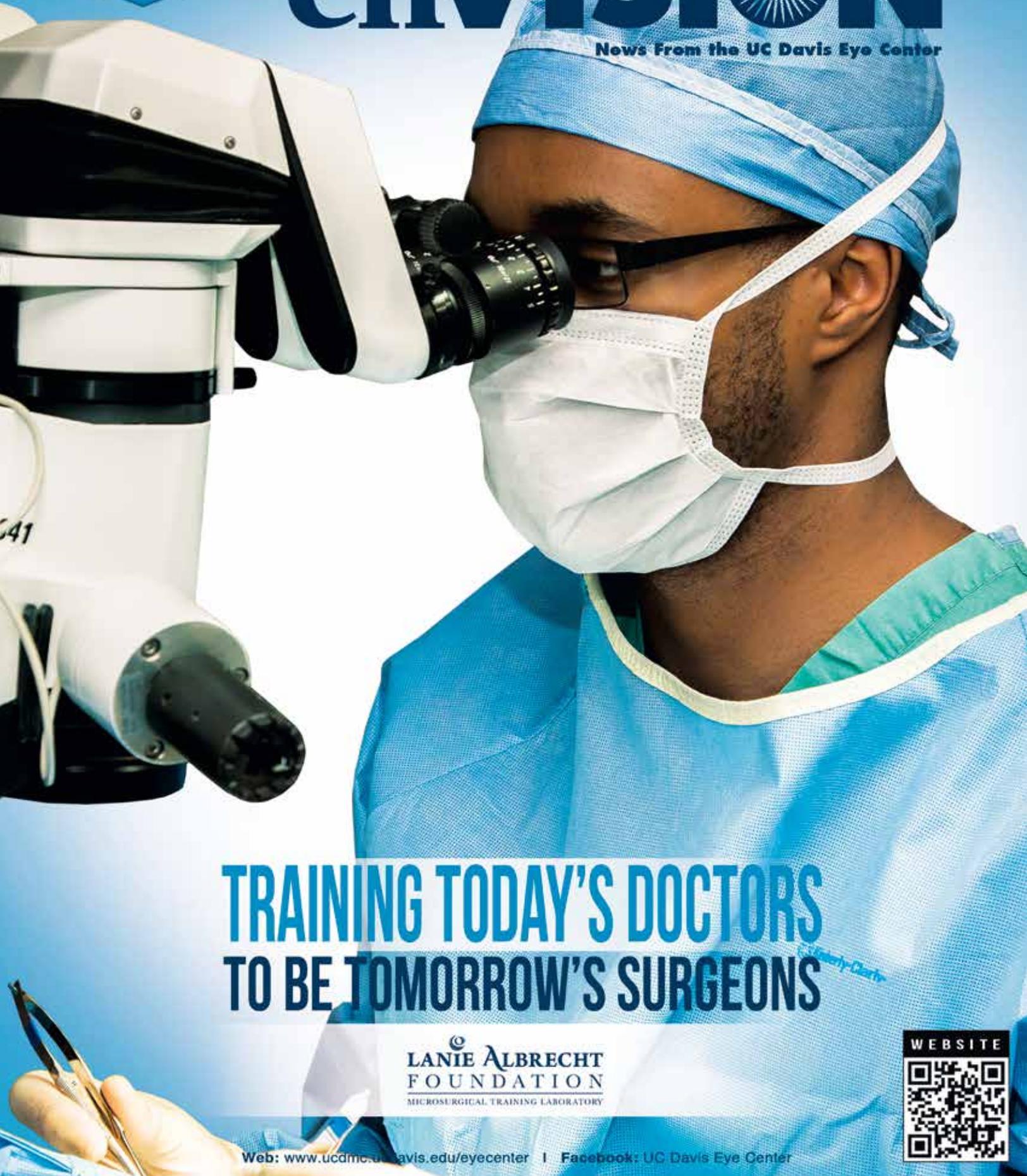


SPRING
SUMMER
2014

enVISION

News From the UC Davis Eye Center



**TRAINING TODAY'S DOCTORS
TO BE TOMORROW'S SURGEONS**

**LANIE ALBRECHT
FOUNDATION**
MICROSURGICAL TRAINING LABORATORY

WEBSITE



Web: www.ucdmc.ucdavis.edu/eyecenter | Facebook: UC Davis Eye Center



▲
Dr. Kingsley Okafor practicing surgical techniques in the
Lanie Albrecht Microsurgical Training Laboratory.

From the Chair's Desk

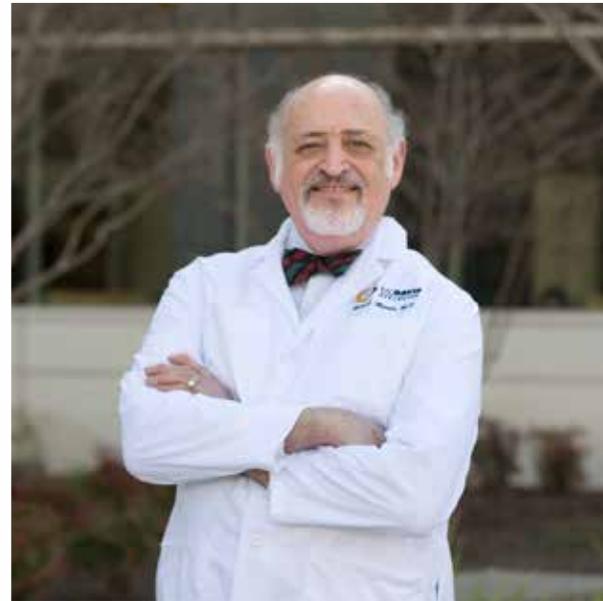
It is the best of times...but not without challenges.

UC Davis Health System is in a time of tremendous growth and change. The changes in our national healthcare system have had a huge impact on the way we do business. This is made even more complex by the fact that in addition to providing top notch patient care to the population with the most challenging health issues in our region, we are a hospital dedicated to the training of new generations of talented physicians. Training young doctors and, at the same time, caring for the most ill in our community, is a complex and extremely costly enterprise.

Fortunately, we have exciting new leadership in our Dean and Vice Chancellor for Human Health Sciences, Dr. Julie Freischlag. Dr. Freischlag, joining our institution from Johns Hopkins where she chaired the Department of Surgery, brings renewed energy to the Health System and will help to set its course for the next decade.

Like the Health System, the Eye Center is also in a tremendous growth phase marked by the addition of new faculty, additional fellowship trainees, and cutting-edge services being made available to our patients such as the femtosecond laser for cataract surgery. Such additions speak to the vibrancy of our organization, even in these financially trying times.

The reality is that our healthcare system and the current reimbursements that we receive for the provision of care cannot cover the costs that are required to make us one of the finest eye centers in the country. To accomplish our tripartite goal of service, research and education, we rely on philanthropic support. A wonderful example of this is the new microsurgical training laboratory, featured later in this edition of enVISION. This unique training facility could not have been made possible without the largesse of the Lanie Albrecht Foundation. And so, change and growth require resources. A good portion of these resources flow from the goodwill of patients, friends and alumni trainees. We thank them for their investment in our program and for their trust in us.



Sincerely,

Mark J. Mannis, MD
Professor and Chair, UC Davis Eye Center

UC DAVIS
EYE CENTER

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

Managing Editor

Mark J. Mannis, MD

Contributing Editors

Cameron Blount
Kimber Chavez
Barbara Holderreed

Contributors

Jeffrey Caspar, MD
Mary O'Hara, MD
Larisa Johnson-Tong, OD
Mark J. Mannis, MD
E. Antoinette McLean
Robert Miller, MD
Roma Patel, MD, MBA
Shari Roeseler

Production Manager

Kimber Chavez

Photography

Bhupinder Dhillon
Jennifer Li, MD
Michele C. Lim, MD
Emi Manning
Ellen Redenbo

Graphic Design

UC Davis Eye Center Staff

To Schedule Patient Appointments:

(916) 734-6602 (Patients - All Sites)
(916) 734-6992 (FAX)
(916) 734-6650 (Lasik)

DIRECTORY

UC Davis Eye Center
4860 Y St., Suite 2400
Sacramento, CA 95817
(916) 734-6602

UC Davis Eye Center Optical Shop
4860 Y St., Suite 2013
Sacramento, CA 95817
(916) 734-6300

UC Davis Eye Services Roseville
2261 Douglas Blvd.
Roseville, CA 95661
(916) 783-7109 (*option 7*)

UC Davis Eye Services Cadillac Drive
77 Cadillac Dr.
Sacramento, CA 95825
(916) 734-4642

UC Davis Cadillac Drive Optical Shop
77 Cadillac Dr.
Sacramento, CA 95825
(916) 734-6644

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.

