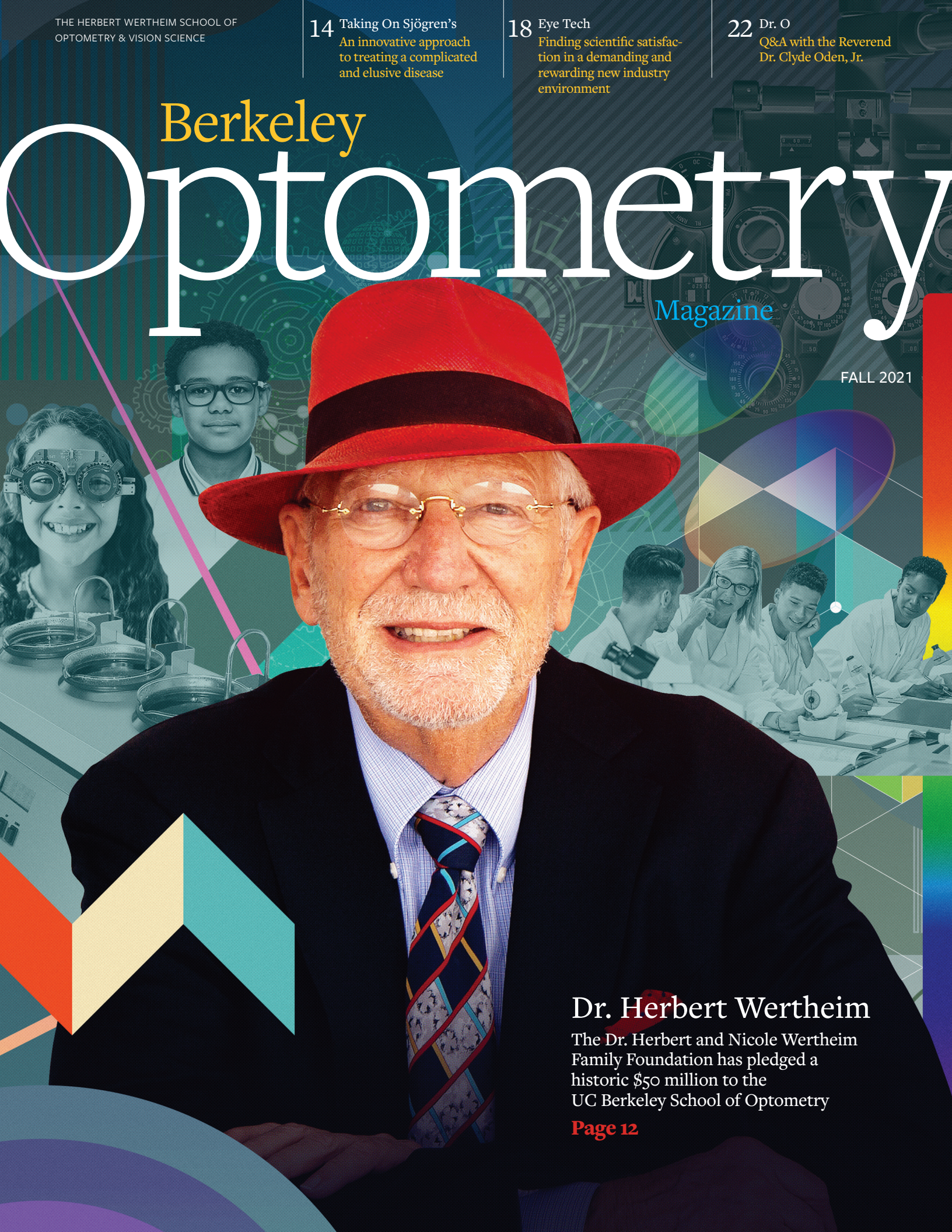
THE HERBERT WERTHEIM SCHOOL OF OPTOMETRY & VISION SCIENCE

Berkeley Optometry

Magazine

FALL 2021



Dr. Herbert Wertheim

The Dr. Herbert and Nicole Wertheim Family Foundation has pledged a historic $50 million to the UC Berkeley School of Optometry

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THE MAGAZINE OF THE HERBERT WERTHEIM
SCHOOL OF OPTOMETRY & VISION SCIENCE
AT THE UNIVERSITY OF CALIFORNIA, BERKELEY

FALL 2021

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Berkeley
UNIVERSITY OF CALIFORNIA

Ava Wu, DDS and Mike Wong, OD,
examine a patient in the Sjögren's Clinic.

PHOTO BY ELENA ZHUKOVA

Features

COVER ILLUSTRATION BY SEAN MCCABE. PHOTO OF DR. WERTHEIM COURTESY OF FLORIDA INTERNATIONAL UNIVERSITY.

Change Agent

Director of DEIB Dr. Ruth Shoge on expanding diversity and cultural competence

This past summer, Dr. Ruth Shoge joined the Herbert Wertheim School of Optometry & Vision Science as Director of Diversity, Equity, Inclusion and Belonging, and Associate Clinical Professor. Before her move from Philly to Berkeley, we caught up with her via email and asked about the challenges — and hopes — for expanding diversity and cultural competence at Berkeley Optometry, and in the profession.

