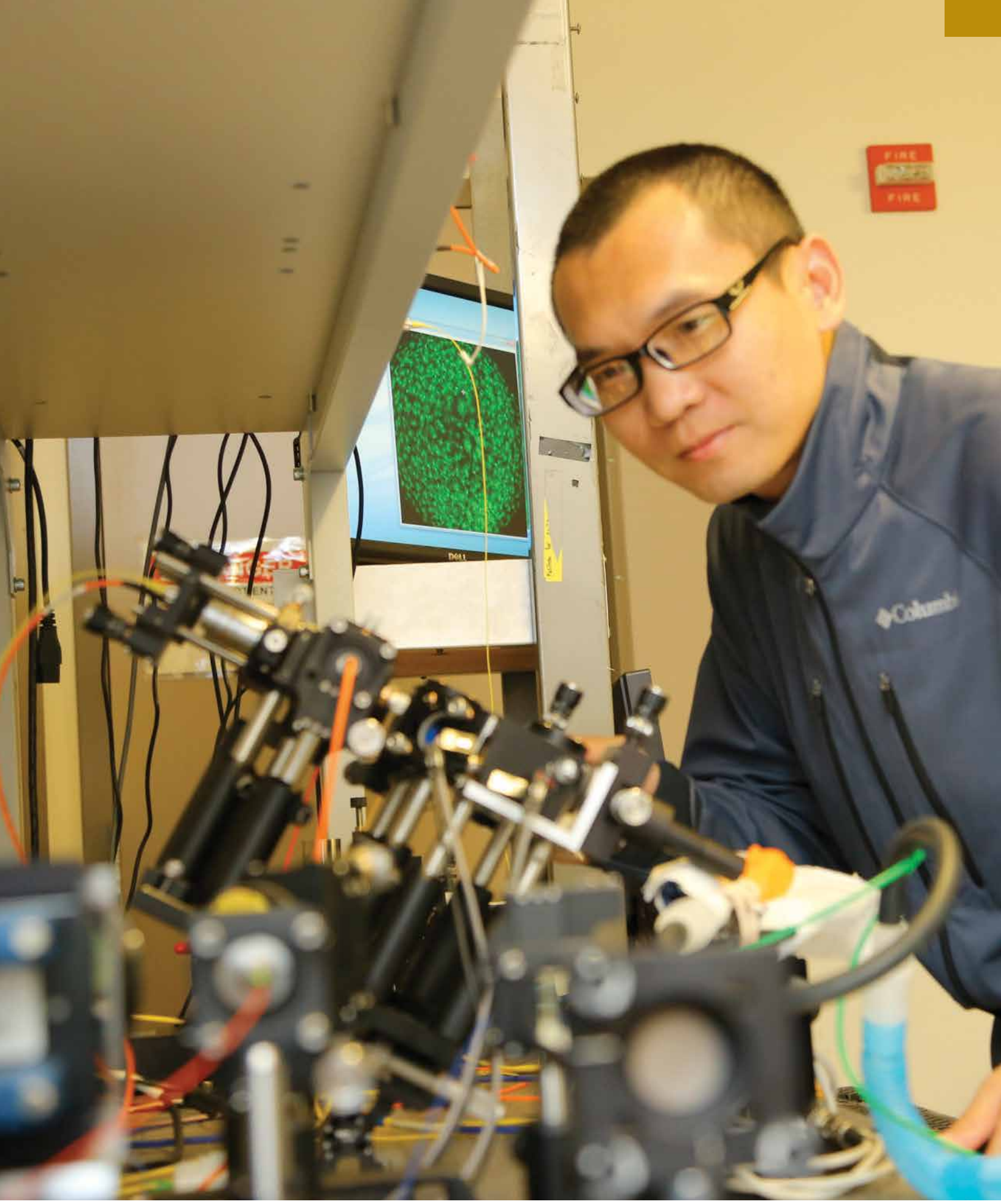
Moisseiev E, **Morse LS**. Fluocinolone Acetonide Intravitreal Implant in the Visual Axis.

JAMA Ophthalmol. 2016 Sep 1;134(9):1067-8. doi: 10.1001/jamaophthalmol.2016.0807. No abstract available.

Willis JR, Vitale S, **Morse LS**, Parke DW 2nd, Rich WL, Lum F, Cantrell RA. The Prevalence of Myopic Choroidal Neovascularization in the United States: Analysis of the IRIS(®) Data Registry and NHANES. Ophthalmology. 2016 Aug;123(8):1771-82. doi:10.1016/j.ophtha.2016.04.021.

Telander DG, Yu AK, Forward KI, Morales SA, **Morse LS**, Park SS, Gordon LK. Epithelial Membrane Protein-2 in Human Proliferative Vitreoretinopathy and Epiretinal Membranes. Invest Ophthalmol Vis Sci. 2016 Jun 1;57(7):3112-7. doi: 10.1167/iovs.15-17791.