CONTENTS

03	From the Chair's Desk
05	Eye Center Opens Lanie Albrecht Foundation Microsurgical Training Laboratory
08	UC Davis Eye Center Goes to Bangladesh
10	Children's Miracle Network Grant Helps Children with Contact Lenses
12	AAO Reception
14	Giving Back to the Community at the Paul Hom Asian Health Clinic
15	Experiences of a Resident at UC Davis Eye Center
16	Low Vision Clinic at the Society for The Blind
18	Improving the Experience for Residents
20	UC Davis Eye Center Welcomes Tania Hashmi
22	UC Davis Eye Center Honor Roll
28	Faculty
33	Residents and Fellows
34	Dr. Mannis Lectures to the UC Davis Mini-Medical School
	and
	Charles Bradbrook, MD Recognized by the Eye Center for his dedication to continuing education

Eye Center Opens

The Lanie Albrecht Foundation Microsurgical Training Laboratory

by Mark J. Mannis, M.D.



Ophthalmology is, perhaps, unique among medical specialties in its combination of broad medical care that is directed to diseases of all the organ systems. The eye is a microcosm of the entire body. As such, the ophthalmologist deals with endocrine diseases such as diabetes and thyroid disorders; skin diseases such as rosacea; infectious disease in its many manifestations in the eye; neurology with the eye as a direct extension of the brain and with vision occupying 40% of the brain's anatomic function; oncology with tumors that affect the eye; and age-related and vascular diseases among many others.

At the same time, we are a surgical specialty, practicing very elegant surgery blessed with a high rate of functional success. Ophthalmic surgery ranges from exceedingly fine microsurgery inside the eye to restorative plastic surgery of the tissues around the eye. And the outcomes of ophthalmic surgery are,

arguably, the best in medicine. Both patient and physician derive enormous satisfaction with the highly successful outcomes of cataract surgery, for example. Likewise, corneal transplantation, retinal detachment repair, straightening of the eyes in children and adults, and restorative oculoplastic surgery can be life altering for the patient, providing huge improvements in the quality of life.

Residents training at the UC Davis Eye Center have always left our institution with quality surgical training. Both in the lab and the operating room, our faculty of expert ophthalmic surgeons nurture our trainees into their surgical roles as skilled practitioners of surgical eye care.

This year we are further enhancing our capabilities for providing expert surgical training. Through the generosity of Mr. Ralph Albrecht and the Lanie Albrecht Foundation,

the Eye Center has opened a state-of-the-art microsurgical training facility in the Ambulatory Care Center. Fully equipped with high-quality surgical microscopes, microsurgical instruments for each resident, and video and recording capabilities, the lab will serve as the surgical training center for our residents for many years to come. The lab will also be used by residents in the veterinary ophthalmology training program, and will be available to other microsurgical specialties at the Medical Center, plus our community faculty as well.

In conjunction with the establishment of the Microsurgical Training Laboratory, the Eye Center is partnering with the Ophthalmology Department at the School of Veterinary Medicine to create a unique, web-based, graduated surgical training curriculum in ophthalmology. This course will require both the Eye Center residents as well as the Vet Med residents to achieve milestones in the development of their surgical skills over the three-year training period.

The training lab will be the site of future ophthalmic surgical courses here at the Eye Center but otherwise will be available to all residents 24 hours a day for individual practice and tutoring.

In providing the Eye Center with this facility, the Lanie Albrecht Foundation has provided generations of future eye patients with the gift of meticulously trained surgeons and the confidence that their eyes are in the hands of skilled practitioners trained to do the finest possible job of surgical vision restoration.



Left to right: (Page 5) Dr. Nandini Gandhi Associate Program Director, practicing microsurgery, (Page 6) Dr. Mark Mannis, Department Chair and Mrs. Sharon Wong, Executive Director of the Foundation, officially open the new facility, (2) M. Glesen, M. Mannis, S. Wong and D. Christy. (Page 7) UC Davis residents in the lab with Program Director Jeffrey Caspar, MD

From the Program Director

Surgical Training at the UC Davis Eye Center

by Jeffrey Caspar, M.D.

Surgery is both a science and an art. The performance of a surgical procedure, particularly an operation on the eye where the margin for error is extremely small and the stakes are very high, demands careful study, a lot of pre-surgical laboratory practice, and excellent mentorship in the operating room. Ophthalmic surgery is a varied science, ranging from cosmetic and reconstructive surgery of the lids and skin around the eye, to corneal transplantation, glaucoma surgery, various types of laser surgery, cataract surgery, and retina surgery. Each of these types of surgery demands a very specific skill set. Over the three years of residency, our trainees learn to assist the faculty surgeons and are gradually introduced to hands-on surgery in preparation for their careers as board-certified ophthalmologists.



In the very first week of training, our residents are brought to the laboratory and given a thorough orientation both to the instrumentation of ocular surgery as well as to the special accommodations made for the patient undergoing surgery. Our trainees must be fully familiar with the general medical status of patients going to the operating room, conditions which may have an impact on the outcome of the ophthalmic procedure. Next, over the course of the first year of training, our residents learn to assist the faculty in the operating room and are gradually introduced to performing various parts of the procedures moving from the simplest to the more difficult and complex. Certain procedures are not undertaken until Fellowship, which is a year (in some cases 2 years) of specialty training after residency. But the residents all get a firm grounding in the principles and practices of ophthalmic surgery.

During the final year of residency, the trainees follow their own patients and perform most of the cases themselves under the direct supervision of experienced faculty. In addition, our program has two affiliated Veterans Administration Hospitals where our residents are afforded the opportunity to participate in the surgical care of the patients there.

This year, we are pleased to open the Lanie Albrecht Foundation Microsurgical Training Laboratory. Through a generous gift from Ralph Albrecht and the Lanie Albrecht Foundation, the Eye Center will have a state-of-the-art microsurgical training laboratory complete with surgical microscopes, surgical instruments, and a unique video system that will allow instructors and students to demonstrate techniques to one another. We anticipate that this lab will be used not only by the Eye Center ophthalmology residents but, in addition, by the ophthalmology residents from the School of Veterinary Medicine, and trainees from other surgical specialties in which microsurgery is performed. This lab will be used for regular in-house training sessions, both group and individual, as well as for surgical training courses.

The graduates of the training program here at the Eye Center are well respected for their surgical expertise. Fine facilities, a large and varied patient population, and skilled mentorship make the surgical training at UC Davis second to none for individual practice and tutoring.

In providing the Eye Center with this facility, the Lanie Albrecht Foundation has bestowed upon generations of future eye patients the gift of meticulously trained surgeons and the confidence that their eyes are in the hands of skilled practitioners trained to do the finest possible job of surgical vision restoration.

UC Davis Eye Center Goes to Bangladesh

by Jeffrey Caspar, M.D.

In October of 2010, the UC Davis Eye Center's Residency Program was presented with a unique opportunity. During its annual resident surgery practice course, Dr. Matti Vazeen presented the residents with a talk on his involvement with the Ispahani Islamia Eye Institute and Hospital (IEH) located in Dhaka, the capital of Bangladesh. Established in 1960, the IEH is the largest eye hospital in Dhaka, an immense facility seeing nearly 425,000 patients each year.

Dr. Vazeen is an ophthalmologist and the director of the Center for Advanced Eye Care in Carson City, Nevada. He attended medical school at Northwestern University Medical School in Chicago and completed his residency in ophthalmology at LSU-Ochsner in New Orleans. But it was as an undergraduate alumnus of UC Davis that forged this connection with the Eye Center.

At the surgical course, Dr. Vazeen gave a fascinating and inspiring talk on the Islamia Eye Hospital and his connection with it. He discussed its assets as a wonderful teaching opportunity for the residents and, in conclusion, offered to fund the travel of two residents per year to the IEH.