Dr. Ruth Shoge, Associate Clinical Professor, and Director of DEIB

Q: In addition to being an OD, you have a Master's Degree in Public Health with a concentration in Social and Behavioral Science from Temple University. How has this combined experience helped prepare you for taking on the role of DEIB director?

A: At the core of my professional experience is being a clinician and taking care of patients. What led me to pursue an MPH degree was my desire to understand the socio-cultural reasons why minoritized people who experienced a TBI didn't report for clinical care as frequently as their White counterparts. This was especially perplexing since my former clinic was majority Black. During my time at Temple, my interest broadened into wanting to better understand health inequities, particularly in eye care, and learn how to improve health outcomes in underserved and disadvantaged populations. This interest married well with the work I was doing on several DEI committees, including chairing ASCO's Diversity and Cultural Competency Committee. These experiences resulted in the desire to identify ways in which educational communities and doctors in practice could help decrease health disparities and improve outcomes in our communities and practices.

Q: What are your short-term and long-term goals for the School in terms of expanding diversity and cultural competence?

A: My short-term goals include getting to know the people at Berkeley Optometry & Vision Science—understanding the culture of the campus and learning their expectations of my role. I think people may have very different expectations across different departments and I want to ensure that these expectations align with the DEIB strategic plan that we will work together to develop and execute. One particular long-term goal that a few people have expressed is the desire to see more students (and faculty) who identify with historically underrepresented minoritized groups, specifically those who identify as Black, Hispanic, and American Indian, represented more on campus. I think Berkeley Optometry & Vision Science is wonderfully diverse, but I would like to explore ways to improve the matriculation, graduation, and sense of belonging of these specific underrepresented groups.

Q: Why aren't we seeing more students from diverse backgrounds applying to optometry school?

A: For the past year several organizations have spent time analyzing the data and reflecting on this very question. There is a multifactorial response to this question but, from my experience, a lack of exposure to the field of optometry and mentorship I believe continue to be a big reason why we see much fewer people from underrepresented groups applying to optometry school. The good news is that we did see a small but mighty uptick in the number of Black and Hispanic students who applied, 5.96% from 5% for Black students, and 12.63% from 11% for Hispanic students. I think this change represents the cross-organizational efforts made to make applying to OD school more accessible and the field of optometry more fun and meaningful.

Q: What are some ways that schools of optometry can do a better job attracting and graduating students from diverse backgrounds and experiences?

A: I advise that schools commit to the marathon that is required to diversify a student body and workforce. While we want to continue to reach out to those in undergraduate school, our efforts really should extend to those in high school, perhaps even middle school. For example, I knew I wanted to be a doctor when I was 6 years old. I had parents (not doctors) and family friends that helped to nurture that dream and get me involved in the right courses and extracurricular activities. It was in high school that I decided I wanted to go into optometry after having an eye exam and subsequently shadowing a local optometrist in my town. If we begin the process of mentoring and nurturing a 14 or 15 year old, we will have to wait at least 8 years before they apply to optometry school and at least 12 before they graduate. This journey is a marathon, not a sprint, and our leaders need to continue to invest the time, money, and human resources into this endeavor.

Q: In your DEIB workshop, you said that in the context of optometry, the broadest goal in diversity and inclusion is to make sure individuals who live in underserved communities receive care. What is the connection between a diverse cohort of optometry students, faculty and staff, and reducing health disparities in the communities we serve?

A: Making sure that we have a diverse workforce is a key component in making sure we have healthy communities, and our student bodies will eventually be our workforce. Concordance, or some shared cultural, social, or linguistic identity between a patient and provider, has been shown to improve the likelihood that a patient will seek care in the first place, trust their doctor, adhere to treatment protocols and follow up care, and maybe even encourage and bring their family, friends, and neighbors with them. That is why this is so important. Having a diverse faculty and staff typically increases the likelihood that minority groups will feel like they belong and are included in the campus culture.

Q: Efforts to increase diversity and cultural competency are not new. There is still much work to do. How can we, as a community, ensure that the momentum of the past year does not dissipate?

A: We need to keep each other accountable. There have been a lot of ideas and initiatives this past year, which has been great! But I want to make sure we have that same energy 3, 5, 10 years from now. And we need our leaders and community and corporate partners to continue to invest their time and resources into this journey.

DEAN'S MESSAGE

Inspirational Multiplication

Thinking back to the momentous year we've lived through and look forward to the year ahead, I am struck by the people and their stories that are featured in our magazine. We are inspired by the life works of alumnus Dr. Clyde Oden, the pioneering clinical work of Dr. Nancy McNamara and her colleagues in the Sjögren's clinic, the extraordinary influence of our vision science graduates and, of course, the astonishing life of our benefactor Dr. Herbert Wertheim.