Okafor K, Lu J, Thinda S, Schwab I, **Morse LS**, Park SS, Moshiri A. Acute Retinal Necrosis Presenting in Developmentally-delayed Patients with Neonatal


FIRE
FIRE

Encephalitis: A Case Series and Literature Review.Ocul Immunol Inflamm. 2016 May 18:1-6. [Epub ahead of print]

Modjtahedi BS, Bose N, Papakostas TD, **Morse LS**, Vavvas DG, Kishan AU. Lipids and Diabetic Retinopathy. Semin Ophthalmol. 2016;31(1-2):10-8. doi: 10.3109/08820538.2015.1114869. Review.

Sharma S, Toth CA, Daniel E, Grunwald JE, Maguire MG, Ying GS, Huang J, Martin DF, Jaffe GJ; Comparison of Age-related Macular Degeneration Treatments Trials Research Group. (**Morse, LS PI for UC Davis**) Macular Morphology and Visual Acuity in the Second Year of the Comparison of Age-Related Macular Degeneration Treatments Trials. Ophthalmology. 2016 Apr;123(4):865-75. doi: 10.1016/j.ophtha.2015.12.002.

Shah N, Maguire MG, Martin DF, Shaffer J, Ying GS, Grunwald JE, Toth CA, Jaffe GJ, Daniel E; Comparison of Age-related Macular Degeneration Treatments Trials Research Group.. (**Morse, LS PI for UC Davis**) Angiographic Cystoid Macular Edema and Outcomes in the Comparison of Age-Related Macular Degeneration Treatments Trials. Ophthalmology. 2016 Apr;123(4):858-64. doi: 10.1016/j.ophtha.2015.11.030.

AREDS2 Research Group., Al-Holou SN, Tucker WR, Agrón E, Clemons TE, Sperduto RD, Ferris FL 3rd, Chew EY (**Morse, LS PI for UC Davis**) The Association of Statin Use with Cataract Progression and Cataract Surgery: The AREDS2 Report Number 8. Ophthalmology. 2016 Apr;123(4):916-7. doi: 10.1016/j.ophtha.2015.10.040. No abstract available.

Daniel E, Shaffer J, Ying GS, Grunwald JE, Martin DF, Jaffe GJ, Maguire MG; Comparison of Age-Related Macular Degeneration Treatments Trials (CATT) Research Group.. (**Morse, LS PI for UC Davis**) Outcomes in Eyes with Retinal Angiomatous Proliferation in the Comparison of Age-Related Macular Degeneration Treatments Trials (CATT). Ophthalmology. 2016 Mar;123(3):609-16. doi: 10.1016/j.ophtha.2015.10.034.

Wells JA, Glassman AR, Jampol LM, Aiello LP, Antoszyk AN, Baker CW, Bressler NM, Browning DJ, Connor CG, Elman MJ, Ferris FL, Friedman SM, Melia M, Pieramici DJ, Sun JK, Beck RW; Diabetic Retinopathy Clinical Research Network.. (**Morse, LS PI for UC Davis**) Association of Baseline Visual Acuity and Retinal Thickness With 1-Year Efficacy of Aflibercept, Bevacizumab, and Ranibizumab for Diabetic Macular Edema. JAMA Ophthalmol. 2016 Feb;134(2):127-34. doi: 10.1001/jamaophthalmol.2015.4599. Erratum in: JAMA Ophthalmol. 2016 Apr;134(4):469.

ALA MOSHIRI, M.D., PH.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Vuong VS, Moisseiev E, Cunefare D, Farsiu S, **Moshiri A**, Yiu G. Repeatability of Choroidal Thickness Measurements on Enhanced Depth Imaging Optical Coherence Tomography Using Different Posterior Boundaries. Am J Ophthalmol. 2016 Sep;169:104-12. doi: 10.1016/j.ajo.2016.06.023.

Okafor K, Lu J, Thinda S, Schwab I, Morse LS, Park SS, **Moshiri A**. Acute Retinal Necrosis Presenting in Developmentally-delayed Patients with Neonatal Encephalitis: A Case Series and Literature Review. Ocul Immunol Inflamm. 2016 May 18:1-6. [Epub ahead of print]

Sachdeva MM, **Moshiri A**, Leder HA, Scott AW. Endophthalmitis following intravitreal injection of anti-VEGF agents: long-term outcomes and the identification of unusual micro-organisms.
J Ophthalmic Inflamm Infect. 2016 Dec;6(1):2. doi: 10.1186/s12348-015-0069-5.

