

enVISION

News From the UC Davis Eye Center

FALL/WINTER 2016



Cover Art by **Barbara Arnold, M.D.**

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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

Building Partnerships

The reach of the UC Davis Eye Center extends well beyond the delivery of clinical care locally and the vision research enterprise that serve as the obvious centerpieces of what we do. The success of the Eye Center has been greatly enhanced by our partners in vision care in the capital city, the region, and the nation. These partners range from the community physicians to the regional eye bank, to support organizations like the Lions Clubs of our region, to the Sacramento Society for the Blind, and beyond our borders to international organizations such as Orbis International. Joining hands in patient care, research, and education, these interlinked entities create a whole that is significantly greater than the individual components.

First and foremost, it is our community physicians who volunteer their time and share their rich experience with our residents-in-training. Some of these physicians are alumni of UC Davis. Others are not, but they give of their valuable time and know-how to educate our trainees.

The regional eye bank—Sierra Donor Services—originated as a UC Davis organization and, for over 20 years, was part of the Medical Center. The departure of the eye bank to become part of Dialysis Clinics, Inc. did not affect its strong relationship with the department. Medical supervision of the eye bank remains at the university, and its medical directors are members of our faculty. All of our residents spend time at the eye bank as part of their ophthalmic training, and the bank has been active in providing practice tissues for the surgeons-in-training.

More recently, the Eye Center has established a strong working relationship with the Sacramento Society for the Blind—an exceptional agency that provides services and training for the profoundly visually impaired. Here too, our residents spend time training the techniques of low vision therapy and learn about important visual rehabilitation services available to the community.

Our organization could not take on all that it does without the financial and volunteer support of our local service agencies. Lions International, whose mission is service for vision restoration, has inspired the Northern California Lions Sight Association (NCLSA) to support vision programs for our pediatric patients. With a generous gift of \$100,000, the NCLSA has contributed to the establishment of the Byron Demorest Chair in pediatric ophthalmology and is supporting our annual educational program – *Eyes of a Child* – which provides important training in pediatric vision evaluation to pediatricians, family practitioners, nurse practitioners, and school nurses in our region.

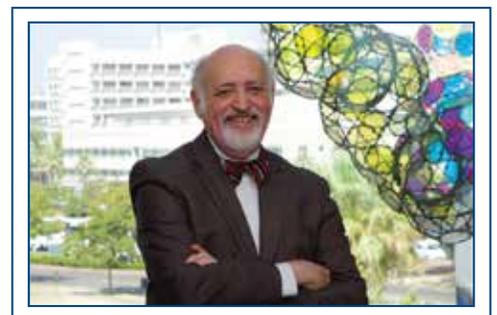
Finally, extending beyond our national borders, the Eye Center has joined forces with Orbis International, sending its expertise around the world with the Orbis team to teach physicians in developing nations the most advanced and effective medical and surgical treatments. Our faculty members have taught with the Orbis team in India, Nepal, Ethiopia, China, Vietnam, El Salvador, Peru, and elsewhere, transferring critical skills to the local physicians.

These efforts on all fronts have been made possible by strong partnerships—alliances that bring wide-ranging talents to the table to enhance education, research, and patient care. It is clear that the whole is much greater than the sum of the parts, and we are thankful for the partnerships that have strengthened us.



Mark J. Mannis, M.D., F.A.C.S

Fosse Endowed Chair in Vision
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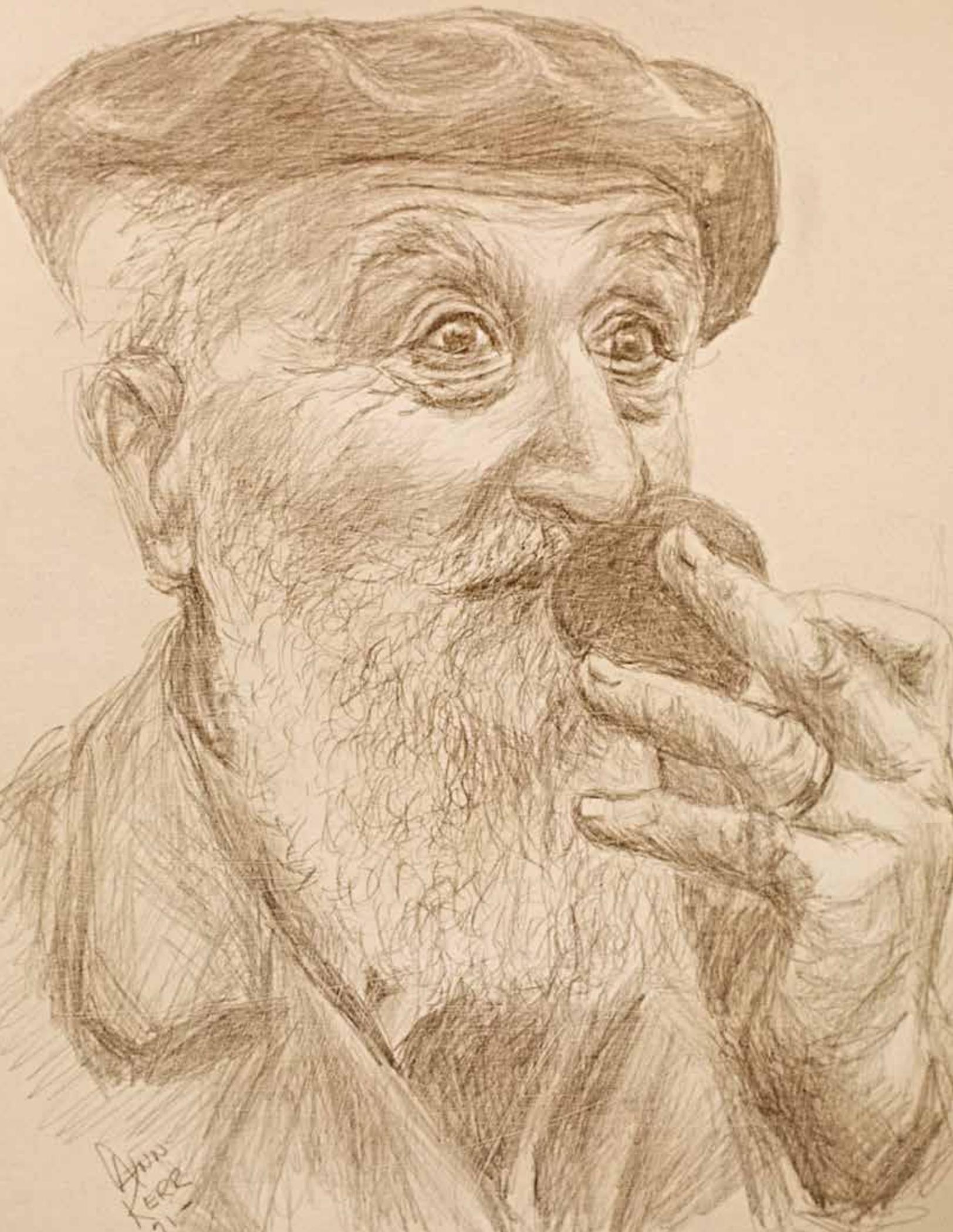
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Ann
Kerr
1911

IN THE
eye
OF THE
beholder

BY: MARK J. MANNIS, M.D.

The beauty of our world is largely perceived through the sense of vision, yet we often see that same world entirely differently from one another. In this issue of *EnVision*, we see how sight is translated into an artist's view of the world through the eyes of two very talented women — *one, an ophthalmologist, and the other, a patient.*



Blackwell, the first woman to receive a medical degree in the United States. After two years at the University of Nebraska, Barbara went on to the University of Nebraska School of Medicine, later transferring to the University of Colorado, where she received her M.D. degree.

Friends encouraged her to pursue a career in ophthalmology, and after completion of her residency, she was in private practice for two years in Colorado. She then moved to Oregon where she practiced general ophthalmology before joining the Devers Eye Institute in Portland for specialty training in retina. She was active duty Air Force stationed in England where she both practiced and expanded her knowledge of the field. Her next move was to our city, where she opened a practice in South Sacramento in November 1981.

BARBARA ARNOLD has been practicing ophthalmology in Sacramento since 1981. She was born and raised in Alliance, Nebraska in a family closely tied to the land through farming. As early as age 9, Barbara knew that she wanted to be a physician, inspired by British-born Elizabeth





Artwork (Pg 8 & 9) by **Barbara Arnold**

But Dr. Arnold's energy was not limited to serving just the patients in her practice. She became one of the founding members of Women In Ophthalmology, a group that has grown into an important and vibrant organization in our national professional community. In addition, she served as president of the California Academy of Eye Physicians and Surgeons, was a member of the Board of Trustees of the California Medical Association, and served as one of the California Delegates to the American Medical Association. Through all of this energetic public outreach, which has included serving as a volunteer clinical faculty at UC Davis since 1982, Barbara steadily built her practice in South Sacramento, treating a population that in our region is often underserved.

Her career as an artist also had its roots in her childhood. She developed a passion for drawing early as a way of entertaining herself after school at the kitchen table—first painting by numbers,

then with pastels. However, it was not until after her residency training in ophthalmology that she turned to art more seriously, taking lessons in landscape painting while in Colorado. She began using watercolors in 2001 and in 2005 began studying with famed Northern California artist, Greg Kondos, who remains her artistic mentor to this day. Even now, Barbara paints in her studio at home evenings and weekends. "For me, painting is like meditation; it carries me to another place", she explains. Her subjects are the beautiful surroundings of our valley, the Delta, and the Sierra from broad landscapes in warm, pastel hues, to delicate individual flowers.

As with her emphasis on outreach in ophthalmology, Barbara has shared her artistic talents in a unique way by teaching watercolors to the partially sighted. She notes, "People with devastating visual problems do not realize that they can nurture their own creativity through the

visual arts. When they see that even with visual impairment, they can make beautiful art, they recognize that they can do many other things in life despite vision loss; it is empowering.”