As I look through the magazine and consider the extraordinary works being performed throughout our school and by our alums, a theme comes to mind, "Inspirational Multiplication." Why multiplication? Dr. Wertheim speaks about the importance of the multiplication factor. The idea that his investment will inspire each and every one of us to greater achievements; or to use a Berkeley phrase, to serve as "change makers." The Eye Tech story illuminates the power of Berkeley's multiplication factor. Our amazing vision science graduates are truly changing our world by bringing their expert understanding of the human visual system to industries ranging from Facebook Reality Lab's work in AR, to gene therapy at Scribe Therapeutics, co-founded by UC Berkeley biochemist Jennifer Doudna, winner of the Nobel Prize.

Dr. Wertheim enthuses that his investment in Berkeley Optometry and Vision Science is in part inspired by the "fire" he sees in "people from Berkeley." As a relative newcomer to Berkeley, I agree. Look at our history — our legacy overflows with greatness, with change makers, with people who have inspired those around them. Berkeley faculty have inspired our profession, and are excellent examples of inspirational multiplication. And of course, there are few greater examples in our history than our beloved former Dean Tony Adams, whose life we recently celebrated.

Looking to our future Dr. Ruth Shoge, our Director of Diversity, Equity, Inclusion and Belonging, inspires us as she describes the challenges — and hopes — for expanding diversity and cultural competence at our school, and in the profession. While Dr. Shoge's impact is already being felt, we know that our collective journey is, as she explains in her interview, "a marathon, not a sprint, and our [school] leaders need to continue to invest the time, money, and human resources into this endeavor." We agree, and look forward to the multiplication effect of Ruth's leadership.

The article on our Sjögren's Clinic, which offers a multidisciplinary approach to the scourge of this devastating autoimmune disease, is a prime example of the multiplication factor that drew the Wertheim Foundation to Berkeley. The three doctors in this clinic are the definition of change-makers, as they provide long-suffering and often ignored patients an ally in the quest to treat a complicated and elusive disease. This same dedication to patient care is the bedrock of all our clinics — a fact not lost on the Wertheims. On their visit to our campus this fall, the Wertheims met with our multi-talented clinic chiefs. Each chief took their turn to explain the scope and care their clinics provide. It was powerful and uplifting, and I have rarely felt more proud to be Berkeley's Dean. The day-to-day work of our clinic, like the research we highlighted so eloquently during the Brilliance of Berkeley* lectures, truly represents the promise of our collective Inspirational Multiplication.

Our feature cover story highlights the Wertheim's dynamic spirit and celebrates their landmark generosity to our school and our profession. I'm delighted to introduce you to Herbie's astonishing story, and his vision for the future of the profession. Together we have the awesome responsibility to use the gift to carefully lay the foundation for the next 100 years of optometry and vision science at Berkeley. For the front cover, we partnered with artist Sean McCabe to create a bold and vibrant illustration that reflects Dr. Wertheim's strength, spirit and commitment to children's vision and public education. We are proud that our faculty and our alumni share the Wertheim's commitment to "make life better on earth." Dr. Clyde Oden, as you will read in his Q&A, is clear about where he found the fire that drives his commitment. "Attending Cal in the '60s amid the student movements, the civil rights and anti-war movements caused a shift in my worldview. By the time I left Cal, it was no longer about 'me' but rather about 'we'.... I left Berkeley with a determination to be part of the solution addressing health disparities in low-income communities." I challenge every one of you to channel your personal Berkeley fire, and to effect Inspirational Multiplication!

—John G Flanagan

**Special thanks to Kristen Williams and the DAR team for leading the Celebration of Berkeley Optometry, and a special shout out to Ciel Mahoney and Kristen. Four years ago Ciel made a cold call to Dr. Wertheim and started a series of events that are already legendary, and resulted in the largest ever naming gift at Berkeley from a donor without any previous connection to the campus. Kristen brilliantly steered the negotiations through their many twists and turns. Thank you.*

Optometry Faculty Assist Vaccination Efforts

As UC Berkeley's general community returned to in-person work this Fall, Berkeley Optometry's faculty assisted in the effort to vaccinate students, staff and faculty. This summer, the President of the University of California, Dr. Michael Drake, announced that everyone returning to campus in the fall would be required, with rare exceptions, to be vaccinated against COVID-19. As part of the effort, Berkeley Optometry's clinical faculty, including Drs. Kuniyoshi Kanai, Anne Tasaki, Meredith Whiteside, and Kerri Yoshiyama, vaccinated members of the UC Berkeley campus community.