Wells JA, Glassman AR, Jampol LM, Aiello LP, Antoszyk AN, Baker CW, Bressler NM, Browning DJ, Connor CG, Elman MJ, Ferris FL, Friedman SM, Melia M, Pieramici DJ, Sun JK, Beck RW; Diabetic Retinopathy Clinical Research Network. (**Moshiri, A PI for UC Davis**) Association of Baseline Visual Acuity and Retinal Thickness With 1-Year Efficacy of Aflibercept, Bevacizumab, and Ranibizumab for Diabetic Macular Edema. JAMA Ophthalmol. 2016 Feb;134(2):127-34. doi: 10.1001/jamaophthalmol.2015.4599. Erratum in: JAMA Ophthalmol. 2016 Apr;134(4):469.

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DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
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Eid R, Guzman DS, Keller KA, Wiggans KT, **Murphy CJ**, LaDouceur EE, Keel MK, Reilly CM. J Avian Med Surg. 2016 Dec;30(4):357-363. doi: 10.1647/2015122. Choroidal Vasculopathy and Retinal Detachment in a Bald Eagle (Haliaeetus leucocephalus) With Lead Toxicosis.

Sebbag L, Park SA, Kass PH, Maggs DJ, Attar M, **Murphy CJ**. Assessment of tear film osmolarity using the TearLab™ osmometer in normal dogs and dogs with keratoconjunctivitis sicca. Vet Ophthalmol. 2016 Oct 20. doi: 10.1111/vop.12436. [Epub ahead of print]

Ali M, Raghunathan V, Li JY, **Murphy CJ**, Thomasy SM. Biomechanical relationships between the corneal endothelium and Descemet's membrane. Exp Eye Res. 2016 Nov;152:57-70. doi: 10.1016/j.exer.2016.09.004. Review.

Leonard BC, Yañez-Soto B, Raghunathan VK, Abbott NL, **Murphy CJ**. Species variation and spatial differences in mucin expression from corneal epithelial cells. Exp Eye Res. 2016 Nov;152:43-48. doi: 10.1016/j.exer.2016.09.001.

Horikawa T, Thomasy SM, Stanley AA, Calderon AS, Li J, Linton LL, **Murphy CJ**. Superficial Keratectomy and Conjunctival Advancement Hood Flap (SKCAHF) for the Management of Bullous Keratopathy: Validation in Dogs With Spontaneous Disease. Cornea. 2016 Oct;35(10):1295-304. doi: 10.1097/ICO.0000000000000966.

Moisseiev E, Smit-McBride Z, Oltjen S, Zhang P, Zawadzki RJ, Motta M, **Murphy CJ**, Cary W, Annett G, Nolta JA, Park SS. Intravitreal Administration of Human Bone Marrow CD34+ Stem Cells in a Murine Model of Retinal Degeneration. Invest Ophthalmol Vis Sci. 2016 Aug 1;57(10):4125-35. doi: 10.1167/iovs.16-19252.

Lau RK, Moresco A, Woods SJ, Reilly CM, Hawkins MG, **Murphy CJ**, Hollingsworth SR, Hacker D, Freeman KS. Presumptive keratoglobus in a great horned owl (Bubo virginianus). Vet Ophthalmol. 2016 Jul 31. doi: 10.1111/vop.12413. [Epub ahead of print]

Thomasy SM, Cortes DE, Hoehn AL, Calderon AC, Li JY, **Murphy CJ**. In Vivo Imaging of Corneal Endothelial Dystrophy in Boston Terriers: A Spontaneous, Canine Model for Fuchs' Endothelial Corneal Dystrophy. Invest Ophthalmol Vis Sci. 2016 Jul 1;57(9):OCT495-503. doi: 10.1167/iovs.15-18885.

Yáñez-Soto B, Leonard BC, Raghunathan VK, Abbott NL, **Murphy CJ**. Effect of Stratification on Surface Properties of Corneal Epithelial Cells. Invest Ophthalmol Vis Sci. 2015 Dec;56(13):8340-8. doi: 10.1167/iovs.15-17468.

Petritz OA, Guzman DS, Gustavsen K, Wiggans KT, Kass PH, Houck E, **Murphy CJ**, Paul-Murphy J. Evaluation of the mydriatic effects of topical administration of rocuronium bromide in Hispaniolan Amazon parrots (Amazona ventralis). J Am Vet Med Assoc. 2016 Jan 1;248(1):67-71. doi: 10.2460/javma.248.1.67.

GARY D. NOVACK, PH.D.

VISITING PROFESSOR PHARMACOLOGY AND OPHTHALMOLOGY
DEPARTMENT OF OPHTHALMOLOGY & VISION SCIENCE
SCHOOL OF MEDICINE

Novack GD. Product exclusivity granted by the U.S. Food and Drug Administration Ocul Surf 2016;14(1):74-76.