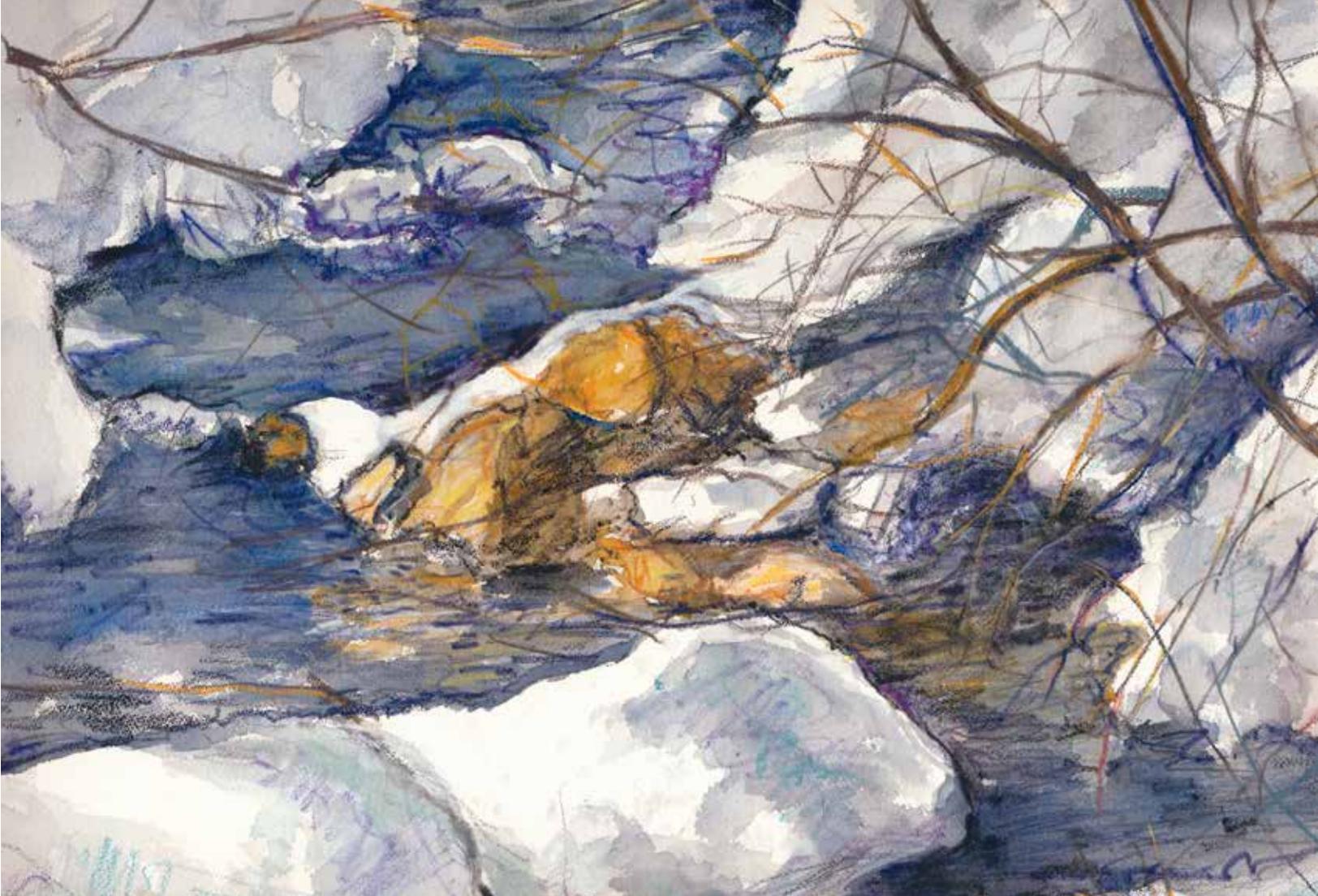
Barbara Arnold is as passionate about her medical specialty as she is about painting. “Ophthalmology is a specialty of medicine that truly allows you to develop lifelong relationships with people. They come to us with fear of vision loss and, most of the time, we can bring them the happiness that comes with vision restoration”, she notes.

This physician/artist feels that both in ophthalmology and in painting, we create serenity. She has built a career and a pastime with this approach, serving the community with both her medical and artistic skills.



ANN KERR came to art under different circumstances. A native of Scranton, Pennsylvania and the daughter of a WWII night fighter pilot, Ann grew up in Pacific Palisades and moved to Sacramento at age 9. In junior high school, she began to notice a distinct deterioration of the vision of her right eye and was diagnosed with





Artwork (Pg 10 -13) by **Ann Kerr**

a disorder known as keratoconus—a disease of unknown cause that results in deformity and scarring of the cornea, the main focusing element of the eye. She was helped for some time by a contact lens, but early in her college career, her left eye developed similar problems, and a sudden dramatic change in her right eye with vision loss made it necessary for her to drop out of school. In 1964, Ann underwent a corneal transplant in the right eye at UC San Francisco. Corneal transplantation was still in relative infancy at that time, and she had to remain in the hospital immobilized for two weeks after surgery with both eyes patched. (In 2016, this operation takes less than an hour and is an outpatient procedure with the patient up and around the same day.) Surgery allowed her to return and complete her college career. The left

eye underwent transplant surgery nine years later in 1973 in an operation already transformed by modern technology.

Art was also an important part of Ann's early life, having begun drawing as a youngster. She majored in art at University of California, Santa Barbara where she began painting and taking courses in art history, media, and design. Until she went to UCSB, she had never been to an art museum, but after her exposure to the fine arts, she traveled to New York and Europe to visit the great museums.

While raising a family, Ann continued to take classes in the arts and taught art at St. Michael's Episcopal School for 13 years. She also taught art at the first grade level in the San Juan School District, actively promoting arts in the curriculum.



a member of the Board of Directors of the Crocker Art Museum for eight years and has trained art docents in the San Juan School district for many years.

Ann Kerr experienced profound vision impairment early in life. Through the miracle of modern corneal transplantation, she has enjoyed good vision for many years. But her brush with vision loss has informed her community service. She was chairperson of the Sacramento Valley Eye Bank for the Junior League of Sacramento, effectively helping to start a functioning eye bank in our city. As a recipient of the gift of sight, Ann wanted to give back so that others might see through corneal transplant surgery. Even now, she is an active member of the UC Davis Eye Center Advisory Council and brings the very special viewpoint of an eye patient to the table.

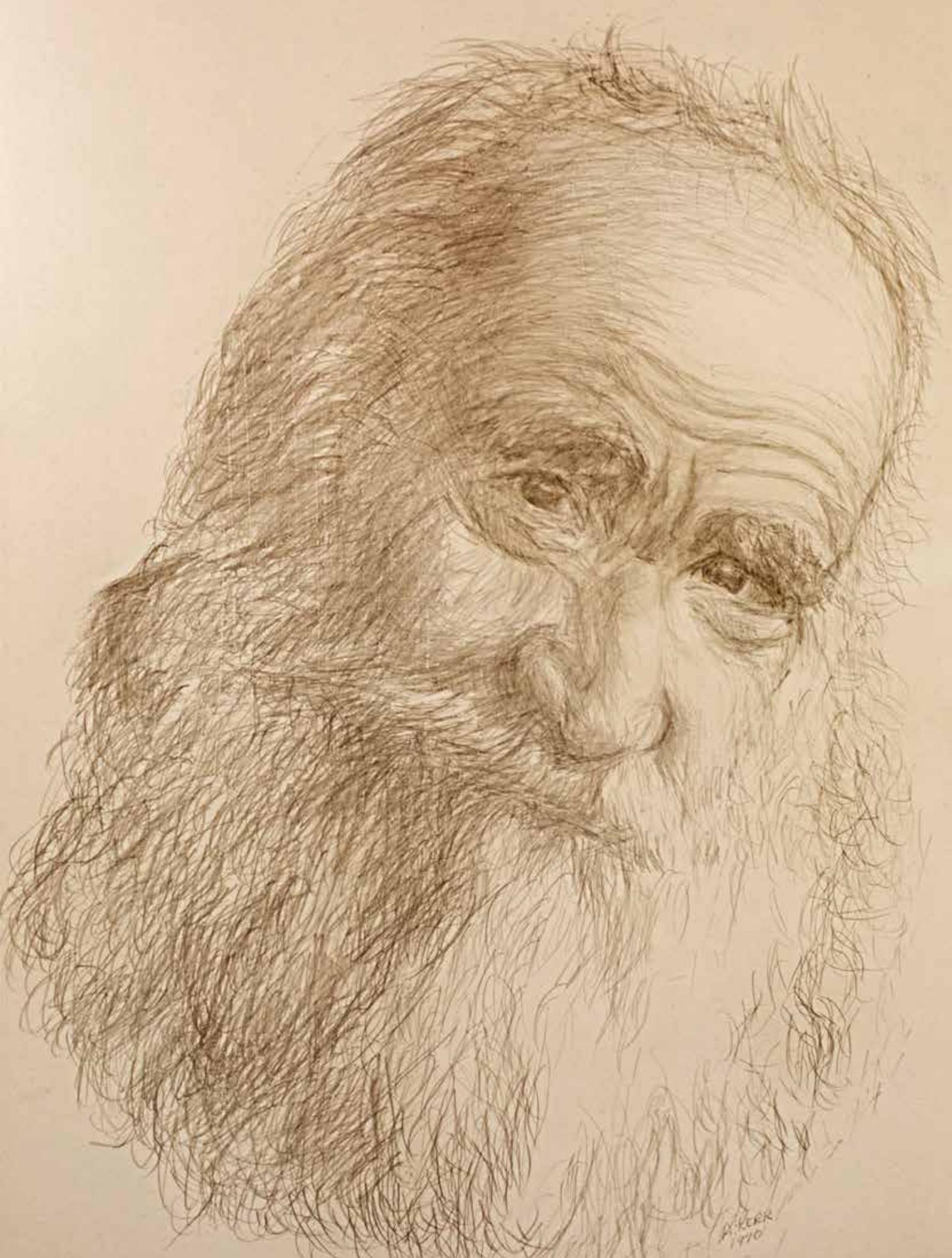
“Just as everyone’s handwriting is unique, everyone’s art is unique” – a message that she has tried to convey even to her youngest students. She sees art as calming and, especially in the hospital setting, finds art extremely important as the visual effect that diverts people from their anxiety.