In January of 2012, Dr. Vazeen and Dr. Caspar, Professor and Director of Residency Education, traveled to the IEH. There, they spent a week observing and teaching in the clinic and operating room and gave lectures each evening. Their stay culminated in a one-day symposium during which they lectured, answered questions and performed live surgery via video feed. The symposium was well attended by numerous ophthalmologists from Dhaka and the surrounding areas.

The budding relationship between UC Davis Eye Center and IEH expanded in April of 2012 when the UC Davis Eye Center sponsored Dr. Amiruz Zamin, head of the cornea department at IEH, to spend one month in the US working with Dr. Caspar. During his stay, Dr. Amir



observed in clinic and in the operating room, attended teaching rounds, and presented several interesting clinical and surgical cases.

Since this initial exchange, the relationship between these two eye centers has blossomed. In October of 2012, Dr. John Keltner, Distinguished Professor and Chair Emeritus of the UC Davis Department of Ophthalmology & Vision Science, traveled with his wife to IEH. Dr. Keltner has since been instrumental in recruiting equipment donations for the IEH and in establishing the Friends of Islamia Eye Hospital, Dhaka, a tax-exempt charity, to help support operations there.

Following Dr. Keltner's visit, other physicians from the Eye Center have made regular visits to the IEH. In December of 2012, Dr. Nandini Gandhi, Assistant Professor of Pediatric Ophthalmology, spent a week lecturing and teaching surgery.

Then, in January of 2013, Dr. Eric Chin became our first senior resident to travel to IEH. Dr. Chin spent a month giving 11 lectures, learning new surgical techniques and helping to develop additional teaching and research programs. He was accompanied by Dr. Annie Baik, Assistant Professor of the UC Davis Glaucoma Service.

In December of 2013, Dr. Vivian Lien became our second senior resident to travel to Dhaka and our third resident is scheduled to travel in the spring of 2014.

Working in Bangladesh is an enlightening experience for our residents, one that is provided by few training programs in the country. The experience in Bangladesh exposes the residents to a wide range of eye diseases and surgical techniques not frequently seen in the United States. There they learn the challenges and rewards of providing much needed eye care in a developing nation and will be better prepared for future opportunities in international service. Their experiences also foster long-standing relationships and emphasize the need to give back to the profession of ophthalmology and to the underserved throughout the world.

Having begun with Dr. Vazeen's desire to give back to a profession that has been so good to him, we expect the mutually beneficial relationship between IEH and UCD to continue to expand and grow over the coming years.

Photos:

Dr. Jennifer Li, MD, UC Davis Cornea Specialist with patients at IEH, Vivien Lien, MD Senior Resident at UCD, examining a patient in Dhaka.





CHILDREN'S MIRACLE NETWORK

GRANT HELPS CHILDREN WITH CONTACT LENSES

by Larisa Johnson-Tong, OD

For most new parents, putting a contact lens on their baby's eye is unimaginable. For a few, this is just part of their daily routine, like feedings, bathing and changing diapers. Approximately 3 in 10,000 children are born with cataracts and require lens removal surgery, the most common reason an infant would be fit for contact lenses. Removing the cataracts results in an extreme prescription. This makes glasses very difficult, if not impossible to wear. Without accurate correction, these children will develop deep amblyopia or lazy eye, meaning the potential for good vision is very unlikely. With contact lens wear and careful observation, these children have a much greater chance for normal visual development.

One of the biggest challenges for pediatric contact lens wear is lens loss. On average, infants will lose 9 lenses in the first year. For the second time, the Children's Miracle Network has partnered with the UC Davis Eye Center by generously providing a \$10,000 grant over two



*Photo:
Larisa Johnson-Tong, OD
examining a young patient.*

years to cover the cost of these custom contact lenses. The grant has proven invaluable by providing initial and spare lenses when contact lenses are inevitably lost and particularly beneficial when insurance coverage falls short.

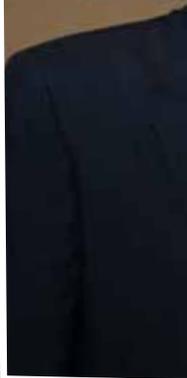
While fitting contact lenses on infants is challenging, it is, nonetheless, very rewarding. We welcome the opportunity to fit infants and children with medically necessary contact lenses and are grateful for the grant from the Children's Miracle Network for making it a little easier. The real heroes, however, are the dedicated parents who go above and beyond by inserting, removing and cleaning contact lenses every day. It is their determination, along with our clinical experience at the UC Davis Eye Center, that results in the best possible visual success for these children.

UC DAVIS

EYE CENTER



Alumni
Volunteer Clinical
Faculty Reception





Left to Right:
Dr. Chris Serdahl, Dr. Clarrissa Tendero, Dr. Andrea Gray and
Dr. Chris Murphy



Left to Right:
Dr. Marina Chechelnitzsky, Dr. Mark Mannis, Dr. Andrea Gray and
Dr. Linda Margulies

Left to Right:
Dr. John Keltner, Dr. Joe Zeiter and Dr. Jeffery Caspar



Dr. Mark Mannis with good friends from Brazil



Left to Right:
Dr. & Mrs. Mark Greiner



Left to Right:
Dr. Ala Moshiri and Dr. Mary O' Hara



GIVING BACK TO THE COMMUNITY AT THE PAUL HOM ASIAN HEALTH CLINIC

by Kimber Chavez

UC Davis Medical School's Paul Hom Asian Health Clinic is the oldest existing free Asian clinic in the United States. The clinic is open on Saturdays to provide free primary care services to the medically uninsured.



In 1971 a group of UC Davis medical students, along with Paul Hom, MD, decided to create a place where elderly Asians and immigrant families could get adequate healthcare in a setting where their language and economic barriers could be overcome.

For the past five years, UC Davis Eye Center has participated in the Paul Hom Asian Health Fair held annually in the Fall with the help of the Lion's Club Mobile Eye Van to do screenings for diabetes, glaucoma, cataracts, macular degeneration and other eye diseases. It gives our ophthalmologists, fellows, residents and medical students an opportunity to gain experience in community medicine while giving back. The medical staff are supported by an impressive body of undergraduate students who are fluent in, and provide translation for, a variety of Asian languages including Chinese (Mandarin and Cantonese), Vietnamese, and even Mongolian.



The Eye Center will soon expand its services to include a regular eye clinic to be held quarterly at the Paul Hom Asian Clinic with the goal of providing sustained ophthalmic services to this important part of our community.

Dr. Michele Lim leads a team of UC Davis faculty, residents, fellows, medical students and undergraduates with visual examinations.



Experiences of a Resident at UC Davis Eye Center

by Roma Patel, MD, MBA

Ophthalmology residency is a whirlwind of emotions, experiences, sleepless nights on call, a very steep learning curve, and great triumphs. After medical school and a year of internship typically in internal medicine, ophthalmology residency is the first time we get to practice the field that we have chosen as our life long career. Most of what we learn in ophthalmology is new to us, since most of medical school is spent learning about the rest of the body with minimal coverage on the eyes.

The first weeks of residency are overwhelming but exciting. During the blur of the first few days, we quickly learn examination techniques, the many new diagnoses, as well as an array of new surgical skills. Surgical training begins the very first week. Until this year, we had to take turns practicing in a small converted bathroom equipped only with an old microscope and surgical tools. This was less than ideal, because there was barely room for a faculty member and a resident. With the January 2014 opening of the Eye Center's new microsurgical training laboratory, resident teaching will be much more effective. Even more exciting, from my perspective, is the idea of senior residents assisting the junior residents. Learning a new skill alone can be frustrating, but in the new lab, there is space for multiple residents to work simultaneously making for a more enjoyable, interactive and instructive experience.

The hardest choice I made during residency was the decision to pursue a fellowship and which subspecialty field to choose. Ultimately, I chose to enter the field of glaucoma, because I found the most satisfaction from partnering with these patients, teaching them about their often slow and silent disease, and following them for many years. Also, I found the unanswered questions regarding the development and treatment of the disease to be intellectually stimulating and found myself attracted to the possibility of a career in an academic teaching institution.