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 2016;32 (1);1-2.

Novack GD, Moyer ED. How much nonclinical safety is required for a clinical study in ophthalmology? J Ocular Pharmacol Ther 2016;32(1):5-10.

Novack GD. Cannabinoids for treatment of glaucoma. Curr Opin Ophthalmology 27(2): 146-150.

Lewis RA, Levy B, Ramirez N, Kopczynski CC, Usner DW, **Novack GD** for the PG324-CS201 Study Group. Fixed dose combination of AR-13324 and latanoprost: A double-masked, randomized, controlled study in patients with open-angle glaucoma or ocular hypertension. Br J Ophthalmol 100: 339-344.

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 2016;32(2): 65-66.

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 2016;32(3):133-134.

Novack GD. Unapproved ophthalmic drugs. Ocul Surf 2016: 14(2): 317-320.

Novack GD, Robin AL. Ocular Pharmacology. J Clin Pharmacol 2016: 56(5): 517-527.

Chao W, Sullivan D, Belmonte C, Benitez del Castillo J, Bron A, Dua H, Nichols K, **Novack GD**, Schrader S, Willcox M, Wolffsohn J. Report of the Inaugural Meeting of the TFOS i2 = initiating innovation Series: Targeting the Unmet Need for Dry Eye Treatment. Ocul Surf 2016;14(2): 264-316.

Novack GD. Eyes on New Product Development 2016;32(4):185.

Novack GD. What determines how much your patient pays for their medication in the United States? Am J Ophthalmol 2016:167(48-51).

Novack GD. Eyes on New Product Development J Ocular Pharmacol Ther 2016;32(5):238-239.

Novack GD. Time to take your medicines, seriously. Ocul Surf 2016;14(3):410-415.

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 2016;32(6):341-342.

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 32(7): 401-402.

Novack GD. Natural does not mean safe. Ocul Surf 2016;14(4):515-519

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 2016;32(8): 483.

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 2016;32(9):563-564.

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther 2016;32(10):639. Schehlein E, Robin AL, Novack GD. New Classes of Glaucoma Medications. Current Opinion in Ophthalmology (in press).

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther (in press)

Novack GD. Chemistry matters! Ocul Surf (in press).

Novack GD. Eyes on New Product Development. J Ocular Pharmacol Ther (in press).

SUSANNA S. PARK, M.D., PH.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Cheng CI, **Park SS**, Aronowitz P. More than Meets the Eye: Metastatic Uveal Melanoma. J Gen Intern Med. 2016 Nov;31(11):1397. No abstract available. Moisseiev E, Smit-McBride Z, Oltjen S, Zhang P, Zawadzki RJ, Motta M, Murphy CJ, Cary W, Annett G, Nolta JA, **Park SS**. Intravitreal Administration of Human Bone Marrow CD34+ Stem Cells in a Murine Model of Retinal Degeneration. Invest Ophthalmol Vis Sci. 2016 Aug 1;57(10):4125-35. doi: 10.1167/iovs.16-19252.

Telander DG, Yu AK, Forward KI, Morales SA, Morse LS, **Park SS**, Gordon LK. Epithelial Membrane Protein-2 in Human Proliferative Vitreoretinopathy and Epiretinal Membranes. Invest Ophthalmol Vis Sci. 2016 Jun 1;57(7):3112-7. doi: 10.1167/iovs.15-17791.

Park SS, Thinda S, Kim DY, Zawadzki RJ, Werner JS. Phase-Variance Optical Coherence Tomographic Angiography Imaging of Choroidal Perfusion Changes Associated With Acute Posterior Multifocal Placoid Pigment Epitheliopathy. JAMA Ophthalmol. 2016 Aug 1;134(8):943-5. doi: 10.1001/jamaophthalmol.2016.1645. No abstract available.

Okafor K, Lu J, Thinda S, Schwab I, Morse LS, **Park SS**, Moshiri A. Acute Retinal Necrosis Presenting in Developmentally-delayed Patients with Neonatal Encephalitis: A Case Series and Literature Review. Ocul Immunol Inflamm. 2016 May 18:1-6. [Epub ahead of print]

Park SS. Cell Therapy Applications for Retinal Vascular Diseases: Diabetic Retinopathy and Retinal Vein Occlusion. Invest Ophthalmol Vis Sci. 2016 Apr 1;57(5):ORSFj1-ORSFj10. doi: 10.1167/iovs.15-17594.