In an effort to ensure that clinical faculty could provide patient care in alignment with the expanding scope of optometric practice in the state of California, Berkeley's clinic administration, under the leadership of Associate Dean Dr. Chris Wilmer, sponsored the first group of faculty members to participate in immunization certification. This certification process began over two years ago when Drs. Kanai, Tasaki, Whiteside, and Yoshiyama completed the Pharmacy-Based Immunization Delivery Course — the same coursework completed by pharmacists to administer immunizations. The program required self-study coursework, in-person classwork as well as a skills assessment. "When we began the pharmacy course, I never thought that we would use these skills as part of the public health effort to mitigate a pandemic" said Dr. Whiteside, "but to get everyone vaccinated, we need an all-hands-on-deck approach." Additional training was also required; participating faculty completed a training through the California Department of Public Health, as well as training required for University Health Services (UHS) staff. "This effort highlights the continued close collaboration between the UC Berkeley Optometry Clinic and UHS. The strength of the partnership not only kept our patients, staff, and clinicians safe in the early days of the pandemic lockdown, when our eye clinics remained open for urgent care, but also allowed us to contribute to the vaccination efforts that helped the campus and City of Berkeley achieve some of the highest COVID-19 vaccination rates in the country," said Dr. Yoshiyama. "It's really nice to be able to support one another and our shared community. We're grateful for our partnership."

Berkeley Optometry currently teaches students coursework and skills related to injections as it relates to eye care but future coursework will be expanded to include vaccinations. Dr. Kanai attests, "Once you have mastered the basic understanding and skills through training, the vaccination procedure itself is achievable for optometrists in a variety of clinical settings." Dr. Tasaki agrees, and adds: "It's rewarding to be a part of the public health effort to get people vaccinated and to keep our campus and community safe."

>OVERHEARD "Remember to breathe and take it day by day. Optometry school was definitely the most difficult 4 years of my life, but also the most that I have grown and learned as an individual. There will be times that you may feel discouraged and overwhelmed, but keep in mind that you are not alone and that you have tons of classmates and faculty that are there to help you and support you! I definitely had my fair share of attending office hours and additional lab practice time. Make sure to prioritize self-care and ask for help when you need it. Be proactive and try your best to stay positive!"
AMANDA DIEU, OD 2020

Farewell, But Not Goodbye

Wishing a happy retirement to the eleven distinguished faculty members who are retiring this year. Together, they represent a whopping 367 years of service to the school! They will be missed, but not forgotten.

MARTY BANKS *"In addition to being a world-class vision scientist, Marty is a world-class friend, colleague, and story-teller. One of the great joys of knowing Marty for over a decade is enjoying the evolution of his stories: the bike rides get a little longer, the hills get a little steeper, and the weather gets a little more extreme. The best stories are those that start with "Oh man, this is a great story... and this one is actually true."* **By Hany Farid**

JOHN CORZINE *"John, it has been an honor and a privilege to have been your student and colleague. Thank you for supporting me as I applied for contact lens residencies and for entrusting me with the 2nd year CL course. You are someone I truly look up to, both literally and figuratively :)! You will surely be missed around the school, and I know your legacy will carry on through the many people you have influenced here. Cheers to your well earned retirement!"*
By Pam Satjawatcharaphong

BOB DISTER *"To say Bob Dister is one of a kind is an understatement. The man does it all — degrees in geology, zoology, law, and optometry, residency in contact lenses, clinical teaching in low vision, didactic teaching in binocular vision, ice skating, golf, trivia! Who other than Bob could receive the Merton Flom Teaching Award from his own class?"* **By John Corzine**

SARAH FISHER *"Dr. Fisher, your legacy is 25 years of providing excellent vision care to pediatric patients, co-mentoring residents, teaching OD students retinoscopy for astigmatism and more, coordinating UCBEST, and commiserating with me over lunch. Enjoy the "quiet." Hugs, Dr. Deb."* **By Deb Orel-Bixler**

DENNIS FONG *"Dr. Fong is an unsung hero. He deserves so much more credit for elevating pre-clinic education and helping clinical interns who needed more time to develop."* **By Glen Ozawa**

CHESLYN GAN *"Cheslyn, I will certainly miss having you around in the contact lens lab. I appreciated your sense of humor and advice regarding the course and expectations of students — thanks for keeping it real ;) Also, thank you for sharing your other talent with us and supplying delicious baked goods. Enjoy your retirement!"* **By Pam Satjawatcharaphong**

"He's an internationally renowned scientist who is also humble and human. Maybe that's why he's such an inspiring teacher, too? When he teaches us something, he connects with us as students and we understand it. And then we think...if Marty can make all those discoveries, maybe we can too."
Emily Cooper on Marty Banks

MICHELLE HOFF *"To my sidekick, partner in crime, other half of the OO duo, it's been an amazing 25+ years! Thanks so much for being part of the OO Team. Through labs, team care, VSP field trips, proficiency exams, lab Zoom sessions, you were an amazing supportive colleague and for that 'we have got it down!' But who could do it better: do the lenses magnify or minify; are the lenses spherical or sphero-cylindrical; are the 2 lenses equal in power or unequal; are the lenses single vision, multifocal, progressive; do the lenses appear to have prism? Thank you so much for caring that the students learn clinical optics."* **By George Lee**

NICK KERRY *"Dr. Kerry is a class act. He made teaching and learning fun. Students, faculty, staff and patients all loved him for his energy, positivity and kindness."* **By Kathy Tran**