The most gratifying of experiences I had at UC Davis centered on the support I received from the faculty once I established my goals and interests. The exploration of finding one's passion within ophthalmology is personal, and my mentors gave me plenty of time and space to make up my mind. But once I decided, I received generous support along the way for my career and research goals.

As the end of my residency approaches, I am beginning to realize how much I will miss this department and the relationships I have created here. My advice to future residents is to stay strong and happy, find your passion within ophthalmology and take advantage of all that UC Davis offers. When you need that extra burst of motivation, think back to what inspired you to choose ophthalmology initially. For me, I only need to look closely at the patient in my exam chair. The patient's gratitude always reminds me of why I chose this path.



society for the blind
Removing Barriers. Building Independence. Changing Lives.



Low Vision Clinic at The Society for The Blind

by Shari Roeseler

The Low Vision Clinic of Society for the Blind is one of the longest-running community-based eye clinics in the Sacramento Region. The clinic was established in 1975 by a group of volunteers who saw a need to provide eye healthcare and training in low vision devices. Today, Society for the Blind's Low Vision Clinic is one of the most comprehensive providers of low vision services in Northern California, caring for patients in 26 counties.

Five optometrists, all of whom have extensive training and experience in low vision eye care, provide exams and training on devices for patients. Too often, however, patients do not learn about the Low Vision Clinic until months or even years after they begin to experience vision loss. Penny Riley, manager of the clinic, said one of the most common statements heard in our Low Vision Clinic is "I wish I had known you were here much sooner."

The recent partnership with the UC Davis Eye Center has increased awareness of this important community resource. Patients of the Low Vision Clinic receive an extensive exam which typically lasts up to two hours and includes testing with specialized diagnostic tools to determine visual acuity, contrast sensitivity, color vision and field of vision. The doctors assist the patients in the selection of low vision devices, and Society staff

meet with the patient to discuss additional services available to them.

The onsite retail store at Society for the Blind keeps a wide variety of low vision devices on hand, from hand-held magnifiers, spectacle-mounted telescopes, to CCTVs and scanners. The Low Vision Clinic serves clients of the Department of Rehabilitation as well as patients with Medicare and private insurance.

"Our goal is to keep our patients active, on the job, and focused on their goals and dreams," said Shari Roeseler, Executive Director of Society for the Blind. The three leading causes of blindness - glaucoma, age-related macular degeneration and cataracts - occur most frequently in people 55 and older. This segment of the population in the Sacramento region is growing rapidly. Seniors today are very active and vision loss can threaten the active lifestyles to which they are accustomed. "Vision loss need not deter them," Roeseler added, "and our Low Vision Clinic is here to work with patients to ensure they have access to assistive devices and ongoing eye healthcare so they can live life to the fullest."

To learn more about the Low Vision Clinic please call: 916-889-7506.





R.B. Miller, M.D.

BOB MILLER, M.D.

Improving the Experience for Residents

Without question, my training in ophthalmology at the UC Davis Eye Center planted the seeds which enabled me to grow the wonderful practice I enjoy today. When I hear about the experiences of doctors trained in programs elsewhere, it's easy to be grateful for the gift I was given. Our UC Davis Eye Center is unique in fostering a tremendous personal connection between the residents, professors and clinical instructors. Relationships often go beyond the traditional teacher-student roles and extend to life-long social bonds. Thus is collegiality born!

A quarter-century later, it's terrific to be able to give back and continue to broaden and strengthen my relationship with the faculty, staff, residents and fellows.

Professionally, I learn from attending the many conferences and meetings. The Eye Center seems to be tuned into the topics that appeal to all facets of practicing eye surgeons. There's something for the academicians, the group practitioners, and those of us in completely solo practice. It's a wonderful feeling to sit in a room with others in such different chosen paths and feel the kinship that we are all in the same specialty.

Financially, I realized that while I had always made donations to various charitable organizations and causes, it was time to "buckle down" and write the check to my own alma mater! The process was seamless and by working with the development staff, I was able to direct my contributions specifically for my

three topics of interest: humanitarian efforts, teaching practice skills, and surgical training.

We established an Endowment for Excellence in Resident Education, and I'm excited to see these funds grow and provide support for residents now and into the future. I encourage others interested in resident education to support this endowment, which provides funding for travel to professional conferences and clinical mission trips. This provides an opportunity for our residents to hone their skills and to help those in need in developing countries. It is a joy to help a resident learn that "giving back" is what being a doctor is all about.

I have fun in the clinic, teaching the residents as a clinical professor. Giving hints to encourage active and focused listening, patient involvement and efficient movement during an exam and discussion is well received and appreciated by the residents.

Despite a busy professional life juggling my solo practice, participating in our regular cataract mission trips and taking time for social activities - helping this new generation of eye physicians develop better patient-centered skills is truly a meaningful pleasure for me. I strongly encourage others to become involved and connect with our UC Davis Eye Center "Family." There's no place like home!

UC Davis Eye Center Welcomes Tania Hashmi

by Mary O'Hara, MD



It is 5,009 miles from Dublin, Ireland to Sacramento, California, but that didn't stop Tania Hashmi from making the journey in search of sunshine and new adventures. Tania is an orthoptist and the newest member of the UC Davis Eye Center family.

Travel comes naturally to Tania. She was born in Sheffield, England and moved to Dublin, Ireland at age 2 years. She returned to Sheffield for University, receiving a degree in orthoptics with a postgraduate diploma in strabismus and vision science. A certificate from the University of Liverpool qualifies Tania to train orthoptists. After several years at home in Ireland, Tania looked westward for new challenges.

Orthoptics is an allied health profession that involves the diagnosis and management of binocular vision disorders. Orthoptists are important members of the eye care team and provide unique services for patients with eye muscle problems. In addition, they make significant contributions to eye research. The Eye Center at UC Davis has provided orthoptic services to the community since 2004 and welcomes Tania's expertise in continuing these services. Tania's professional goals include research and an expansion of her experience in the diagnosis and management of adult strabismus. In addition, Tania will be participating in the orthoptic externship that is being developed between St. Catherine University and the Eye Center at UC Davis.

Tania is very out-going and loves to socialize. She has found lots to do in Sacramento. She loves the sea and the mountains that are in close proximity to our city. The good food and diversity is much appreciated, as is the music scene. Tania is presently learning to play the banjo and has an interest in bluegrass music. She is still looking for a good rowing club to explore the many waterways of Sacramento. Tania Hashmi welcomes meeting new members of the UC Davis family and, in her beautiful Irish brogue, exclaims, "If you're ever bored, find me!"

UCDAVIS
EYE CENTER

OPTICAL SHOP
ASK AN EYE STAFF MEMBER TODAY!

UC Davis Eye Center
Optical Shop
4860 Y St., Suite 2013
Sacramento, CA 95817
(916) 734-6300

UC Davis Cadillac Drive
Optical Shop
77 Cadillac Dr.
Sacramento, CA 95825
(916) 734-6644



web



facebook

www.ucdmc.ucdavis.edu/eyecenter

UC Davis Eye Center Honor Roll

We are grateful for the support the UC Davis Eye Center receives from our donors for research, education, patient care and outreach activities.

Lifetime Donors

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

Visionaries

Gifts of \$1,000,000 and above

Research To Prevent Blindness
The Estate of Natalie A. Fosse
Ernest E. Tschannen
Lanie Albrecht Foundation
Anonymous

Chairman's Council

Gifts of \$500,000 and above

Allergan, Inc.
Wylda H. Nelson, M.D.

Society of Leaders

Gifts of \$100,000 and above

Foundation Fighting Blindness
The Estate of Agnes Russfield, M.D.
Robert B. Miller, M.D.
California HealthCare Foundation
Glaucoma Research Foundation
Sierra Health Foundation
The Estate of
Charlotte T. Dunmore
Edward C. Lawrence
Dr. Michael J. and Mrs. Rochelle S. Schermer

St. Lukes Roosevelt Institute for Health Sciences
Joseph T. Zeiter, M.D.
Jerome J. and Helen P. Suran
Carl Zeiss Meditec, Inc.
Patricia F. Ekstam
The Estate of Mary Beth Tasker, M.D.
Macular Degeneration Foundation, Inc.