Shah N, Maguire MG, Martin DF, Shaffer J, Ying GS, Grunwald JE, Toth CA, Jaffe GJ, Daniel E; Comparison of Age-related Macular Degeneration Treatments Trials Research Group. (**Park, SS PI for UC Davis**) Angiographic Cystoid Macular Edema and Outcomes in the Comparison of Age-Related Macular Degeneration Treatments Trials. Ophthalmology. 2016 Apr;123(4):858-64. doi: 10.1016/j.ophtha.2015.11.030.

Daniel E, Shaffer J, Ying GS, Grunwald JE, Martin DF, Jaffe GJ, Maguire MG; Comparison of Age-Related Macular Degeneration Treatments Trials (CATT) Research Group. (**Park, SS PI for UC Davis**) Outcomes in Eyes with Retinal Angiomatous Proliferation in the Comparison of Age-Related Macular Degeneration Treatments Trials (CATT). Ophthalmology. 2016 Mar;123(3):609-16. doi: 10.1016/j.ophtha.2015.10.034.

Wells JA, Glassman AR, Jampol LM, Aiello LP, Antoszyk AN, Baker CW, Bressler NM, Browning DJ, Connor CG, Elman MJ, Ferris FL, Friedman SM, Melia M, Pieramici DJ, Sun JK, Beck RW; Diabetic Retinopathy Clinical Research Network.. (**Park, SS PI for UC Davis**) Association of Baseline Visual Acuity and Retinal Thickness With 1-Year Efficacy of Aflibercept, Bevacizumab, and Ranibizumab for Diabetic Macular Edema. JAMA Ophthalmol. 2016 Feb;134(2):127-34. doi: 10.1001/jamaophthalmol.2015.4599. Erratum in: JAMA Ophthalmol. 2016 Apr;134(4):469.

KIMBERLY PLUMB

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Cello KE, Keltner JL, Johnson CA, Wall M; NORDIC Idiopathic Intracranial Hypertension Study Group. Factors Affecting Visual Field Outcomes in the Idiopathic Intracranial Hypertension Treatment Trial. J Neuroophthalmol. 2016 Mar;36(1):6-12. doi:10.1097/WNO.0000000000000327.

Wall M, Johnson CA, **Cello KE**, Zamba KD, McDermott MP, Keltner JL; NORDIC Idiopathic Intracranial Hypertension Study Group. Visual Field Outcomes for the Idiopathic Intracranial Hypertension Treatment Trial (**IIHTT**). Invest Ophthalmol Vis Sci. 2016 Mar;57(3):805-12. doi: 10.1167/iovs.15-18626.


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SCHOOL OF MEDICINE

Zhang P, Goswami M, Zawadzki RJ, **Pugh EN Jr**. The Photosensitivity of Rhodopsin Bleaching and Light-Induced Increases of Fundus Reflectance in Mice Measured In Vivo With Scanning Laser Ophthalmoscopy. Invest Ophthalmol Vis Sci. 2016 Jul 1;57(8):3650-64. doi: 10.1167/iovs.16-19393.

NAOKI SAITO, PH.D.

DEPARTMENT OF MATHEMATICS

J. Irion and **N. Saito**, *"Learning sparsity and structure of matrices with multiscale graph basis dictionaries," in Proceedings of the 2016 IEEE 26th International Workshop on Machine Learning for Signal Processing (MLSP),* 2016.

N. Saito, "Laplacian eigenfunctions and their applications to image data analysis," *Journal of Plasma and Fusion Research*, vol.92, no.12, pp.904-911 (in Japanese), Invited Paper.

L. Hermi and **N. Saito**, "On Rayleigh-Type formulas for a nonlocal boundary value problem associated with an integral operator commuting with the Laplacian," *Applied and Computational Harmonic Analysis*, accepted for publication, 2016.

J. Irion and **N. Saito**, "Efficient approximation and denoising of graph signals using the multiscale basis dictionaries," *IEEE Transactions on Signal and Information Processing over Networks*, accepted for publication, 2016.

IVAN R. SCHWAB, M.D., EMERITUS

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Jeng BH, Farid M, Patel SV, **Schwab IR**. Corneal Cross-linking for Keratoconus: A Look at the Data, the Food and Drug Administration, and the Future. Ophthalmology. 2016 Nov;123(11):2270-2272. doi: 10.1016/j.ophtha.2016.08.006. No abstract available.

Okafor K, Lu J, Thinda S, **Schwab IR**, Morse LS, Park SS, Moshiri A. Acute Retinal Necrosis Presenting in Developmentally-delayed Patients with Neonatal Encephalitis: A Case Series and Literature Review. Ocul Immunol Inflamm. 2016 May 18:1-6. [Epub ahead of print]

Li FJ, Nili E, Lau C, Richardson NA, Walshe J, Barnett NL, Cronin BG, Hirst LW, **Schwab IR**, Chirila TV, Harkin DG. Evaluation of the AlgerBrush II rotating burr as a tool for inducing ocular surface failure in the New Zealand White rabbit. Exp Eye Res. 2016 Jun;147:1-11. doi: 10.1016/j.exer.2016.04.005.