JEFF KO *"Dr. Jeff Ko was loved by his patients, who were loyal to him and his private practice emphasis within our larger clinic. Jeff began what became known as 'Ko Clinic' back in the early 90s with the intention of exposing interns to a doctor driven exam. I had the personal honor of training with him as an intern and to this day use some of the pearls he taught me when teaching my own students."* **By Chris Wilmer**

GUNILLA HAEGERSTROM-PORTNOY *"There is no person who has influenced Berkeley Optometry more over the past 50 years, or has been more dedicated to driving our agenda of excellence. Gunilla is a brilliant administrator, an exemplary academic, a visionary of the highest order and the constant that has allowed others to shine around her, always without fuss and without ego. Gunilla has a wicked sense of humor accompanied by a healthy dose of skepticism, both essential qualities to survive UCB. When I arrived as Dean, Gunilla promised me one more year as Associate Dean, she gave me seven. I will be forever grateful for her friendship and guidance."* **By John Flanagan**

BARRY WINSTON *"I have known Dr. Winston for eons and taught with him for many years. He is a great clinician and teacher. I could always count on him being in clinic in the morning as he gets up around 5:30 AM and comes to the clinic really early. I had to remind him clinic starts at 8:30 AM. Arriving for clinic early allowed him to read a week's worth of papers which he had picked up from coffee shops, gyms or wherever else he had been. I think his greatest contribution to the clinic was planning the end-of-session potluck lunch."*
By Dennis Burger

Top 10

Works of Art Featuring Eyes or Vision

Artists have long been drawn to the eyes. And for good reason. Eyes are often associated with focus, truth, clarity, light, vision, prophecy, awareness, and observation — and so are a perfect symbol for artists striving to evoke imagery that surfaces these concepts to the conscious mind.

1> The False Mirror
by René Magritte, 1929

Magritte and other surrealists working in the aftermath of World War I were fascinated by the eye, and saw it as a portal "between inner, subjective self and the external world." The visual artist Man Ray, also a surrealist, once owned Magritte's *False Mirror*, and is said to have described it as "a painting that sees as much as it itself is seen."

2 Swayambhunath Stupa
Kathmandu, 460 AD

Also known as the "Monkey Temple," the Swayambhunath Stupa is one of the holiest Buddhist sites in Nepal. Each day, hundreds of pilgrims begin a series of clockwise circumambulations of the stupa. The eyes are said to represent wisdom and compassion. Above the eyes is a third eye, from which, it is said, cosmic rays emanate when Buddha preaches, carrying a message to "heavenly beings so that those interested can come down to earth to listen to the Buddha."

3 Eye
by M.C. Escher, 1946

One of the most famous graphic artists in the world, Escher drew this image of his own eye while looking at it through a convex shaving mirror. Of the drawing Escher wrote, "As the viewer always sees himself in the eye he is looking into, I decided to show a skull reflected in it...because we are all forced to look at Death, whether we like it or not. Or he looks at us."

4 The Japanese Footbridge
by Claude Monet, 1922

Monet, diagnosed with cataracts in 1912, initially refused to undergo surgery. Over time, his ability to see critical detail was reduced, and his paintings — such *The Japanese Footbridge* — took on a more muted, brown hue devoid of the vibrant use of color found in his earlier work. Eventually, Monet had cataract surgery, and over time his sense of color returned.

5 De la Conquista a 1930
by Diego Rivera, 1929-1935

Celebrated artist Diego Rivera, one of the most important muralists of Mexico, painted a vast mural at the Palacio Nacional in Mexico City that describes the history of Mexico. In this section of the mural, we see the Viceroy Luís de Velasco, who was an emissary sent by the Spanish king to rule over Mexico in the late 1500s. Velasco, pictured in the center, is thought to be the first person on the American continent with eyeglasses.

6 Eye of Horus
Tomb of Sennedjem, ca. 1250 BC

Located on the West Bank of the Nile, lies the tomb of a local artisan named Sennedjem. The walls of his tomb, like that of many artisans from the area, are adorned with mythological symbols. The Egyptian sky god Horus is the son of Isis and Osiris; his eye — The Eye of Horus — is a symbol for well-being, healing, and protection.

7 The Eye
Salvador Dalí, 1945

Filmmaker Alfred Hitchcock commissioned Spanish surrealist Salvador Dalí to create a series of paintings for the psychological thriller, *Spellbound*, starring Ingrid Bergman and Gregory Peck. The paintings were used during a dream sequence where Gregory Peck's character describes being in a gambling house that had curtains adorned with eyes, which were then cut with a giant pair of scissors. Spooky!

8 The Old Guitarist
by Pablo Picasso, 1903

The deeply shadowed eyes of the blind guitar player are typical of Picasso's Blue Period, which began after he learned of the death of a dear friend. As Picasso's depression deepened, his paintings took on somber blue tones, and many of his subjects depicted "the miseries of the poor, the ill and those cast out of society." Art historians believe that Picasso may have also been influenced by the literature of the Symbolist movement, which included "blind characters who possessed powers of inner vision."