Like Barbara Arnold, Ann loved giving art to the community. Through a Getty Grant, she taught teachers how to integrate art into their classes for 15 summers at the Crocker Art Museum. She became a leader in the Kingsley Art Club (est. 1892), which began as a women’s study group and has grown into an organization that brings lectures and art shows to the Crocker Art Museum program.

Ann used her talents to design logos, program covers and other graphics for volunteer groups. Since 1978, she has spent every Wednesday painting at the Fine Arts Center in Carmichael. She served as

Ann has worked primarily with watercolors combined with Caran d’ache crayon but enjoys acrylics, silver point drawing, and other media. Vision has been given back to her through corneal transplantation, and her art is a true expression of gratitude for the ability to see the beauty in everything around us.

Two women, both leaders and teachers, have made a special connection between our ability to see and our ability to see the beauty in our world.



A shared vision for **better eye health**

BY: UC DAVIS MAGAZINE

Grateful patient Ernest E. Tschannen has donated \$38.5 million in gifts to UC Davis Eye Center —making him the largest individual donor in the university's 108-year history

In 2000, Ernest Tschannen, noticed his eyesight was failing. As someone who walks six miles every day and cherishes his time outdoors, losing his sight to glaucoma was a frightening prospect.

Referred by a local optometrist to the ophthalmologists at UC Davis Eye Center, Tschannen underwent eye surgery by Michele Lim to improve his vision and manage his glaucoma, a disease often caused by abnormally high pressure in the eye that damages the eye's optic nerve.

Considered a silent disease, glaucoma's effects can be so gradual that a patient may not notice a change in vision until the condition is at an advanced stage. When untreated, the disorder can result in vision loss and blindness.

Because of his experience at UC Davis, Tschannen began donating to the UC Davis Eye Center, supporting its mission to preserve and restore sight for thousands of people in the Sacramento region and beyond.

Tschannen's first donation was for \$25. Today, the 91-year-old has donated at total of \$38.5 million in gifts and pledges to the UC Davis Eye Center and its Center for Vision Science. His contributions make Tschannen (pronounced CHAN-nen) the largest individual donor to UC Davis in the entire university's 108-year history. The gifts position UC Davis to take on some of the greatest challenges in vision science — such as finding a cure for glaucoma, the disease that affected Tschannen and is one of the world's leading causes of blindness.

What early glaucoma looks like

This photograph compares normal vision (top) and vision with early glaucoma (bottom). The disease is a leading cause of blindness, and a target of research at the UC Davis Eye Center that will benefit from Ernest Tschannen's philanthropic support.



Normal Vision



Vision with early glaucoma



Mayor Kevin Johnson, Julie Freischlag, M.D., Ernest E. Tschannen, Mark Mannis, M.D. and Ann Madden Rice

"We're proud to have a strong partnership with such a visionary individual," said Julie Freischlag, vice chancellor for human health sciences and dean of the School of Medicine at UC Davis. "Because of the health system's interdisciplinary approach to medicine and its position as an economic and healthcare leader in Northern California, Mr. Tschannen's gifts will have a profound impact on thousands of lives in our region."

Finding cures for blinding eye diseases

Tschannen's gifts support the UC Davis Eye Center's vision to be a national leader in the development of cures for blinding eye diseases. Funds will be used to expand research, teaching and patient-care services at the eye center and, once approved by the University of California Regents, to build a new and larger eye center on the UC Davis Health System campus in Sacramento. The new facility will be named the Ernest E. Tschannen Eye Center.

"Our mission is to be the world's transformational leader in collaborative vision research and in developing cures for blinding eye diseases, from cornea to cortex," said Mark Mannis, director of the eye center and chair of ophthalmology and vision science at UC Davis. "Mr. Tschannen's gifts will allow us to realize this vision beyond anything we could have realized on our own."

Ernest E. Tschannen Day

Mayor Kevin Johnson declared February 16 as Ernest E. Tschannen Day in Sacramento. The honor was bestowed on Tschannen's 91st birthday and recognizes his contributions to the local community. "Ernest has been an inspirational fixture in Sacramento's nonprofit community, devoting a lifetime to helping others. Throughout the course of his life, he has committed a majority of his earnings to make Sacramento a city where all citizens' basic needs are met, and he advances research and cures as much as possible," Johnson said at the Feb. 16 Sacramento City Council meeting.



Ernest E. Tschannen Visionary Award

Other funds from Tschannen expand basic research to complement the eye center's renowned patient care programs, which serve more than 55,000 visits each year for those in need of advanced specialty care. Research will focus on the optic nerve, the bundle of 1 million nerve fibers that transmit visual signals to the brain, and glaucoma, a leading cause of blindness caused by damage to the optic nerve that affects three million Americans.

The eye center has recruited a national leader who is investigating the processes underlying regeneration of the optic nerve in frogs, the only species that can repair optic nerve fibers.

"A healthy optic nerve is essential to good vision, yet once damage occurs, it cannot be restored," said Lim, who is a professor of ophthalmology and a glaucoma specialist at UC Davis. "As a result, vision loss due to glaucoma currently can't be recovered. If it's recognized early, vision loss can be slowed or prevented."

Desire to give back

"I have realized great success in the United States, and so my primary goal in life now is to give back to the country that gave me so much," said Tschannen, who is fluent in French, German, Spanish and English. "I like to help whenever I can. I'm so glad I am able to do it."

Tschannen was born in 1925 and grew up in the small town of Aarwangen, Switzerland, where some of his earliest jobs included delivering bread after high school and guarding the Swiss border during World War II. But he always wanted to live in the United States.

"I went to Canada first because I could not get a sponsor for a visa in the U.S.," Tschannen recalled. "I lived in Toronto for three years before moving to Detroit and later Minneapolis, where I worked as a mechanical engineer for about 10 years."

Tschannen said that he didn't really like engineering and started buying investment properties as a hobby. Eventually he was able

to quit his job to manage his properties full time. Now a real estate investor, he owns 28 apartment complexes throughout the country. He said that he considers the Ernest E. Tschannen Eye Center a unique part of his investment portfolio.

"Even though I don't own the building, this has become a top priority in my portfolio," Tschannen said. "And this investment is just as important to me as my other real estate ventures because it will help advance glaucoma research—a disease that has affected me personally—and support two communities—UC Davis and Sacramento—which have contributed so much to my health and happiness."

"I have realized great success in the United States, and so my primary goal in life now is to give back to the country that gave me so much."

— ERNEST TSCHANNEN

Ernest E. Tschannen Visionary Award

The Ernest E. Tschannen Visionary Award at the UC Davis Eye Center recognizes an individual for contributions that will allow us to realize our vision of being the world's transformational leader in collaborative vision research and in developing cures for blinding eye diseases, beyond anything we could have realized on our own. This award is a tribute to an individual's steadfast, consistent contribution to the advancement of vision care and research while inspiring others to help in accomplishing shared goals. This award is not necessarily intended to be given on an annual basis, but rather on the occasion of demonstrated extraordinary leadership, partnership and innovative contributions to the Eye Center.

The award is named in honor of Ernest E. Tschannen— a patient and very dear friend to all at the Eye Center. His motivation for giving is not only to propel the Eye Center forward through philanthropy, but to inspire others to join him in supporting the vision and mission of the Eye Center. Ernest is the first individual to receive the Ernest E. Tschannen Visionary Award, which was presented at the 2016 Resident and Fellow Graduation Ceremony on Saturday, June 18.

THE 3RD GENERATION ORBIS FLYING EYE HOSPITAL VISITS SACRAMENTO ON ITS MAIDEN VOYAGE

The partnership between the UC Davis Eye Center &
Orbis International grows deeper

BY: JAMES D. BRANDT, M.D.





Ala Moshiri, M.D., Ph.D. and Glenn Yiu, M.D., Ph.D.

As readers of EnVision Magazine well know, the UC Davis Eye Center and Orbis international have developed a strategic partnership in ophthalmic education and delivery of much-needed surgical eye care throughout the developing world. This partnership reached a new milestone in June, 2016 when the newly-launched 3rd Generation Orbis Flying Eye Hospital (FEH) took its maiden voyage to McClellan Airfield where, in partnership with the Eye Center, the FEH was “put through its paces” as a hospital with comprehensive technology assessments including simulated surgery, simulated medical emergencies and real-time communication with a partner eye center abroad.

Orbis International (www.orbis.org) is a global charity founded in the 1970s merging ophthalmology and aviation in a unique way. The dream of Orbis’ founders was to put a complete ophthalmic teaching hospital on an airplane and bring that hospital to areas of need. The first FEH, a retired DC8 jet, had a tiny operating room, a small classroom and a one bed recovery room. In 1992, the DC8 was replaced by the 2nd

generation FEH based on a DC-10 wide-body aircraft donated by United Airlines. The DC-10 FEH became a worldwide icon for Orbis’s mission; it became and remains one of the most recognized aircraft in the world.

About five years ago, the DC-10 aircraft was approaching the end of its functional utility. FedEx, a major corporate sponsor of Orbis, donated



an MD-10 cargo aircraft which has now been converted into the 3rd generation FEH. In a gala event June 3-5 at Los Angeles International Airport, the DC-10 FEH was retired and the new MD-10 FEH was christened.