Society of Friends

Gifts of \$25,000 and above

Alcon, Inc.
Ted and Melza M. Barr
Bausch + Lomb
Bay Glass Research, Inc.
Cal Aggie Foundation
Cameron Park Optimist Club
Phyllis M. Demorest
Quong M. and Jennie Doo
Fight for Sight, Inc.
Barbara E. Fingerut
Gordon Binder Weiss Vision
Institute

Helen Keller International
Howard Hughes Medical Institute
Iolab Corporation
Shirley A. Jonsson
Jorge Dairy
Juvenile Diabetes Research
Foundation Intl.
Dr. John L. and
Mrs. Nancy R. Keltner
The Estate of
Dorothy M. Knoell, Ph.D.
Ann M. Kohl
The Estate of
Thomas F. Leuteneker
McBeth Foundation

National Society to
Prevent Blindness
Northern California Society to
Prevent Blindness
Northern California Lions
Sight Association
The Estate of Dona D. Platt
Roche Vitamins, Inc.
Synemed, Inc.
Techna Vision
Thomas J. Long Foundation
Welch Allyn, Inc.

UC Davis Eye Center Honor Roll

We are grateful for the support the UC Davis Eye Center receives from our donors for research, education, patient care and outreach activities.

Annual Donors

With gratitude to the following donors who have provided support to the UC Davis Eye Center from July 1, 2012 through December 31, 2013.

Society of A Thousand

Gifts of \$250,000 and above

Ernest E. Tschannen
Anonymous
Robert B. Miller, M.D.
Research To Prevent Blindness

Gifts of \$10,000 and above

St. Lukes Roosevelt Institute for Health Sciences
Jerome J. and Helen P. Suran
Dr. Michael J. and Mrs. Rochelle S. Schermer
Joseph T. Zeiter, M.D.
Ted and Melza M. Barr
Ann M. Kohl
Orthopaedic Trauma Association
The California Endowment
Quong M. and Jennie Doo
Ken and Nancy Fahn

Gifts of \$1,000 to \$9,999

Dr. Thomas Barnes
Wayne A. and Jacque A. Bartholomew
Robert C. and Eva Bostrom
Richard W. Bower
Dr. Charles and Mrs. Shirley E. Bradbrook
Anne Cain
Dr. David and Mrs. Renee Chaffin
Dr. Marina and Mr. Boris A. Chechelnitsky
Rajinder S. and Paramdeep K. Chohan
Gene and Phyllis Christopher
Judge Robert and Mrs. Barbara J. Dale
Elise Dale-Fong
Patricia Diepenbrock
Dr. Ronald E. and Mrs. Marcia L. Foltz
Gustavo A. and Carol Y. Foscarini
Jill K. Frechette
Robert and Jacqueline Harris
Andrew C. Hemphill
Gertrude E. Henderson
Dr. Leonard M. and Mrs. Mary K. Hjelmeland
Dr. Desmond R. Jimenez and
Ms. Nora Moore Jimenez
Manraj S. Johl
Shirley A. Jonsson

Dr. Ronald A. and Mrs. Mary J. Kalayta
Werner and Harriet V. Keim
Brett Keiser
Dr. John L. and Mrs. Nancy R. Keltner
Thomas P. and Ann L. Kerr
Dr. Thomas P. and Mrs. Rebecca W. Kidwell
Clement J. and Mindy Kong
Jennifer Li, M.D.
Dr. Michele C. Lim and Mr. Christopher M. Sanders
Drs. Lily K. and Hank Lin
James A. and Marilyn M. Livingston
Michael K. and Barbara MacKinnon
Dr. Mark J. and Mrs. Judy Mannis
Jim and Charlene Meenan
Gerald A. and Susan Meyers
Barbara R. Monroe
Captain Robert Newsad
Walter Onwiler
Organization of Macular Friends
Susanna Park, M.D., Ph.D.
Drs. Joanne Paul-Murphy and Christopher J. Murphy
Dr. Jonathan P. and Mrs. Shawna M. Perlman
Paul W. and Susan L. Prudler
Dr. Gregory J. and Mrs. Megan Rabin
Stephen R. Stepler and Susan Scarritt
Dr. Ivan R. and Mrs. Nora Schwab
Joseph Silva, Jr., M.D.
Dr. Hissam E. and Mrs. Mary L. Soufi
Francis J. Sousa, M.D.
Jim and Mary Jo Streng
Synthes USA HQ, Inc.
Kathleen A. Taylor
Thomas L. and Melodee L. Trapp
Dr. Mehdi and Mrs. Ashley Vazeen
Drs. Lisa T. Wallace and David L. Everitt
David H. Warren, Ph.D.
Dr. Richard A. and Mrs. Catherine Weise
Sheri Welles
John S. Werner, Ph.D.
Stephen H. Wetzel

Gifts of \$100 to \$999

Forrest D. and Cherlyn W. Adams
Thomas and Larre Allen
MaGracia R. Alvarez
David F. and Carolyn C. Anderson

UC Davis Eye Center Honor Roll

Gifts of \$100 to \$999, continued

Susan Ansbro
Henry and Arlene H. Baer
Ponniiah Balasingam
Arthur N. and Barbara J. Baldwin
Virginia P. Bane
Dr. Paul and Mrs. Margaret Barkin
Dr. Carol S. Beatty
Natalia Benkunsky
Robert E. and Bonnie J. Berry
Marcia J. Blount
Joe and Meredith A. Boggio
Lt. Col. Frederick and Mrs. Julie Bohmfalk
Hazel J. Booher
Dr. Thomas F. Booze
Franklin M. and Ursula W. Boyden
Dr. Jay and Mrs. Rachael Bradley
Dr. Marvin and Mrs. Susan Brienes
Dr. Donald W. and Mrs. Margaret R. Brown
Roy W. Cabral
Tony and Marion J. Cabral
Anne Cain
Charles L. and Loretta E. Cantoni
Robert Castle
David J. and Rosemary Chamberlain
William J. Chandler
B. Eileen Chapin
Rey and Kimber Chavez
Curtis and Amy Chiuu
Margery C. Cline
Beverly S. Cothren
Thomas and Susan C. Cuquet
James and Crystal Curry
Kenneth I. and Roberta A. Dacus
Harvey and Rochelle J. Davis
Leonila de Guzman
Margaret De Young, M.D.
James A. and Joan K. Deak
Jonalyn Dela Cruz
Michael M. and Mary Ann Delleney
George and Anna C. Deubel
Bhupinder and Hardev Dhillon
Diane X. Diep
Alan N. and Catherine Duncan
Dr. Carl J. and Mrs. Karen A. Eilers
Gerald V. and Connie Esparcia
Maral Findley
Harvey C. and Colleen I. Firchau
Carl Fischer and Olga Hermosillo-Fischer
Howard W. and Carol A. Frank
Jeffrey C. and Mary Franz
Clifford and Kathleen Freeman
Tommy Fujinaka
Dr. Jane Galustian and Mr. Jay Dyer
Dr. Murray and Mrs. Alice Gardner
Dr. Gary E. Gathman
Dr. Arthur and Mrs. Thomaysa Glover
Mark S. Goldman

Marilou Goldstein
Kathy Goodrich
Grand Lodge I.O.O.F. of the State of CA
Drs. Andrea V. and Jason Gray
Mark B. and Patricia K. Green
James and Barbara Griffin
John Griffing
Dr. Erich B. and Mrs. Jane L. Groos
Terrie Gross
Dr. Daniel and Mrs. Evangeline Guettinger
Donald and Judy Hair
Maria Hajgato
Dr. Robert E. and Mrs. Dianne Hales
Joe W. and Shirley H. Hammon
Richard W. and Lucille J. Harrison
Patrick Harrison
John J. and Renee Hayes
Opal B. Hays
George Heidel
John and Michelle Henskens
Raphael C. Hess
Dorsey and M. F. Hoffman
Daniel D. Holt
Kathleen Houde
Dr. Theodore and Ms. Edith Hsiao
Alice T. Huberty
Megan Hughes-Salaber
Ron and Sandra Hults
Frank T. and Lee T. Ismail
Dr. Larisa M. Johnson-Tong and Mr. Hai H. Tong
Barbara Juenger
Raymond C. and Sharon Kassis
James M. and Glenys M. Kaye
Janean G. Kelling
Paula H. Kime
Dr. Daniel and Mrs. Sherry King
Jerry W. and Kullaya Knapp
Ivan Kochan, Ph.D.
Michael J. and Linda H. Koepke
Roland Krapf
Dr. Van A. and Mrs. Joyce Kreis
Donald M. and Sheila S. Lai
Christopher and Holland Lattin
Joe B. and Janice G. Lawrence
J. H. and Jung H. Lee
Juan and M. Isabel Legorreta
Robert L. and Chieko Y. Lehman
Johnny M. Leung and Ms. Yuen S. Yu
Marc Levinson and Mary Jane Large
Edward and Connie Lewis
Thomas A. Licursi
Gus H. London and Sara Rogers London
Jesse K. Lythgoe
Daniel W. and Ana G. Magyar
Dr. Stephen A. and Mrs. Marsha Mannis
Nabih G. and Deborah E. Marche'
Gary and Adelle Maricich
Eugene D. and Judy P. Marquart