9 Charcoal and Ink Eyes
by Bryce Olson, 2020

No top ten list would be complete without an entry from one of our talented students! This charcoal and ink drawing by 2nd year student Bryce Olson was created for the California Optometric Association to celebrate 2020. There wasn't much to celebrate that year after all, but we think this piece is beautiful! For models, Bryce used friends, family members, optometry students, and Dr. Ron Seger of the COA.

10 C-Stunners
by Cyrus Kabiru, 2013

"I really love trash," says Cyrus Kabiru, a painter and sculptor living in Nairobi, Kenya. "I try to give trash a second chance." *C-Stunners* is a collection of eyewear fashioned from mostly electronic waste. Each frame is cleverly named with reference to its previous life. A salvaged set of speakers is "Big Mouth," a desktop computer became "The Fatherboard."

Through Our Eyes

Experience the life and times of Berkeley Optometry students through their (smartphone) lens!

Send your images to us at optweb@berkeley.edu

Anjali Paramanandam | CLASS OF 2023

"Showcasing some Berkeley spirit for Quiz Bowl at Optometry's Meeting 2021 in Denver, Colorado!"

Micah Isabel Sarmiento | CLASS OF 2022

"Visiting Glacier National Park while on my externship rotation at Crow Indian Hospital in Montana."

Sophia Moh | CLASS OF 2022

"The summer where we went paddle boarding in Lake Tahoe"

Iris Yeh | CLASS OF 2024

"Enjoyed the sunset after all the midterms next to Berkeley beach."

Peter Ji | CLASS OF 2023

"The best team one could ask for to run a club together! –VDC 2020-2021"

Kellie Melton | CLASS OF 2023

"Enjoying the blossoms on campus with our opto family line"

Estie Sherbak | CLASS OF 2024

"Said goodbye to our scrubs and aloha to Hawaii on our spring break adventure!"

Quynh Nguyen | CLASS OF 2022

"Cradled by my staples at Crater Lake"

QuickFacts

A look at the class of 2025: who they are, where they come from and how they got here.

Class of 2025

Applicants

307
Applications

183
Interviews

70
Students matriculated

Academics

2.99–4.0
Overall GPA range

3.46
Average GPA in Bio, Chem & Physics

3.7
Average GPA in undergrad

349
Average Score on the OAT

Student Profile

22
Out-of-State

48
California

18-31
Age Range

22
Number of students who entered directly from undergrad

48
Number of students who took at least a year off

13
Opto-Camp alumni

Undergraduate Institutions

ALCORN STATE UNIVERSITY
ARIZONA STATE UNIVERSITY
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
CALIFORNIA STATE UNIVERSITY - EAST BAY
CALIFORNIA STATE UNIVERSITY - FULLERTON
CLEMSON UNIVERSITY
MCGILL UNIVERSITY - MONTREAL
OHIO STATE UNIVERSITY
RICE UNIVERSITY
ROWAN UNIVERSITY
SAN DIEGO STATE UNIVERSITY
SAN FRANCISCO STATE UNIVERSITY
STANFORD UNIVERSITY
UNIVERSITY OF CALIFORNIA - BERKELEY
UNIVERSITY OF CALIFORNIA - DAVIS
UNIVERSITY OF CALIFORNIA - IRVINE
UNIVERSITY OF CALIFORNIA - LOS ANGELES
UNIVERSITY OF CALIFORNIA - RIVERSIDE
UNIVERSITY OF CALIFORNIA - SAN DIEGO
UNIVERSITY OF CALIFORNIA - SANTA CRUZ
UNIVERSITY OF FLORIDA
UNIVERSITY OF REDLANDS
UNIVERSITY OF SOUTHERN CALIFORNIA
UNIVERSITY OF DALLAS
UNIVERSITY OF TEXAS - DALLAS
UNIVERSITY OF TORONTO
UNIVERSITY OF UTAH
UNIVERSITY OF WASHINGTON
WICHITA STATE UNIVERSITY

PHOTO BY PAUL BARNETT

Dr. Herbert and Nicole Wertheim at their home in San Diego.

Dr. Herbert Wertheim:

Making Life on Earth Better, One Pair of Eyes at a Time

BY ELIZABETH COSTELLO

Herbie Wertheim is hard to miss, and not just because of the red fedora that is his signature look. He has worn many hats — engineer, scientist, clinician, researcher, inventor, entrepreneur, educator, philanthropist, and health care and university leader. With an extraordinary $50 million gift — the largest to any school of optometry in the country — Dr. Wertheim and his wife Nicole have laid the foundation for a new era in vision research and clinical service at Berkeley and beyond. The gift is the seed of a ten-year, $100 million investment in optometry that will expand the school's offerings and position the profession as a central contributor in the healthcare sphere. To honor this extraordinary gift, the school has been named the Herbert Wertheim School of Optometry and Vision Science.