The new aircraft's maiden voyage was to Sacramento, California. Landing at McClellan Airfield on June 7th, the FEH arrived for a week of validation testing.

Why Sacramento for the maiden voyage? The UC Davis Health System possesses many unique core technologies that made Sacramento a natural fit for this first trip beyond the close relationship with Eye Center faculty. The UCDHS Center for Health & Technology and its Center for Virtual Care (CVC) is considered one of the world's leading centers for simulation training. Peter G. Moore, M.D., Ph.D. of UC Davis' Department of Anesthesia



Simulation training



& Pain Medicine is a frequent volunteer faculty member with Orbis; Dr. Moore is heavily involved in global efforts to improve anesthesia safety in the developing world. Finally, the UC Davis Eye Center has a long history of remote learning partnerships around the world. For example, the Eye Center holds a joint grand rounds event twice a year during which challenging clinical cases are discussed in a live video forum with the Department of Ophthalmology at the Federal University of São Paulo in Brazil.

This all came together during the action-packed week in June. After the plane landed at McClellan airfield, in just a few hours, the aircraft was converted into “hospital mode,” a full simulation of what will happen when the plane arrives at a remote airfield in the developing world.

These days, when any new hospital or facility is opened, it is important for doctors, nurses and staff to simulate patient care so that everyone involved knows their role in an emergency, where equipment is stored, how to find necessary drugs, and verify that emergency equipment

works as designed. During the first day of simulated surgery on June 8th, computerized mannequins from the CVC were brought on board the FEH to serve as mock patients. These highly-sophisticated mannequins can simulate a live patient – they react to drugs, talk and move like a real patient. During the FEH validation program, these “patients” were checked to the FEH, underwent anesthesia and simulated cataract surgery and were awakened in the aircraft’s recovery room. The simulated surgery was a success and gives Orbis, its FEH staff and UC Davis volunteer faculty complete confidence that when the FEH travels to the developing world the hospital will function as designed.



UC Davis Eye Center Residents



Orbis honors UC Davis as an Outstanding Partner Institution

On Thursday evening, June 9th, the aircraft was open to the UC Davis Health System Community during a special Dean's Global Health Night. UC Davis faculty and Dr. Jonathan Lord, Orbis' global medical director, emphasized the importance of battling blindness throughout the world. On Friday morning, June 10th, the regularly scheduled international telemedicine grand rounds program with the Federal University of São Paulo was carried out directly from the 46 seat classroom on the FEH, with a two-way live video link with Brazil. The Brazilian ophthalmologists presented cases demonstrating how Zika virus caused blindness in some of the babies they have cared for; and the UC Davis ophthalmologists presented a case of how a rare form of leukemia can cause blindness. This successful session further confirmed that the technology on the aircraft can support live video links from its classroom to just about anywhere in the world (see page 31).

On Saturday, June 11th, the FEH opened for tours for friends and family of the UC Davis Eye Center, with more than 200 visitors passing through the airplane. The FEH departed Sacramento a few days later on a goodwill tour to Memphis, New York, Washington, and Fort Worth. The FEH departed on Labor Day weekend for its inaugural 3-week program in Shenyang, China. Many members of the UC Davis Eye Center will join the FEH for that initial program—we encourage you to follow the Eye Center and Orbis on social media like Facebook, Twitter and Instagram for updates on programs in the developing world and the unique Orbis-UC Davis partnership.



facebook.com/pages/UC-Davis-Eye-Center
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The Sacramento launch of the Orbis Flying Eye Hospital would not have been possible without the generous support and partnership of these wonderful organizations and individuals:



Binda Mangat of Quorum Technologies



Sierra Donor Services Eye Bank



Craig Senders, M.D. of Senders Wines

Launch Event Sponsors

Quorum Technologies - Binda Mangat, CEO

Binda is a member of the Eye Center Executive Advisory Council, grateful patient of the Eye Center and supports other local organizations in their pursuit to provide children with the resources they need to live happy, healthy and productive lives. Learn more about Quorum at: <http://www.quorumtech.net/>

Sierra Donor Services Eye Bank

Sierra Donor Services Eye Bank recovers, evaluates, processes and distributes donor eye tissue for sight-saving cornea transplants, reconstructive eye surgeries, and research into cures for other eye diseases. Annually, 1000 people have their sight restored through tissue provided by Sierra Donor Services Eye Bank. Learn more at: <http://sierradonor.org/>

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We also want to offer our sincere gratitude to **Senders Wine and Dr. Craig and Karen Senders** for their partnership in these events and the fabulous wine. After years of making wine and working on international surgical outreach, Craig & Karen needed to do more. They now harness artisan winemaking to fund outreaches they and others from around the world work on to repair cleft lips and palates. Learn more: <https://senderswines.com/about/>

BEHIND THE CONFERENCE ROOM DOOR

BY: ERIN BAUER

“When things look their worst and the clouds hover over the earth causing utter darkness, it is then that the wind blows and chases the clouds away, and the sunshine returns.”

– AN OLD LEBANESE PROVERB

DR. HENRY ZEITER arrived at the Sacramento launch event to celebrate the third iteration of the Orbis Flying Eye Hospital with his lovely wife Carol and his nephew Dr. Joe Zeiter, who he affectionately refers to as one of his sons. To the amazement of the Orbis staff in attendance that evening, Henry was sporting a pair of “vintage” Orbis flight wings on his jacket. Orbis staff immediately asked Henry how he got the wings and remarked that this particular pair of wings was given to Orbis volunteer clinical faculty during the early days of the organization after each member of the team completed a medical mission. That evening, we were reminded of the extent of Henry’s contributions to the profession and his commitment to explore the world while always making it a better place.

“On October 24, 1982,” wrote Dr. Zeiter in his memoir, *From Lebanon to California*, “as we were flying to Manila to meet Orbis—the DC-8 flying Eye Hospital, brainchild of Dr. David Paton, of Houston, Texas—I was looking at the emerald green



texture of the Philippine Islands below us. Slowly, a large formation of white clouds interposed itself between my eyes and the wondrous beauty of the earth below. It suddenly occurred to me how I have spent a lifetime fighting the clouds of blindness, the white cataracts, the corneal scars and the vitreous membranes that have impeded the sight of my fellow human beings.”

Henry Zeiter is a retired ophthalmologist well known for the extraordinary care he offered to countless patients in the Central Valley. Dr. Zeiter built a robust ophthalmology practice that started with its first clinic in Stockton in 1962. Henry is also a published author of three books, a landscape painter, devoted husband, father of four, uncle, grandfather, world traveler and educator. Well-grounded in common sense and the hard knocks of life, which Henry describes as old Lebanese habits, Henry has lived a life full of wonder, love, discovery, compassion and exploration.

Throughout his childhood, Henry dreamed of becoming a philosopher and writer, but he developed a passion for medicine and ultimately ophthalmology through listening to his father share his unfulfilled dreams of becoming a doctor. Henry’s father was a businessman and a poet who valued education, medicine and the opportunity to improve the wellbeing of others. The youngest of his siblings by almost seven years, Henry was born in Serhel, a village high in the mountains of Lebanon. His five brothers and one sister welcomed and adored Henry, and so did his many relatives who awaited his birth, gathered anxiously outside the family villa. Henry has very fond memories of his days in Lebanon with his large, extended family, most of whom relocated to Venezuela, Canada, Detroit, and mostly to Stockton, California.

Henry and his family left Lebanon for Venezuela when he was 14, which is where he completed his high school education before leaving for

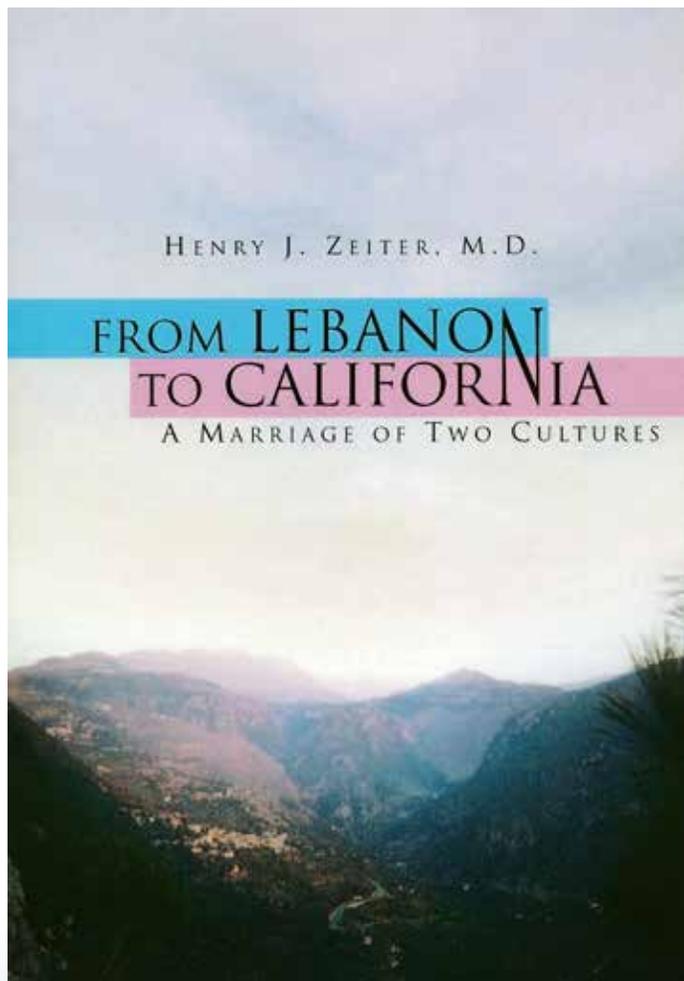
college in Canada. After college, Henry received his medical degree from Western University and headed to Detroit for his internship, residency and to meet his love, Carol. Henry vividly recalls the day he decided to pursue ophthalmology as his chosen specialty. The first time Henry looked into a fundus in third-year medicine and saw the yellow optic nerve, the orange fundus, the red arteries and veins, he viewed this as the unification of science, medicine, the artistic beauty of vivid colors and the possibility of the unknown. Henry’s passion for ophthalmology only grew from that day forward and led him to a very distinguished career.