UC Davis Eye Center Honor Roll

Jack D. and Charlotte H. Mast
Dr. Damien McCann and
Mrs. Adrienne McCann-Stecher
Dr. Allan A. and Mrs. Susan R. McKillop
Richard J. and Virginia P. McRostie
Frank C. and Elizabeth A. Meyer
Bruce V. and Donna R. Mickle
Dragica Mihanovich
Dorothy Miles
Akira B. and Evelyn E. Mizoguchi
Peter Montana
John D. Moody
John P. Mooney
Jeff and Gina Moresco
Edward B. and Marilyn W. Morgan
Edward J. and Emilene M. Morrison
Leroy and Rebecca Namam
Rebecca H. Naman
Dr. Maria Niederberger de la Guardia and
Mr. Ramon de la Guardia
Melvin R. and Adele Nowicki
William T. and Margaret C. Olmsted
Walter and Pat Orey
Mike and Joan Parkerson
Ernest E. Phinney and Robert C. Walker
Virgil A. and Frances C. Pinkley
Benjamin and Carolina R. Reg
Kerstin B. Renner
Rita A. Rice-Hubbard
Helen Ridolfi
Sheldon L. and Nancy J. Rieger
Kiyono U. Roach
Dr. Jeffrey S. and Barbara Robin
Richard G. and Helen T. Rogers
Kevin H. and Nancy Rogers
David Rogers
Walter and Patricia Rothe
Dr. James B. and Mrs. Judi Ruben
Arthur C. Rynerson
Kenneth G. and Joanne B. Sahl
John M. and Mitsue Sakamoto
Jose F. and Lorena L. Salazar
Geraldine B. Schaffer
Truman and Mary L. Schoenberger
Milton E. and Nancy R. Schultz
Dr. Norman and Mrs. Reba Schwilk
Harold W. and Carol J. Sconyers
Richard H. Seader
Archie Shaw
Hiroko Sherrel
Stanley W. and Susan D. Silva
John T. Simpson
Lee L. and Mary E. Simpson
Steven E. Simpson
Calvin J. and Josephine B. Skancke
Michael and Mary Ann Skeels
John Thomas Small
Arthur V. and Maria C. Smith

Van and Marjorie Smith
Elijah L. and Yoshi H. Smith
Dr. Dolores Sorenson and Mr. Don Ballenger
Miss Luciene Sousa
Henry E. Stanton
Judith A. Stapleton
Loretta Starr
Ray and Mary Lou Stone
Dr. Gang Sun and Ms. Daihua Yao
Edward H. Sweet, Jr., M.D.
Glenn E. Takahashi
Tomie Takahashi
Dr. Ronald D. and Mrs. Colleen A. Tamaru
Francie F. Teitelbaum
The Reverend Walter and Mrs. Ione Tietjen
Peery Tischer
Kirk G. and Dianne S. Tracy
Dr. Frederic A. and Mrs. Linda A. Troy
Helen S. Tsai
Masuo and Ann Tsuda
Ben Turner and Jean Lockett-Turner
James M. and Shirley J. Underhill
Dr. Kaaryn P. Van Buskirk
Dennis N. Vance
Eleanor S. Vance
Karen S. Vinyard
Noble E. and Susan E. Vosburg
Du T. Vu
Daniel R. Walters and Doris K. Winter
Master Sgt. Donald and Mrs. Gwendoline Warner
Dr. George and Mrs. Ami E. Watson
Harold W. and Verda E. Webster
Kenneth R. and Diane Weeks
Robert E. and Vicky S. Weidner
Kenneth M. and Tary L. Weller
Duane C. and Cheri H. Werth
John W. and Judith C. Whitcombe
Beatrice Wickland
John R. and Dorothy C. Wiederrich
Rose M. Williams
Priscilla T. Win
Robert W. Wing, M.D.
Albert and Gloria Wong
Mansour and Fariden Yaghoubian
Drs. Michiko Yamada Oye and Ronald T. Oye
Rudolf and Joyce E. Zuidema

Gifts of \$99 and below

Kimberly A. Angelo
Arnold L. and Tomoko Ayers
Dr. John M. and Mrs. Marie E. Babich
Burton D. and Katherine I. Baker
Greg and Susan Banks
Naomi Barrow
Stephen and Gertrude C. Bertges
Ken and Annette Bertolini
Don and Susan Bettencourt
Carol M. Blake

UC Davis Eye Center Honor Roll

Gifts of \$99 and below, continued

Leroy A. Blomgren
Eugene and Olga Bochkarev
Joyce R. Boehm
Don G. Boland
Attilia Brady
Wanda Brown
Hal C. and Ellie Brown
Horace D. Bryant
Everett D. Butts
Edward A. and Praman Bylicki
Jeric K. and Eliza V. Cabaltera
Margaret Cardoza
Thomas R. and Nancy L. Carr
Paul P. and Harumi Chaffee
Yasmen Choudhry
Emma D. Clayton
George W. and Jean L. Coffos
Ralph S. and Edith C. Colby
John B. and Lavina Conner
Bernice B. Cook
Dorothy Cotton
James M. and Kathy T. Coulter
M. G. and Gloria M. Day
Lena Del Campo
Francoise DeMartini
Eugene J. and Martha Denn
Jennifer K. Douglas
Que Duong
Gerald and Vicky Ettle
Eleanor B. Evans
Carla D. Falcone
Dr. John and Mrs. Henriette Fetzer
Marian H. Frazier
Tom T. and Ichiko Fujishima
Dolores B. Garcia
Donna I. Gibbs
Dr. Marcia J. and Mr. Donald A. Giza
Dr. Marvin and Mrs. Joyce Goldman
Rose Marie Gonzales
Dr. Ralph and Mrs. Irene Green
Leonard and Barbara Grossman
Raquel M. Grossman
Nina Grueneberger, LCSW
Robert A. Hale
Claude and Doris Ham
Mary C. Hampton
Molly Hanby
Drs. Saleema and Talib Haq
Nalini Harakh
Doug and Mary M. Harmon
Vera M. Harris
Evadell A. Harvey
Michael E. and Juanita F. Hatherly
Tony Hazarian and Kate Bishop-Hazarian
Donald and June Henry
Carol A. Hobbs
Iris Hogan-De Zara
Barbara A. Holderreed
Donald R. and Alice M. Hook
Charles and Patricia Hornisher
Dolores Huenger
Boyd A. Hughes
The Reverend Virginia Hummel
Diane M. Huntington
Choudhry M. Hussain
Arthur T. and Gloria T. Imagire
Lois K. James
Anne Marie Jauernig
Josefina Jimenez
Cyrus A. Johnson
Charlotte H. Johnson
Marvin P. Johnson
Layla L. Jorgensen
Osamu and Kisako Kakudo
Rose Kelly
Dale and Ileen Koehn
Marguerite Koenig
Ronald W. and Joyce T. Korock
Gary and Liz B. Krohn
Prem S. and Katherine S. Laumas
Erika A. Lesku
R. L. Levy
Lucy M. Lincoln
Robert M. and Lois F. Ling
Ana Lopez
Steven Lovotti
Raymond and Jean Macchiavelli
Karen Mahone-Smith
John J. and Mary G. Maloney
Mark C. and Emi Manning
Marketing Resources
Dr. Muhammad A. and Mrs. Delores Marrush
Franklin R. and Henrietta M. Martz
Brian Mate and Sheila Wilson-Mate
Douglas D. and Eleanor J. Mathews
David R. and Lynn McConathy
Helga M. McCoy
Judith A. McGuire
Sylvia M. Mehlhaff
Barbara S. Monroe
Marguerite A. Morrison
Sergeant Major Clentis Murphy
Jane Nelson
Drs. Cynthia Neuman and Richard Rawson
Daniel Neumann
Cuc C. Ngo
James W. and Evelyn Nolan
Michael C. O'Neil
Acel D. and M. Ruth Oilar
Karl N. and Katherine V. Omlin
Oen L. Ong
Genaro and Carmen R. Orozco
Chandra Orphe
Manuel J. and Elsie Palermo
Linda J. Passage