"Dr. Wertheim cares deeply about elevating and expanding the field of optometry as a key part of primary health care," says Dean John Flanagan, remarking on the scope of the gift, which supports a new optometry satellite campus for clinical teaching and professional education, children's vision and vision science initiatives, two endowed faculty chairs, and scholarships for students pursuing an OD or a PhD. "His investment reflects the shared vision for an imperative to train the next generation of optometric physicians to serve as health care leaders."

Warm and gregarious by nature, Dr. Wertheim is clearly enthusiastic about advancing optometry as a field, a practice, and a public health offering. An undiagnosed dyslexic in his youth, he has had a lifelong fascination with the way the human brain takes in and processes information. A polymath trained in chemistry, physics, computer programming, and electrical engineering, Dr. Wertheim has led an unusual life driven by a deep curiosity about the greatest computer of all — the human brain.

"What is my interest in optometry? It's basically what I call visual neurology," says Dr. Wertheim, framing his interest as a series of questions. "How does one transfer information to the brain, where it's interpreted as information rather than optical signals?"

Throughout his extraordinary life, Dr. Wertheim has been interested in the mechanisms in the brain that inform our sense of sight. From his humble beginnings as a high school dropout hunting frogs and snakes in Florida swamps, he built a career that includes serving as an engineer at NASA working with the team that launched America's first astronauts into space in the early 60's, teaching and leading academic institutions, and creating technologies that have saved countless people from debilitating eye disease. More than 40 years ago, through his own clinical practice, Dr. Wertheim discovered the dangers of UV and blue light and developed products that have helped prevent cataracts and macular degeneration for countless numbers of people.

While his research — and the more than 100 patents and trademarks it has yielded — is a foundation of his wealth, his career has always been grounded in a sense of duty to the greater good. He and his wife Nicole have emphasized the role of public education to support "Making Life on Earth Better," the Wertheim Foundation's motto for more than 44 years.

Dr. Wertheim's degrees and academic service include an OD from Southern College of Optometry, and work as a distinguished lecturer at Bascom Palmer Eye Institute and as an adjunct professor of physics at the University of Miami, Florida. Working in his own clinical practice, he specialized in visual neurology and optometry at the University Eye and Medical Center in Coral Gables, Florida.

While Wertheim's deep philanthropic commitment to public education reflects his success as a teacher, researcher, and inventor, his own educational beginnings were less than auspicious. The son of Jewish immigrants, he was born when the effects of the Great Depression were still being felt across the country and his own family struggled financially. Coupled with his dyslexia, a difficult home life interfered with his early traditional education. His response was to seek experience in the outside world, connecting with people from backgrounds very different from his own and learning by doing.

As a young person, he started working early, pumping gas, picking citrus fruit, selling frogs' legs with members of the Seminole Tribe who lived in the area, and hunting duck eggs to feed himself. He got in trouble and was sent before a judge, who he credits with seeing potential in him. He was then 16, and the judge gave him the choice of going to reform school or joining the Navy. The day he turned 17 he was sworn in, thus setting the course for his career.

Wertheim credits his time in the Navy — where he trained in physics, mathematics, chemistry, electronics, and avionics — with connecting him to his potential for problem-solving and research, and ultimately training him as an engineer and aviator. After the Navy, he became an engineer at NASA. During his time working for NASA at Cape Canaveral, Wertheim turned his initial interest in human vision and optometry into a career path.

"I worked with John Glenn and other original astronauts," says Wertheim, noting that problem-solving for astronautical instrumentation fed his profound curiosity about the programming language of the brain. "I became very interested in the part of the brain that had to do with just how the vision system worked. As a result of that interest, I decided I wanted to go to optometry school. At that time optometry was an outgrowth of physics. My electrical engineering background was rooted in physics and so it all fit very well."

He left NASA to pursue his OD at the Southern College of Optometry in Memphis, Tennessee, and obtained his degree in 1967. Subsequently, he pursued his own clinical practice, specializing in visual neurology and optometry. As a researcher at the University of Miami Bascom Eye Institute, he helped to reveal the dangers of ultraviolet light and the importance of protecting the eye with UV filters. These investigations ultimately led him to develop chemical tints and other technologies that have had a tremendous impact on public health by preventing cataracts, macular degeneration, and other eye diseases. Discovering the chemicals that enable the tints to block harmful UV rays right at the moment when plastic lenses, which are much more malleable and responsive to the dyes than glass, were becoming commonplace meant that he was able to have an immediate and profound impact on eye care.

In 1971, Wertheim founded Brain Power Incorporated (BPI), and after years of research the company introduced the ultraviolet-absorbing dyes that have since protected thousands of pairs of eyes. BPI remains at the forefront of the field, and through it, Dr. Wertheim established himself as an entrepreneur as well as a scientist.