Today, the Zeiter Eye Medical Group is comprised of a team of talented surgeons who are all committed to helping others through teaching and providing medical care to the underserved in the community and throughout the world. Henry’s first major recruit to the practice was his nephew, Dr. Joe Zeiter, who trained at the UC Davis Eye Center and has a “heart full of courage” according to Henry. After Dr. Joe became a stable part of the practice, Henry’s son Dr. John Henry Zeiter joined the practice. According to Henry, both Joe and John have played a crucial role in growing the practice and managing business affairs. Dr. Henry has also built a reputation for himself as an outstanding clinician adored by his patients. John has a very similar reputation among the many residents of the UC Davis Eye Center who have the great fortune of training with him as a longstanding member of our volunteer clinical faculty. To add to the already robust practice, the Zeiters recruited UCD Eye Center-trained ophthalmologist Dr. John Canzano, who also serves on the volunteer clinical faculty at the Eye Center. Henry’s great-nephew, Joe Jr., is the most recent addition to the practice.

Despite all of Henry’s major commitments to the practice, the profession, his family and the community, he still made it a priority to participate in medical missions in the developing world

where access to quality eye care is not as readily available as it is in the more developed world. Henry traveled to the Philippines and China on an Orbis medical mission in the early 80s on one of the first iterations of the Flying Eye Hospital. Henry was introduced to Orbis through a colleague who was a volunteer clinical faculty member for the organization. Henry was a natural recruit given his extensive experience with corneal transplants and his commitment to vision care for all individuals. At that time, Henry received all of his corneas from the Eye Bank in Houston, which is also where Orbis was headquartered. When asked if he would be willing to participate in an Orbis mission, Henry felt that he owed it to Houston and off he went. Henry has also chronicled his very unique and rewarding experience in his first published book, *From Lebanon to California—a Marriage of Two Cultures*:

“The second night we were invited as VIPs to the Manila Golf Country Club for a dinner in our honor. Much to our surprise, we were welcomed there by Imelda Marcos, wife of the president of the Philippines at the time. She asked if we would be kind enough to visit one of the homes for the blind that she sponsored in Manila, to see if any of the residents could be helped. I was driven there after dinner by her chauffeur. There were about fifty blind people in a two-story project, all blind from total corneal opacities due to Vitamin A deficiency. We found we could operate only on two of them (we had two donor corneas), so I chose the two with moderate damage, for corneal transplantation the next day. It was fortunate that we had two corneas sent to us that previous day from the Orbis headquarters in Houston.”



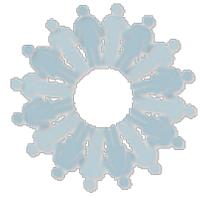
The Orbis program is one of Henry’s most cherished memories from his countless medical mission trips. Henry’s passion for helping the underserved is shared by his family and in 1992 Dr. Joe started Mission Cataract with Drs. Henry and John Zeiter. Mission Cataract is an annual program that provides cataract surgery to people who would not otherwise be able to afford it.

The Zeiter family name is a household name for many individuals in the profession in our region, and certainly for the Eye Center staff, faculty, residents, fellows, volunteers and patients. There is hardly an hour that goes by when the conference room that Henry and the surgeons at Zeiter Eye Group named is empty. The conference room is representative of one of the many ways Henry has chosen to make sure that those nearest and dearest to his heart have the resources needed to fulfill a mission. Behind the conference room door is a true Renaissance man who, as it is written in the old Lebanese proverb, has often been the sunshine that finds a way to shine through the utter darkness for his patients, family and friends.



Sierra Donor Services

an extraordinary commitment to science, health and hope



MEET **SCOTT SANTANA**, HERO EXTREME AND ALL AROUND GOOD GUY.

What made Scott a hero to those who knew him and those who have learned about him was his generous heart. At 15 years old, Scott joined the Donate Life Registry and declared he'd like to help others in need of sight, mobility and life if something ever happened to him. In 2011 at the age of 17, Scott had a car accident on his way home from school, and his family took great pride and comfort in his choice to be a donor. While he was still in the hospital, Scott's older sister coined the family motto, "On the worst day of our lives, so many families will be getting the best news of theirs." Scott helped over 80 people through his donation of corneas, tissues and organs. It became the mission of the family to share the legacy Scott has left on the world, both for those who knew him and those who hear his story as a spotlight on donation. That donation can be the only bright light in a very dark time.

His family missed spending hours watching him play rugby and football, so they turned their attention to sharing Scott's story. Collectively, they have volunteered over 1,000 hours in five years.

Then, four years ago, Scott's mom went to work for Sierra Donor Services, the organization that facilitated Scott's donations.

Scott's family always wondered about where his corneas "landed." Scott loved to travel, and despite his young age he had already traveled as far as New Zealand and Australia, so they secretly hoped he was "seeing" the world with his recipients. A few years later, when they learned that Scott's corneas had gone to a 14-year-old girl and a 26-year-old young man, they hoped even more that his gift was providing the opportunity to these two recipients to see beauty around them. Last summer, Scott's parents were blessed to speak on the phone to the young lady who received the gift of sight from Scott. They learned that she is now in college, taking pre-med classes with the intention of becoming a doctor. She expressed her gratitude to them and to Scott for her gift of sight. She openly shared that without the transplant from Scott and another generous donor for her other eye, she would not be able to be a straight-A student and would certainly not have the opportunity to consider medicine as a career.

Scott and his family are eternally grateful to Sierra Donor Services and Sierra Donor Services Eye Bank for the care they received during the hardest time of their lives but also for making the gift of sight available to Mai and so many others.

To learn more about Sierra Donor Services Eye Bank go to <http://sierraeyebank.dcdids.org/>. If you'd like to join the Donate Life Registry go to www.registerme.org

5TH ANNUAL

Resident and Alumni Research Symposium

relish the moment – you are in the
doubt you will ever receive as much
al satisfaction as you will in
logy



Robin Lewis, Rick Lewis, M.D. and Mark Mannis, M.D.

The 5th Annual Resident & Alumni Research Symposium took place on Saturday, June 18, 2016. The day, celebrating the research efforts by our residents and fellows was highlighted by three special presentations—the Byron Demorest Memorial Lectureship, the William Kohl Medical Student Research Presentation, and the Alumnus of the Year Lecture. The Demorest Lecture, established to commemorate the leadership of the department's first chair, was delivered by Paul R. Lichter, M.D., renowned ophthalmologist and Immediate Past Chair and Founding Director at W.K. Kellogg Eye Center. The William Kohl Medical Student Research Presentation, new to our program this year, was provided by fourth-year medical student Jonathan Lu. Richard A. Lewis, M.D., glaucoma specialist and graduate of the UC Davis

Residency program was honored with the Alumnus of the Year Award and spoke about his creative career in collaboration with industry.

The residents and fellows presented their research projects, which were ably discussed by members of the Sacramento and Davis practice communities. Celebrating the academic achievements of our residents, fellows and our ophthalmic community was at the center of the day's activities, and pride for the Eye Center.



Elizabeth Kohl Hagler, Mark Mannis, M.D., Jonathan Lu (William Kohl Medical Student Research Presenter) and Susanna Park, M.D., Ph.D.



Mark Mannis, M.D., Christian Otto, M.D., M.M.Sc. and James Brandt, M.D.

39TH ANNUAL UC DAVIS EYE CENTER SYMPOSIUM **Testing the Limits: Ophthalmology in 2016**

For more than three and half decades, The Eye Center has produced a top-flight clinical meeting that is now nationally recognized for destination and quality content. This year's event in Napa was no exception, attracting participants from all over the country. Keynote speaker, Christian Otto, M.D., M.M.Sc. National Aeronautics & Space Administration (NASA) and Lead Scientist for NASA's research program presented on the effects of long-term space flight on astronaut vision and the ocular effects of microgravity. The meeting provided a unique opportunity for participants from around the region and the country to meet and interact with UC Davis Faculty.

**The 40th Anniversary UC Davis Eye Center Symposium will take place June 2-4, 2017
at the Napa Valley Marriott Hotel.**



Retina Visiting Professor, William Mieler, University of Illinois

The Eye Center hosted a distinguished array of Visiting Professors during the 2015-2016 academic year. Framed at either end of the schedule by our unique International Telemedicine Conferences with the Federal University of São Paulo and including our annual School of Veterinary Medicine Grand Rounds, the lecture and discussion series provided a truly unique educational experience for members of the department as well as the regional ophthalmologic community.