UC Davis Eye Center Honor Roll

Gifts of \$99 and below, continued

Thakorbhai and Savita Patel
Norman C. and Betty K. Pederson
James A. and Priscilla Peters
William and Arlette R. Peterson
Dr. Anthony and Mrs. Patricia Philipps
David R. and Ellen M. Phillips
Rita K. Pollnow
Martina Pony
Milan G. and Lynn Popovac
Jason and Courtney L. Portlock
Lena R. Posey
Ravindra and Salendar S. Prasad
Margaret N. Pryor
Gene Quintana
Jack Radavero
Donald and Peggy Rader
Robert A. and Elaine M. Reynolds
Richard H. and Primitiva M. Reynolds
Ann C. Richardson
Eva L. Rickert
Bobby Rodriguez
Sanders and Rita Rosenberg
Greg L. and Kathleen M. Rowe
Richard K. and Dorothy M. Ryan
Thomas P. and Carole A. Ryan
Dr. Kay Ryugo
Mary J. Saal
Randall T. and Petriena Samoian
Rhonda Samoian
Yolanda San Miguel
Varachai and Wannee Sangkatavat
Wardie W. Scherber

Alan and Antoinette Schroeder
Robert O. and Elizabeth J. Schwantes
Carol R. Scott
Helen D. Sheppard
John M. and Ai-Ling C. Shiels
Harbans and Satwant Singh
Rena S. Smilkstein
Joseph A. and Antoinette A. Smith
Arden and Anne M. Smith
William N. and Sharon Sousa
George J. and Mary H. Stanley
Frank F. Stork
William A. Sturdy
Dr. Edward and Rose Tamler
Evelyn K. Tanimoto
Charles E. Thomas
Sherman L. Thompson
Judith J. Thomsen
Dolores M. Tomaselli
Leon and Wanda Tomlinson
Lee Trentman
Doris L. Trinkle
Richard L. Trisler
Dr. Tzipora and Mr. Dan Goldkorn
Steven and Jennifer Utt
Tony C. Vieira
Teresita S. Vines
Mayling Wang
Estella Wesley
Barbara A. Wilkins
John R. Williams
Dorothy K. Wilson
Arthur L. and Mimi D. Winslow
Frances M. Yankauer
Delwyn and Claire Ziegler

It is with deep gratitude that the UC Davis Eye Center recognizes the following individuals for making us a part of their estate plans.

Heritage Circle

Fiore Ai
Curtis and Amy Chiuu
Gene and Phyllis Christopher
Eileen Doran
Patricia F. Ekstam
Jill K. Frechette
Francisco Garcia-Ferrer, M.D.
Virginia C. Goodman

Arthur and Luann Hawkins
Gertrude E. Henderson
Dr. Leonard and Mrs. Mary Hjelmeland
Robert B. Miller, M.D.
Dr. Michael J. and Mrs. Rochelle S. Schermer
Jim and Mary Jo Streng
David H. Warren, Ph.D.

If we have inadvertently omitted or incorrectly listed your name please accept our apology and contact us at 916.734.6435 or hradams@ucdavis.edu. We will correct our records immediately.

LEADERSHIP



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



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

FACULTY



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



James D. Brandt, M.D.
Professor, Glaucoma
Director, Glaucoma Service
Research Interests:
Nanotechnology for innovation in glaucoma treatments



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



Nandini Gandhi, M.D.
Assistant Professor, Pediatric Ophthalmology and Strabismus
Research Interests:
International ophthalmology and curriculum development abroad



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



Syed Khizer Khaderi, M.D., M.P.H.
Assistant Professor, Neuro-Ophthalmology
Research Interests:
Genetic diseases of the optic nerve and visual psychophysics

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



Jennifer Li, M.D.
Assistant 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 orbital globe and trauma



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



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



Ala Moshiri, M.D., Ph.D.
Assistant Professor,
Vitreoretinal Surgery
Research Interests:
Genetic Disease.



**Mary A. O'Hara, M.D., F.A.C.S.,
F.C.A.P.**
Professor, Director, 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.
Professor Emeritus, Cornea,
External Disease and Uveitis
Director, Cornea, External
Disease Service
Research Interests:
Limbal stem cell transplants
and comparative anatomy



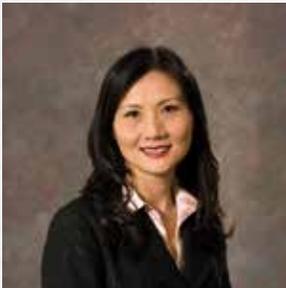
OPTOMETRISTS



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



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



Brooke S. Chang, O.D.
Senior Optometrist



Larisa Johnson-Tong, O.D.,
F.A.A.O.
Senior Optometrist



Hai Tong, O.D.
Senior Optometrist



Marcia Nearing, O.D., F.A.A.O.
Senior Optometrist



Kaaryn Pederson-Vanbuskirk,
O.D., F.A.A.O.
Senior Optometrist

ORTHOPTIST



Tania Hashmi, B.Med.Sci.
Orthoptics

VISION SCIENCES



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 Visual
Sciences
Research Interests:
The role of intermediate
filaments in the biology
of the ocular lenses of the
retina



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



Leonard Hjelmeland, Ph.D.
Professor, 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



Charles E. Thirkill, Ph.D.
Adjunct Professor Emeritus,
Immunology & Biology
Research Interests:
Ocular immunology, retinal
and optic nerve imaging
techniques

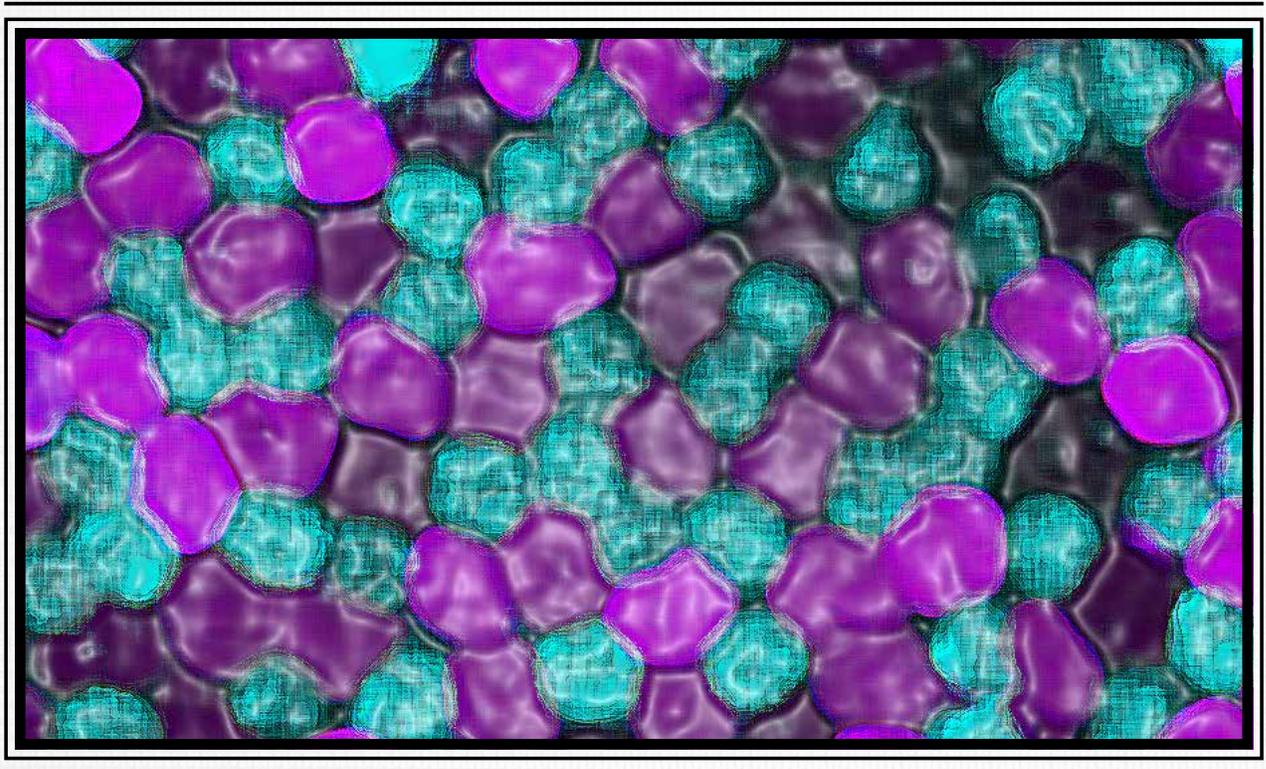
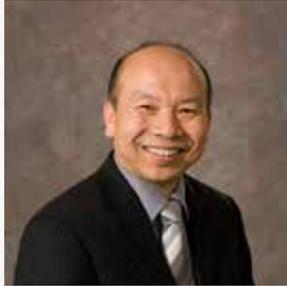