Schwab IR. Nice Ink. Cornea. 2016 Apr;35(4):429-30. doi: 10.1097/ICO.0000000000000694. No abstract available.

VIVEK SRINIVASAN, PH.D.

DEPARTMENT OF BIOMEDICAL ENGINEERING
COLLEGE OF ENGINEERING

Borycki, D., Kholiqov, O., & **Srinivasan, V. J.** (2016). Interferometric near-infrared spectroscopy directly quantifies optical field dynamics in turbid media. Optica, 3(12), 1471-1476. (link)

Srinivasan, V. J., & Dubra, A. (2016). Noninvasive imaging of the photoreceptor mosaic response to light stimulation. Proceedings of the National Academy of Sciences, 113(46), 12902-12903. (link)

Merkle, C. W., Leahy, C., & **Srinivasan, V. J.** (2016). Dynamic contrast optical coherence tomography images transit time and quantifies microvascular plasma volume and flow in the retina and choriocapillaris. Biomedical Optics Express, 7(10), 4289-4312. (link)

Goergen, C. J., Chen, H. H., Sakadži , S., **Srinivasan, V. J.**, & Sosnovik, D. E. (2016). Microstructural characterization of myocardial infarction with optical coherence tractography and two photon microscopy. Physiological Reports, 4(18), e12894. (link)

Shieh, E., Lee, R., Que, C., **Srinivasan, V.J.**, Guo, R., DeLuna, R., ... & Chen, T. C. (2016). Diagnostic Performance of a Novel Three-Dimensional Neuroretinal Rim Parameter for Glaucoma Using High-Density Volume Scans. American Journal of Ophthalmology, 169, 168-178. (link)

Leahy, C., Radhakrishnan, H., Bernucci, M., & **Srinivasan, V. J.** (2016). Imaging and graphing of cortical vasculature using dynamically focused optical coherence microscopy angiography. Journal of biomedical optics, 21(2), 020502-020502. (link)

Borycki, D., Kholiqov, O., Chong, S. P., & **Srinivasan, V. J**. (2016). Interferometric Near-Infrared Spectroscopy (iNIRS) for determination of optical and dynamical properties of turbid media. Optics express, 24(1), 329-354. (link)

Merkle, C. W., & **Srinivasan, V. J**. (2016). Laminar microvascular transit time distribution in the mouse somatosensory cortex revealed by Dynamic Contrast Optical Coherence Tomography. NeuroImage, 125, 350-362. (link).

CHARLES E. THIRKILL, PH.D, EMERITUS

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Lincoff N, Nadeem M, Younus Z, **Thirkill CE**. Ophthalmol Ther. Exudative Polymorphous Vitelliform Retinopathy: Importance of Early Recognition of the Condition in Patients with Metastatic Melanoma. 2016 Jun;5(1):121-7. doi: 10.1007/s40123-016-0044-8.

W. MARTIN USREY, PH.D.

DEPARTMENT OF NEUROBIOLOGY, PHYSIOLOGY AND BEHAVIOR
COLLEGE OF BIOLOGICAL SCIENCES
DEPARTMENT OF NEUROLOGY
SCHOOL OF MEDICINE

Fisher TG, Alitto HJ, **Usrey WM**. Retinal and Non-Retinal Contributions to Extraclassical Surround Suppression in the Lateral Geniculate Nucleus. J Neurosci. 2016 Nov 30. pii: 1577-16. [Epub ahead of print]

Goldberg JL, Guido W; Agi Workshop Participants.. (**Ursey WM PI for UC Davis**) Report on the National Eye Institute Audacious Goals Initiative: Regenerating the Optic Nerve. Invest Ophthalmol Vis Sci. 2016 Mar;57(3):1271-5. doi: 10.1167/iovs.15-18500. Review.

JOHN. S. WERNER, PH.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Jonnal, R.S., Kocaoglu, O.P., Zawadzki, R.J., Liu, Z., Miller, D.T. & **Werner, J.S**. (2016) A review of adaptive optics optical coherence tomography: Technical advances, scientific applications, and the future. Investigative Ophthalmology & Visual Science, 57, OCT51-OCT68.

Tillman, M.A., Panorgias, A. & **Werner, J.S**. (2016) Age-related change in fast adaptation mechanisms measured with the scotopic full-field ERG. Documenta Ophthalmologica, 132, 201-212.

Chen, Z., Huang, D., Izatt, J.A., Wang, R.K., **Werner, J.S**. & Yasuno, Y. (2016) Re: Spaide et al.: Volume-rendering optical coherence tomography angiography of macular telangiectasia type 2. Ophthalmology, 123(3), e24-e25.