Glaucoma Visiting Professor
Leon Herndon, Duke
University

Neuro-ophthalmology Visiting
Professor, Marc Dinkin, Weill
Cornell Medical College





International Telemedicine Grand Rounds from the Orbis Flying Eye Hospital, June 2016

————— **The 2016-2017 Schedule of Grand Rounds Visiting Professors will include:** —————

International Telemedicine Grand Rounds with the Federal University of Sao Paulo

Felipe A. Medeiros, M.D., Ph.D. – Glaucoma

Akrit Sodhi, M.D., Ph.D. – Retina

Carol L. Karp, M.D. – Cornea

David K. Wallace, M.D., M.P.H. – Pediatric Ophthalmology

Don O. Kikkawa, M.D., F.A.C.S. – Oculoplastic Surgery

Vivek R. Patel, M.D. – Neuro-ophthalmology

Veterinary Grand Rounds – **Christopher Murphy**, D.V.M., Ph.D., UCD School of Veterinary Medicine



Cornea and External Disease
Visiting Professor, Elmer Tu,
University of Illinois

Lions and the UC Davis Eye Center:

A MARRIAGE MADE IN HELEN KELLER'S HEAVEN

BY: DEREK LEDDA



In June 1925, Helen Keller appeared at the Lions Clubs International (LCI) Convention in Cedar Point Ohio and made her heartfelt plea “Will you not help me hasten the day when there shall be no preventable blindness; no little deaf, blind child untaught; no blind man or woman unaided? I appeal to you Lions, you who have your sight, your hearing, you who are strong and brave and kind. Will you not constitute yourselves Knights of the Blind in this crusade against darkness?” Lions accepted her challenge and for the next 91 years, made it their priority and passion to work through their local clubs on projects designed to prevent blindness, restore eyesight and improve eye health and care for hundreds of millions of people in more places around the world than there are countries in the United Nations. The UC Davis Eye Center’s vision is to be the world’s leader in collaborative sight research and in the development of cures for blinding eye disease, while also providing state-of-

the-art, world-class eye care, and training superbly prepared ophthalmologists and vision scientists. The powerful commitment to sight that Lions and the UC Davis Eye Center have in common attests to the fact that a relationship between them is very much a marriage made in Helen Keller’s heaven.

In the lobby of the UC Davis Eye Center, there is a donor board acknowledging that the Northern California Lions Sight Association (NCLSA) is among the donors that the Eye Center called its “Society of Friends” for contributing over \$25,000 to support the Center’s great work. The acknowledgment has been there for over 20 years. Dr. Mark Mannis, the head of the Eye Center, remembers that NCLSA’s place of honor on the Board does not tell the whole story of the sight saving role that NCLSA played decades ago in helping to operate the Eye Bank which was so critical to the Center’s ability to perform corneal transplants in the region. With its recent sale of

the old Society for the Blind building, the NCLSA Board found itself with the amazing opportunity to renew its relationship with the Eye Center and once again assume a leadership role in improving and maintaining the eye health status of children in Northern California by donating \$50,000 to the Demorest Endowment and another \$50,000 to the Eyes of a Child annual symposium. The Demorest Endowment will fund on a continuing basis the Eye Center's research in pediatric ophthalmology and the Center's efforts to treat underserved children with sight problems. The "Eyes of a Child Symposium" is held annually by the Eye Center to educate both lay people and eye care specialists, including school nurses and doctors and starting with the September Symposium many Lion leaders from Northern California, regarding children's eye health and vision needs. The Eye Center has committed to showing its gratitude for NCLSA's generous donation by reflecting NCLSA as a valued partner in both the Endowment and the Symposium in perpetuity.

In supporting the UC Davis Eye Center, the NCLSA understands and appreciates the overlap of its mission with the Eye Center's mission "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". The NCLSA's donation reflects the commitment by the two organizations to developing a long term mutually beneficial relationship that will strengthen their ability to achieve their common goal of addressing the needs of the blind and visually impaired in the local area and throughout Northern California. At the Eye Center's 5th Annual Resident and Alumni Research Symposium held last June 18, Dr. Mannis and the Dean of the UC Davis Medical School, Dr. Julie Fleischlag praised Lions Clubs International for almost 100 years of service to the blind and visually impaired locally and around the world. They also thanked the NCLSA Board for the \$100,000 donation and expressed excitement over the areas of collaboration that the Eye Center and the NCLSA and District 4-C5 Lions are exploring. NCLSA President Joe Bowers and Board member Derek Ledda expressed their enthusiasm for the partnership as well and took the opportunity to

highlight to those who attended the life changing and even lifesaving service that Lions have provided in feeding hungry people, preserving the environment, supporting youth programs, providing disaster relief and especially in helping the blind and visually impaired.

As the Northern California Lions Sight Association and the UC Davis Eye Center embark on an exciting journey of innovative collaboration, a quote by Helen Keller comes to mind that "the only thing worse than being blind is having sight and no vision". The NCLSA is already benefiting from the help it is receiving from the Eye Center's residents who the Center is encouraging to volunteer time with the NCLSA's cataract and glaucoma screening van. The Eye Center is also collecting used eyeglasses for the Lions' Folsom Project for the Visually Impaired, which cleans, refurbishes and grades more than 100,000 glasses a year to distribute to needy people in the United States and around the world. The future is particularly exciting for Lions and the Eye Center, as they explore ways that the Eye Center may be able to support the Lions' new and expanding "KidSight USA" child sight screening program and how Lions can possibly play an important role in supporting the Center's extraordinary work, especially in 2018 when the UC Davis Eye Center breaks ground on its new facility, the same year that the Center and Lions Clubs International Foundation both celebrate their 50th anniversary of serving the blind and visually impaired.

It is easy to see that Lions and the Eye Center will be able to accomplish so much more together than they otherwise would be able to do on their own. It will be exciting to watch the partnership develop.



Serving Those Who Served Our Country

BY: SHARI ROESELER

EXECUTIVE DIRECTOR, SOCIETY FOR THE BLIND

Society for the Blind is working with the UC Davis Eye Center and the UCD Health System's Institute on Population Health to form a collaborative approach to meet the needs of our veterans. The goal of this initiative is to improve access to and utilization of low vision eye care, vision rehabilitation, and blindness education resources for veterans living in Northern California.

There are an estimated 194,400 veterans living in the 26 counties served by the Society who are age 65 or older. It is estimated that at least 33,000 are visually impaired. Age-related Macular Degeneration, (AMD), glaucoma and diabetic retinopathy are the leading causes of vision loss and blindness for these men and women.

Vision loss is currently the leading cause of age-related disability. People experiencing vision loss are more likely to have moderate to severe

problems with daily activities, mobility, anxiety and self care. As vision loss progresses, quality of life declines. Falls, medication mix-ups, and other incidents requiring medical attention or hospitalizations are three times more likely for seniors with vision loss.

The number of aging veterans will rise significantly over the next decade and with this rise direct and indirect healthcare costs, especially for those with low vision. Reducing the risks of falls, medication errors, and premature transitions to nursing homes will help to reduce the economic burden of vision loss and improve the quality of life for the men and women who have served our country.

Society for the Blind embraces a continuum-of-care model, offering services and programs in proximity to a veteran's home environment. Knowing that transportation is the major barrier to receiving services, the Society offers a service delivery model for in-home and community-based settings as well as providing courses and onsite programming at its Sacramento headquarters.

Two veterans who recently participated in Society's Senior Impact Program shared the difference the program made:



DEBBIE, is 64 and a veteran of the U.S. Army. She came to Society because, "I couldn't read or pay my bills, and I was missing a lot of work" due to vision loss from age-related macular degeneration. When asked how the program made a difference in her life she said, "Everything changed. With technology, I regained my ability to read, pay bills and I returned to work. I am able to use the white cane and feel more secure and independent."

BRUCE, is 69 and served in the U.S. Army. He lost his vision due to diabetic retinopathy. At his graduation from the eight day workshop he said, "I have more confidence, improved mobility, and I regained my independence. I also made life-long friends through the Senior IMPACT Project."



Top: Debra Pendleton is pictured with Dr. Ingman in our Low Vision Clinic.

Bottom: Bruce Reed is pictured with instructor, Diane Starin, with a meal that Bruce prepared in his ILS course.

Both UCD Eye Center and the Institute on Population Health are providing the Society with expertise and access to the most recent advances and approaches to serving people with vision loss and blindness. Working together, we can improve the quality of life and access to services and programs for those who have so bravely served our country.



Mirrored-Prism Spectacles

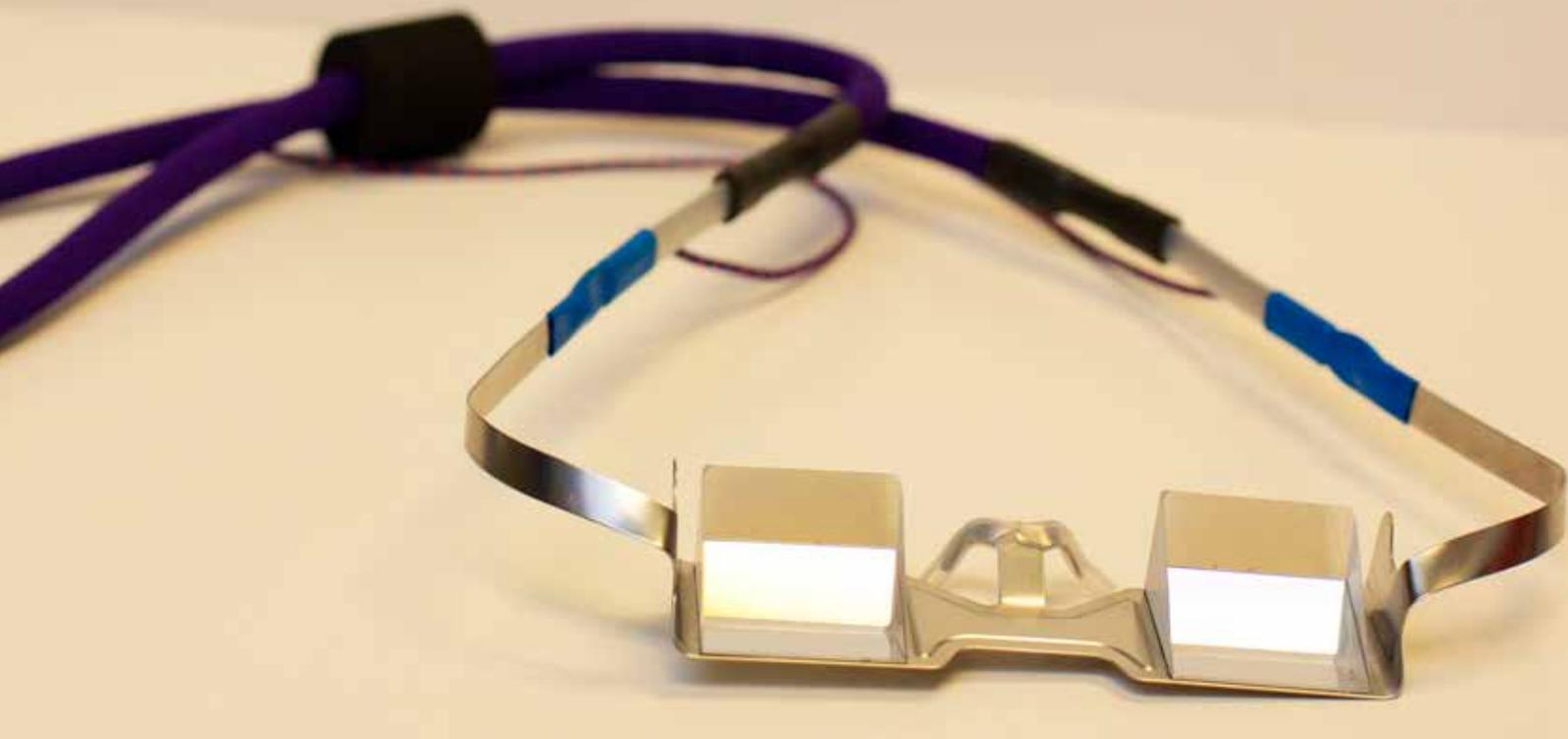
Improving comfort with face-down posturing after retinal surgery

BY: GLENN YIU, M.D., PH.D.