John S. Werner, Ph.D.
Distinguished Professor,
Visual Psychophysics.
Research Interests: Color
and spatial vision, normal
aging and age-related
disease, retinal and optic
nerve imaging



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

Min Zhao, M.D., Ph.D.
Professor, Regenerative Cures
Research Interests:
The role of endogenous
electric fields to stimulate
cell migration, corneal wound
healing and regeneration
of retinal degeneration



This image is taken from a mouse retina that has been removed, and spread flat on a microscope slide. A sub population of retinal ganglion cells is fluorescing green due to the presence Green Fluorescent Protein. The large roundish cell body shows “spray” dendrites, and also a single long axon. Input from rods and cones is conveyed to the ganglion cell via the dendrites. When this input reaches a certain threshold it gives rise to an electrical pulse (action potential) which travels along the axon to the optic nerve head, where it exits the eye on its way to the brain. It is the ganglion cells which die off with untreated glaucoma, starting at the periphery of the eye, and progressing centrally toward the optic nerve head.

Photo credit: Myung Soon Moon
Laboratory of Nadean Brown, PhD
Department of Cell Biology and Human Anatomy

RESIDENTS AND FELLOWS



Rory T. Allar, M.D.
Clinical Glaucoma Fellow



Paramdeep S. Mand, M.D.
Clinical Cornea Fellow



Amar P. Patel, M.D.
Clinical Retina Fellow



Sumeer Thinda, M.D.
Clinical Retina Fellow



Harinderpal Chahal, M.D.
Third Year Resident



Vivian Lien, M.D.
Third Year Resident



Roma Patel, M.D., M.B.A.
Third Year Resident



Judith Sabah, M.D., Ph.D.
Third Year Resident



Annamieka Leary, M.D.
Second Year Resident



Shabnam Taylor, M.D.
Second Year Resident



Jeffrey Willis, M.D.,
Ph.D.
Second Year Resident



Peter Wu, M.D.
Second Year Resident



Nathaniel Gebhard, M.D.
First Year Resident



Kimberly Gokoffski,
M.D., Ph.D.
First Year Resident



Natasha Kye, M.D.
First Year Resident



Kingsley Okafor, M.D.
First Year Resident

DR. MANNIS LECTURES TO THE UC DAVIS MINI-MEDICAL SCHOOL

The Mini Medical School program on the UC Davis campus provides a dynamic public program to the community. As part of this lecture on Saturday, February 15, Dr. Mannis presented a talk entitled “The Aging Eye: Preserving your Vision for Life” to over 350 participants in the program. Reviewing the basics of cataract, glaucoma, and age related macular degeneration, Dr. Mannis also presented the newest technologies available for the treatment of these diseases.



CHARLES BRADBROOK, MD RECOGNIZED BY THE EYE CENTER FOR HIS DEDICATION TO CONTINUING EDUCATION

by Kimber Chavez

Dr. Bradbrook graduated from Northwestern University Feinberg School of Medicine in 1957. He chose to practice in Sacramento and has been here since September of 1961. He has practiced general ophthalmology with the Martel Eye Group since 1986.

Dr. Bradbrook has been a steadfast participant at nearly every educational event at UC Davis Eye Center in his 53 years of practice. This past February, he was honored with a Lifetime of Education Award at our Grand Rounds conference.

When asked if he is looking forward to retirement, he responded, “I enjoy my weekends, but I am not ready for a 7 day weekend yet.” We admire Dr. Bradbrook for his dedication to life-long learning.



enVISION

COMING SOON

The complexity of the intricate system of vision that brings us the visual world begins when light touches the front of the eye and is then focused by the cornea and the lens onto the “film” that records the images we see—our retina. There, light is converted into chemical and electrical energy that goes to the brain. This visual signal is carried through a delicate cable—the optic nerve— consisting of tens of millions of nerve fibers called “axons”. Our ability to see the world depends on the proper function of this coaxial cable transmitting light from the cornea at the front of the eye to the cortex in the back of the brain.

This remarkable visual system that opens the glories of the world to us can be disrupted by injury, disease, and the processes of aging. While there are many causes of interruption to the visual system and ensuing loss of vision, perhaps the most difficult problems are those that directly affect the optic nerve—the final common pathway of sight. These include inflammatory diseases, infections, neurologic disorders, vascular disease and, of course, glaucoma— one of the three most common causes of blindness in our country and the world over. Diseases of the optic nerve have remained a huge problem because, unlike other tissues in the body, nerve tissue heals with scarring that interrupts the normal transmission of the optic nerve. Until now, we have been unable to direct the regeneration and regrowth of damaged neurons in a way that allows the optic nerve to regain function.

Developing the ability to stimulate re-growth of the optic nerve is a challenge that UC Davis is extremely well-positioned to undertake. The UC Davis Eye Center and Center for Vision Science bring together an unmatched team including ophthalmologists, cell biologists, stem cell biologists, physiologists, engineers and bio-engineers who have the tools and knowledge to ensure success.

The next enVISION Magazine will focus on current optic nerve research and future expansion plans to become the leading center of optic nerve research in the world.



UC Davis Health System Eye Center
4860 Y Street, Suite 2400
Sacramento, CA 95817

Non-Profit Org.
US Postage
PAID
UC Davis
Permit #3

Together we bring research from the laboratory to the bedside, and we advance:

STEM CELL RESEARCH:

UC Davis Eye Center researchers initiated the first clinical trial in the U.S. using a person's own stem cells to treat previously untreatable blinding retinal conditions such as age-related macular degeneration

DIAGNOSIS AND TREATMENT:

We are developing high-resolution, non-invasive imaging tools to look inside a patient's eye to understand - at the cellular level - early indicators of a range of eye diseases and the impact of patient centered treatment programs

UNDERSTANDING THE MYSTERY OF VISION:

By studying responses to light we are understanding how the visual signal transmits from the photosensitive cells in the human eye to the brain

OPTIC NERVE RESEARCH:

Our retinal stem cell biologists are studying how stem cells grow and become retinal ganglion cells and then, how to get them to reform connectivity that transmits the visual signal to the brain

ARTIFICIAL CORNEA:

In collaboration with the School of Veterinary Medicine, we are using animal models to develop an artificial cornea

RETINAL DISEASES:

Researchers are identifying biological markers related to retinal disease and are using these markers to develop therapeutic strategies that will slow the progression of blinding eye diseases

TRAUMATIC BRAIN INJURY AND SPORTS MEDICINE:

We are developing vision training tools for athletes to enhance their performance and tools for rapid diagnosis of traumatic brain injury

Please consider supporting our work today. Your gift will support cutting edge vision science research and benefit many individuals today and in years to come.