Gorczynska, I., Migacz, J.V., Zawadzki, R.J., Capps, A.G. & **Werner, J.S**. (2016) Comparison of amplitude-decorrelation, speckle-variance and phase-variance OCT angiography methods for imaging the human retina and choroid. Biomedical Optics Express, 7(3), 911-94.

Park, S.S., Thinda, S., Kim, D.Y., Zawadzki, R.J. & **Werner, J.S**. (2016) Phase-variance optical coherence tomographic angiography imaging of choroidal perfusion changes associated with acute posterior multifocal placoid pigment epitheliopathy. JAMA Ophthalmology, 134, 943-945.

Werner, J.S. (2016) The Verriest Lecture: Short-wave-sensitive cone pathways across the life span. Journal of the Optical Society of America A: Optics, Image Science and Vision, 33, A104-122.

Tregillus, K.E.M. **Werner, J.S**. & Webster, M.A. (2016) Adjusting to a sudden "aging" of the lens. Journal of the Optical Society of America A: Optics, Image Science and Vision, 33 (3), A129-136.

Shinomori, K., Panorgias, A. & **Werner, J.S**. (2016) Discrimination thresholds of normal and anomalous trichromats: Model of senescent changes in ocular media density on the Cambridge Colour Test. Journal of the Optical Society of America A: Optics, Image Science and Vision 33, (3), A65-76.

GLENN C. YIU, M.D., PH.D.

DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Moisseiev E, **Yiu G**. The Suprachoroidal Space: From Potential Space to a Space with Potential. Clin Ophthalmol. 2016 Jan 25;10:173-8. (PMID: 26869750)

Wells JA, Glassman AR, Jampol LM, Aiello LP, Antoszyk AN, Baker CW, Bressler NM, Browning DJ, Connor CG, Elman MJ, Ferris FL, Friedman SM, Melia M, Pieramici DJ, Sun JK, Beck RW; Diabetic Retinopathy Clinical Research Network (**Yiu G PI for UC Davis**). Association of Baseline Visual Acuity and Retinal Thickness With 1-Year Efficacy of Aflibercept, Bevacizumab, and Ranibizumab for Diabetic Macular Edema. JAMA Ophthalmol. 2016 Feb;134(2):127-34. (PMID: 26605836)

Yiu G. Mirrored-Prism Spectacles for Face-Down Posturing after Vitreoretinal Surgery with Gas Tamponade. Retina. Retina. 2016 Apr;36(4):846-8. (PMID: 26689270)

Vuong VS, Moisseiev E, Cunefare D, Farsiu S, Moshiri A, **Yiu G**. Repeatability of Choroidal Thickness Measurements on Enhanced Depth Imaging OCT using Different Posterior Boundaries. Am J Ophthalmol. 2016 Sep; 169:104-12. (PMID: 27345731)

Moisseiev E, **Yiu G**. Role of Tractional Forces and Internal Limiting Membrane in Macular Hole Formation: Insights from Intraoperative Optical Coherence Tomography. Case Rep Ophthalmol. 2016 Jul 21;7(2):372-376. (PMID: 27721786)

Yiu G, Tieu EV, Nguyen AT, Wong B, Smit-McBride Z. Genomic Disruption of VEGF-A Expression in Human Retinal Pigment Epithelial Cells using CRISPR-Cas9 Endonuclease. Invest Ophthalmol Vis Sci. 2016 Oct 1;57(13):5490-5497. (PMID: 27768202)

Yiu G, Vuong VS, Oltjen S, Cunefare D, Farsiu S, Garzel L, Roberts J, Thomasy S. Effect of Uveal Melanocytes on Choroidal Morphology in Rhesus Macaques and Humans on Enhanced-Depth Imaging Optical Coherence Tomography. Invest Ophthalmol Vis Sci. 2016 Oct 1;57(13):5764-5771 (PMID: 27792810)

Moisseiev E, Vuong VS, **Yiu G**. Refining the Definition of the Choroidal-Scleral Interface. Acta Ophthalmol. 2015. Dec 21 [Epub ahead of print] (PMID: 26687146)

Moisseiev E, **Yiu G**. Retinal Detachment in Severe Myopia. Lancet. 2016. Nov 3 [Epub ahead of print] (PMID: 27817867)

Moisseiev E, Rudell J, Tieu EV, **Yiu G**. Effect of Syringe Design on the Accuracy and Precision of Intravitreal Injections of Anti-VEGF Agents. Curr Eye Res. 2016. [In Press]

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DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
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DEPARTMENT OF CELL BIOLOGY AND HUMAN ANATOMY
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Cua M, Wahl DJ, Zhao Y, Lee S, Bonora S, **Zawadzki RJ**, Jian Y, Sarunic MV. Coherence-Gated Sensorless Adaptive Optics Multiphoton Retinal Imaging. Sci Rep. 2016 Sep 7;6:32223. doi: 10.1038/srep32223.