FACE-DOWN POSTURING is a common practice after eye surgeries that require intraocular gas.

The use of gas is very common in retinal surgery because gas is lighter than fluid and can float inside the eye to help seal macular holes or help re-attach a detached retina. However, patients often have to maintain a head-down or face-down position to achieve the optimal effect, often for up to a week. There are companies that offer a variety of massage-style chairs, donut-shaped pillows, and other contraptions to improve physical comfort while a patient maintains this posture during the rehabilitation period, but little is available to address how patients see after surgery. Occasionally, the patient can use a mirror to look around or watch television, but the image is upside-down and reversed.



GLENN YIU, M.D., PH.D., a retinal surgeon and Assistant Professor at UC Davis, has adapted the use of mirrored-prism spectacles to help his post-operative patients see better while maintaining a face-down position after surgery. The glasses change the angle of a person's line of sight, so that he or she can still see ahead while keeping their face down. Similar glasses are used by patients who undergo MRI but are claustrophobic, by allowing them to see out of the narrow interior of the scanner. This new approach lets patients watch TV or use a computer, and also see their friends and family without lifting their heads. The device has the potential not only to provide better comfort during the post-operative period, but also to improve compliance with positioning and hopefully the outcome of the surgery.

Dr. Yiu conducted a pilot study with several prototypes of mirrored-prism spectacles and offered

them to patients for a week after retinal surgery. He then gave out a standardized survey from the National Eye Institute, and he found that the patients reported overall better visual function and quality of life while using the spectacles compared to using a mirror. On average, patients used the mirrored-prism glasses for about 51% of their waking hours, and 90% reported excellent comfort with the spectacles. These study results were recently published in the April 2016 issue of the journal *Retina*.¹

Starting this summer, the UC Davis Eye Center will begin offering mirrored-prism glasses for patients who have had retinal surgery and need to maintain a face-down position. The newest models are actually used by belayers to relieve neck strain while helping to secure climbers. ***If you want more information, feel free to inquire at the Optical Shop.***

1. Yiu G. Mirrored-Prism Spectacles for Facedown Posturing after Vitreoretinal Surgery with Gas Tamponade. *Retina*. 2016;36(4):846-848.

LEONARD HJELMELAND

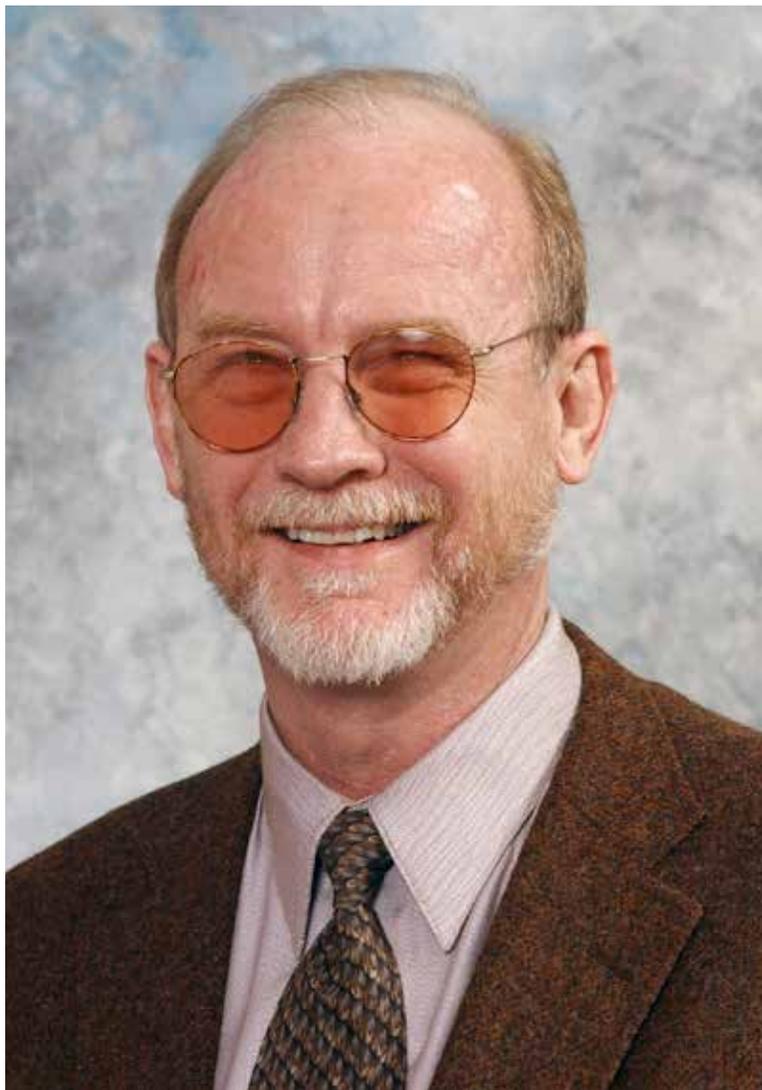
Retires After a Long and Creative Career in Vision Science

BY: PAUL FITZGERALD, PH.D.

After an accomplished career in vision research Leonard (Larry) Hjelmeland has retired from active academic practice. A

native of California, Larry attended high school in San Jose where he was elected Student Body president, and voted Best Dancer, early signs of the skills that would serve him well in academia. In 1966, he took off for Stanford, where he majored in a multidisciplinary program in Computer Science and Chemistry. Upon graduation, he entered Stanford's Ph.D. program in Biophysical Chemistry, where he worked in the laboratory of Nobel Laureate Joshua Lederberg. His doctoral work focused on the mechanism by which oxygen electrophiles were added to unsaturated hydrocarbons.

After completing his Ph.D., Larry joined the National Institutes of Health as a Staff Scientist where he worked until 1986. At the NIH, he worked on ways to improve on the isolation of cellular membrane proteins that preserved the native structure of those proteins. This effort



led to the creation and patenting of CHAPS, a new reagent that proved to be a breakthrough in membrane protein isolation. The value of this reagent is evidenced by the thousands of publications that cite its use.

In 1983, while still working at the NIH, Larry lost his sight from diabetes. Undeterred, he wrote an NIH grant proposal which was successfully funded. Grant in hand, Larry was recruited in 1986 by John Keltner, M.D., to join the UC Davis Department of Ophthalmology. In the subsequent 30 years, Larry has built an outstanding career at UC Davis, competing successfully for NIH funding, amassing a long list of peer-reviewed publications in the research literature, serving as an instructor in a major required undergraduate biochemistry course, teaching medical students, and ultimately

reaching the highest ranks of the professoriate in the University of California system. Among Larry's many contributions was the development of an immortal cell line derived from human retinal pigmented epithelium. This line, ARPE19, has been extensively used by scientists around the world and is now being used in industry as a tool in the treatment of human disease. The article, which reported the development of this cell line, remains the most cited publication in the history of *Experimental Eye Research*.

In addition to his faculty duties, Larry has served as senior assistant to the Provost, where he chaired the committee that oversaw the design and building of the Genome and Biomedical Sciences Facility on the Davis campus. He also served as chair of the School of Medicine's Department of Biological Chemistry, and as associate dean for Research in the School of Medicine. He is currently a member of the Editorial Boards of *Investigative Ophthalmology and Vision Science*, and *Molecular Vision*.

Larry's success would be impressive by any standards, but to have accomplished it

Larry's success would be impressive by any standards, but to have accomplished it all without the ability to see is *astonishing*.

all without the ability to see is astonishing. If this were not impressive enough, Larry has maintained his career momentum while undergoing kidney transplantation, battling prostate cancer and life-threatening skin cancers.

Larry leaves a huge academic legacy (although he is not finished with his work in the lab). He has been a dedicated mentor to junior scientists and a devotee of UC Davis and the Department of Ophthalmology & Vision Science. With his wife, Mary Kay, he enjoys good company, fine wine, and scintillating conversation. Larry continues to come into his lab everyday, staying current in the literature and providing a resource to the vision scientists around him. We thank him for his service and contributions.



UC DAVIS

EYE CENTER

Faculty & Alumni Honors & Awards:

Glenn Yiu, M.D., Ph.D.

National Alliance for Eye & Vision Research (NAEVR) Emerging Vision Scientist

Mark J. Mannis, M.D.

2016 American Academy of Ophthalmology Life Achievement Honor Award

John S. Keltner, M.D.

2016 Dean's Team Award for Excellence in Departmental Mentoring

John S. Werner, Ph.D.