Moisseiev E, Smit-McBride Z, Oltjen S, Zhang P, **Zawadzki RJ**, Motta M, Murphy CJ, Cary W, Annett G, Nolta JA, Park SS. Intravitreal Administration of Human Bone Marrow CD34+ Stem Cells in a Murine Model of Retinal Degeneration. Invest Ophthalmol Vis Sci. 2016 Aug 1;57(10):4125-35. doi: 10.1167/iovs.16-19252.

Jonnal RS, Kocaoglu OP, **Zawadzki RJ**, Liu Z, Miller DT, Werner JS. A Review of Adaptive Optics Optical Coherence Tomography: Technical Advances, Scientific Applications, and the Future. Invest Ophthalmol Vis Sci. 2016 Jul 1;57(9):OCT51-68. doi: 10.1167/iovs.16-19103.

Zhang P, Goswami M, **Zawadzki RJ**, Pugh EN Jr. The Photosensitivity of Rhodopsin Bleaching and Light-Induced Increases of Fundus Reflectance in Mice Measured In Vivo With Scanning Laser Ophthalmoscopy. Invest Ophthalmol Vis Sci. 2016 Jul 1;57(8):3650-64. doi: 10.1167/iovs.16-19393.

Park SS, Thinda S, Kim DY, **Zawadzki RJ**, Werner JS. Phase-Variance Optical Coherence Tomographic Angiography Imaging of Choroidal Perfusion Changes Associated With Acute Posterior Multifocal Placoid Pigment Epitheliopathy. JAMA Ophthalmol. 2016 Aug 1;134(8):943-5. doi: 10.1001/jamaophthalmol.2016.1645. No abstract available.

Jian Y, Lee S, Ju MJ, Heisler M, Ding W, **Zawadzki RJ**, Bonora S, Sarunic MV. Lens-based wavefront sensorless adaptive optics swept source OCT. Sci Rep. 2016 Jun 9;6:27620. doi: 10.1038/srep27620.

Gorczynska I, Migacz JV, **Zawadzki RJ**, Capps AG, Werner JS. Comparison of amplitude-decorrelation, speckle-variance and phase-variance OCT angiography methods for imaging the human retina and choroid. Biomed Opt Express. 2016 Feb 19;7(3):911-42. doi: 10.1364/BOE.7.000911.

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DEPARTMENT OF DERMATOLOGY
DEPARTMENT OF OPHTHALMOLOGY AND VISION SCIENCE
SCHOOL OF MEDICINE

Ferreira F, Luxardi G, Reid B, **Zhao M**. Early bioelectric activities mediate redox-modulated regeneration. Development. 2016 Nov 8. pii: dev.142034. [Epub ahead of print]

Nakajima KI, **Zhao M**. Concerted action of KCNJ15/Kir4.2 and intracellular polyamines in sensing physiological electric fields for galvanotaxis. Channels (Austin). 2016 Mar 16:1-3.

Shen, Y. Y., Pfluger, T., Ferreira, F., Liang, J. B., Navedo, M. F., Zeng, Q. L., Reid, B. and **Zhao, M**. Diabetic cornea wounds produce significantly weaker electric signals that may contribute to impaired healing. Scientific Reports. 2016 Jun 10;6:26525. doi: 10.1038/srep26525. PMID: 27283241 PMCID: PMC4901296.

Hoeller O, Toettcher JE, Cai H, Sun Y, Huang CH, Freyre M, **Zhao M**, Devreotes PN, Weiner OD. Gβ Regulates Coupling between Actin Oscillators for Cell Polarity and Directional Migration. PLoS Biol. 2016 Feb 18;14(2):e1002381. doi: 10.1371/journal.pbio.1002381. eCollection 2016 Feb.

Zhu K, Sun Y, Miu A, Yen M, Liu B, Zeng Q, Mogilner A, **Zhao M**. cAMP and cGMP Play an Essential Role in Galvanotaxis of Cell Fragments. J Cell Physiol. 2016 Jun;231(6):1291-300. doi: 10.1002/jcp.25229. Epub 2015 Nov 24. PMID: 26517849

Nakajima K, Zhu K, Sun YH, Hegyi B, Zeng Q, Murphy CJ, Small JV, Chen-Izu Y, Izumiya Y, Penninger JM, **Zhao M**. KCNJ15/Kir4.2 couples with polyamines to sense weak extracellular electric fields in galvanotaxis. Nat Commun. 2015 Oct 9;6:8532. doi: 10.1038/ncomms9532.

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