2016 W.S. Stiles Memorial Lecture - University College London

Marie E. Burns, Ph.D.

Elected Organizer, FASEB Science Research Conference "Biology and Chemistry Vision"

Selected ad hoc member, Neurobiology of Visual Cognition and Perception, ZRG1 IFCN-Q,
Center for Scientific Review, National Institutes for Health

Selected Co-Chair, Audacious Goals Initiative Workshop "Creating a Cellular Environment for
Neuroregeneration", National Eye Institute, San Diego, CA

Nicholas Marsh-Armstrong, Ph.D.

Invited Participant, Audacious Goals Initiative Workshop "Creating a Cellular Environment for
Neuroregeneration", National Eye Institute, San Diego, CA

Invited Speaker, Cambridge Ophthalmological Symposium 2016: "The Retinal Ganglion Cell",
St. John's College, Cambridge UK.

Susanna S. Park, M.D., Ph.D.

Invited speaker, Diabetic Retinopathy Scientific Session, 76th Annual Scientific Session of
American Diabetes Association (ADA) Topic: In vivo retinal imaging of diabetic patients,
New Orleans, LA

Paul FitzGerald, Ph.D.

2016 President of the Association of Anatomy, Cell Biology and Neurobiology Chairpersons

Andrew T. Ishida, Ph.D.

Neuroscience Graduate Group Faculty Service Award

Mary O'Hara, M.D.

2016 American Academy of ophthalmology Senior Achievement Award



THE LIFE AND LEGACY OF

Phyllis Marie Demorest (1926-2016)

BY: ERIN BAUER

Phyllis Demorest was an individual so interested in and passionate about others, she did not talk about herself. Yet, all those who knew Phyllis have much to say about the profound impact she had on their lives and how her unwavering grace, humility and compassion for others made her an amazing role model and dear friend. She was known to all as kind, generous and optimistic; one of the few people in the world who could match Byron's own optimism.

Phyllis was raised on a dairy farm in Schuyler, Nebraska and graduated from the University of Nebraska with a degree in Nursing. She met her love, Byron Demorest, while he was in medical school, and the two married in 1947. She was married to her beloved husband for 63 years. Byron and Phyllis had three children- Kathy, John and Sue—four grandchildren, and 10 great-grandchildren. Her main passion through the years was the lives and joys of their children, for whom she and Byron gave top priority. Phyllis was always there to support her children in their favorite activities including swimming, sailing, and even started competing in 5K races in her 80s with her children when they weren't busy traveling together.



The time and attention Phyllis and Byron gave to their family was no small feat given the extent of Byron's responsibilities as founding chair of the department of ophthalmology at UCDHS and Phyllis's commitment to service as a volunteer with Camp Fire Girls, Fremont Presbyterian Church, the Symphony League, Crocker Art Gallery, The Medical Auxiliary, and Northern Californians for Nebraska. Yet, Phyllis made it happen and was an amazing partner to Byron. In the words of a dear friend, "Phyllis was the remarkable, supportive woman behind Byron, staying always in the

background, manning his office and handling the finances, allowing him to be the prominent man that he was."

Phyllis was the gracious hostess for many "eye wife" functions over the years, which were exceptionally meaningful to one of those very special eye wives. Nancy Keltner, in reflecting on her many fond memories of Phyllis shared, "John and I will be eternally grateful for the loving support and kindness we received from Phyllis and Byron and Ann and Bill Kohl as John navigated the early challenges of being such a young, inexperienced chair." There is not a day that goes

by that Dr. Mannis, Chair of the Eye Center, does not think about Phyllis and Byron and the example they set as true partners in this endeavor who lived each day with the goal to better the lives of others. "What a gift they gave us in this department. Phyllis was an unwavering source of inspiration, and through her efforts, helped Byron and the faculty create a family culture in the department where we care for all as if they are our own."

To honor the legacy of Byron and Phyllis, the department will establish an endowed chair in pediatric ophthalmology at the completion of a \$400K campaign for the remaining funding required to endow a chair at UCDHS. The Byron Demorest Pediatric Fund in the Department of Ophthalmology will allow the department to fulfill its commitment to treat our pediatric ophthalmology patients and recognize extraordinary excellence in patient care, teaching and research.

James Arthur Livingston (1929-2016)

BY: ERIN BAUER



James "Jim" Arthur Livingston, longtime Sacramento educator, civic leader and artist, died May 11, 2016 at his home. Jim is survived by Lyn, his wife of 56 years; four children, Laura, Maria, Frances (Kevin) Leslie, and James; and three grandchildren, Lucas Farrar, Logan Farrar and Emma Leslie.

THE EDUCATOR

Dr. James Arthur Livingston was Professor Emeritus of Education at CSU Sacramento following his retirement in 1992 after a 24-year career on the faculty. His lifelong pursuit of knowledge saw him make his way from a grammar student in a one-room Corwith, Iowa schoolhouse to UC Berkeley where he received his Doctor of Education. Dr. Livingston's career highlights include a two-year USAID posting as consultant to the Brazilian Ministry of Education & Culture in addition to many decades as mentor and advisor to educators throughout Northern California and beyond.

THE CIVIC LEADER

Well respected in the community for his many civic contributions, Jim and Lyn served together on the UC Davis Eye Center Executive Advisory Council



and dedicated a great deal of time and resources to helping advance vision research. Dr. Livingston also served on the San Juan Unified School District Board for three terms, was a member of the Sacramento County Board of Education, the Board of the Carmichael Water District, the Art Access Committee at the Crocker Museum, the Organization of Macular Friends, Swing Club for the Blind, California Eagles, the US Army Reserve, and brother of the Masonic Lodge & Scottish Rite.

Dr. Mannis, chair of the UC Davis Eye Center, is extremely grateful to Jim for his leadership and dedication to the department. "We are all so much the better for having known him," Mannis said. "It goes without saying that Jim was an inspiration to many of us. He bore his health issues, particularly his vision problems, with incredible fortitude and grace, making the very best of what he had been given. We will remember him very fondly and very admirably."

THE ARTIST

Almost eight weeks before Jim passed away, Barbara Arnold, M.D., Jim's art instructor at the Crocker Art Museum, made a touching and meaningful house call on Saturday morning March 5. Dr. Arnold shares:

I wanted to make sure he had finished all the paintings he did in class. He certainly did. Most meaningful from his drawings was a group of birds swimming together on the water, and then a group of birds in the sky far above, and notably a single bird, "that is me," Jim said, noting that he is flying the route between his immediate family and going to meet his ancestors. He said it all in his completed last painting.

Having Jim in all my classes over a period of four years was a remarkable demonstration of determination and progress. He always had a strong resolve to choose what he wanted to paint, and often his choice was a challenging one, different from the rest of the class. Jim knew what he wanted to paint, and wasn't afraid to ask for help. He also practiced at home, drawing scenes from his personal garden. He made cards of his work and sent them to friends and family. Many people appreciated getting one of Jim's personal images in the mail.

Jim even took a class for folks without visual impairments—that is, going above and beyond the class designed for those with visual limitations. Some of the other students challenged Jim verbally asking how he could be visually impaired and yet do as well as the others. I attribute this success to determination and motivation, Jim made bold strokes with his brushes, and I feel this reflects the bold strokes he made throughout his career as an educator and community leader. He was full of aspirations and fully participated in life. His success and determination made him a role model for others. He wore to class an apron he sewed at a class at the Society for the Blind; he was quick to smile and say, "see what I can do." His enthusiasm for life and creativity only spurs me on to continue in the task of teaching painting, and in turn self-expression, to others.

We are incredibly fortunate that Jim was part of the UCDHS Eye Center family, and we will continue to make advancements in vision science research and treatments to honor Jim's legacy.

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Professor, Glaucoma
Research Interests: Glaucoma patient compliance focusing on medication adherence



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Director, Glaucoma Service
Professor, Glaucoma
Research Interests: Nanotechnology for innovation in glaucoma treatments

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Research Interests: Emerging glaucoma surgical techniques, patient education



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Professor, Comprehensive Ophthalmology and Refractive Surgery
Research Interests: Cataract surgery after refractive surgery and new techniques for cataract extraction



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Associate Director, Residency Program
Assistant Professor, Pediatric Ophthalmology and Strabismus
Research Interests: International ophthalmology and curriculum development



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



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Chief of Ophthalmology and Eye Care Division
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Assistant Professor of Ophthalmology
UC Davis Eye Center
Research interests: New models of eye care delivery, Glaucoma surgical advances



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Assistant Professor of Ophthalmology
UC Davis Eye Center
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Esther S. Kim, M.D. Director,
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Professor, Comprehensive
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Research Interests:
Improvement of technology in
cataract surgery



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Cornea, External Disease and
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Research Interests:
Endothelial keratoplasty and
keratoprosthesis surgery



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Improvement of aging eyelids
and the relationship between
the orbit, globe, and trauma



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Research Interests:
New treatment for
age-related macular
degeneration



**Lawrence S. Morse, M.D.,
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Professor, Vitreoretinal
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Interests: Treatment for
diabetic retinopathy and age-
related macular degeneration



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Research Interests:
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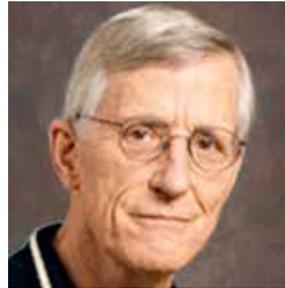
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of retinal ganglion cells
relevant to glaucoma



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Research Interests:
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protein movement



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pigment epithelium



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of aging and age-related eye
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Ophthalmology
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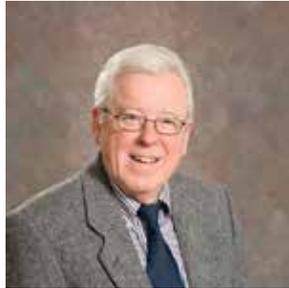
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