In every aspect of his career, Wertheim has remained engaged with and interested in the role that good vision can play in cultivating a life well lived. Recognizing that healthy eyes are critical for success inside and outside the classroom, he and Nicole designated a portion of their gift to support pediatric eye care. Their interest in supporting healthy vision in young people is motivated by their experience as parents as well as in Dr. Wertheim's work as a clinician. One of the Wertheims' daughters was born prematurely and one of their granddaughters developed type 1 diabetes at age seven — she is now 14 and her illness is well controlled. Both of these medical conditions can have negative long-term effects on vision. With early optometric interventions, both children developed excellent vision. The gift includes funds to support a pediatric eye care model clinic at Berkeley, as well as the establishment of Berkeley Vision CURE, a national and international initiative that aims to provide eyeglasses to every child in need of them. The endowed Nicole Wertheim Chancellor's Chair in Pediatric Optometry will ensure that a top faculty member has the resources they need to pursue research in this critical area.

"In every aspect of his career, Dr. Wertheim has remained engaged with and interested in the role that good vision can play in cultivating a life well lived."

As a philanthropist, Wertheim found public education to be the best vessel for expressing his wide-ranging interests. He says he always looks for the "multiplication factor" in his giving, asking himself what kind of support can generate collateral benefits and long-term positive change. The Wertheims' initial efforts to support public education focused on their home state of Florida, where they have long been involved with Florida International University. Dr. Wertheim has served as a trustee at FIU for 30 years, and the Wertheim name graces University of Florida colleges and laboratories focused on engineering, medicine, and nursing, as well as a 1,000-seat performing arts complex. In 2018, the Wertheims brought their interest in invigorating the health sciences as a public good to UC San Diego, establishing the Herbert Wertheim School of Public Health and Human Longevity Science. Establishing new vision science and optometry programming and support at Berkeley seemed like a logical next step.

"Everybody I've known who's graduated from Berkeley has been a multiplication factor," Wertheim says. "They've all done great things, so why would you not want to be associated with those kinds of people? I'm not an alumnus, but I hope to be able to produce lots of well-trained optometric alumni."

Wertheim's gift will provide game-changing resources for established vision scientists and budding optometrists. For those considering graduate school in these areas, new resources can make the critical difference that leads to vital new careers.

"The Wertheim gift actually doubles the number of graduate students we can bring on," says Rowland Taylor, a professor of optometry and vision science, noting that grant-based funding tends to constrain that number. Clearly, there is a distinct multiplication factor at work.

Christina Wilmer, associate dean for clinical affairs, concurs. "This gift is truly a game-changer," she says, noting that the broad support provided by the Wertheims will play a key role in sustaining clinical work as well as making critical contributions to vision science.

Herbie and Nicole Wertheim are proud signers of the Giving Pledge established by Bill and Melinda Gates and Warren Buffet. They are deeply dedicated to having a lasting impact on the world. Dr. Wertheim's long and winding road in life helped him to cultivate an extraordinary array of skills and to become a powerhouse as a scientist, clinician, and businessman. Establishing the Herbert and Nicole Wertheim School of Optometry and Vision Science is but the next step in an extraordinary life of invention, creativity, and curiosity.

Nancy Carteron, MD, Nancy McNamara, OD, PhD, and Ava Wu, DDS at the Sjögren's Clinic on the UC Berkeley campus.

PHOTO BY ELENA ZHUKOVA

Taking On Sjögren's Syndrome

An innovative approach to treating a complicated and elusive disease

BY ZAC UNGER

Frances Van Loo wasn't feeling well. An academic who earned a PhD in economics and a faculty position at UC Berkeley's Haas School of Business in the 1970s — when women were a rarity in the field — Van Loo wasn't accustomed to feeling lethargic. Her primary care physician noticed her continuously low platelet count and sent her to a hematologist. "He told me that I had bone marrow cancer," she recalls, "but that I didn't need to worry about it because it was moving very slowly." Needless to say, that wasn't much of a reassurance. Then he left to do research and tossed her to another doctor. The second hematologist rejected the cancer diagnosis but he also sent her to a liver specialist and to a neurologist. The neurologist treated her with monthly 3-hour infusions for over a year, which did no good whatsoever. By this point, Van Loo's symptoms also included severely dry eyes and dental problems associated with an inability to produce adequate saliva.

"I was having symptoms for five years, and probably more like eight to ten," she recalls. Eventually Van Loo landed in the office of Dr. Nancy McNamara, currently a Professor and Associate Dean for Academic Affairs at the Herbert Wertheim School of Optometry & Vision Science at UC Berkeley. McNamara, a specialist in dry eye, confirmed what so many other doctors had missed. Van Loo wasn't suffering from cancer or liver failure or any of the other theories that had been proposed. Instead, what Van Loo had was Sjögren's Syndrome, an autoimmune disorder that often first manifests with dry eyes, but that can grow to include any number of additional symptoms and bodily systems.

McNamara, Chief of the Sjögren's Clinic, says that Van Loo's experience is not unusual. "Quite honestly, the typical patient is a middle-aged woman," McNamara says. "And they

come to a doctor and say 'I'm feeling tired, I'm kind of achy, my eyes are dry, and my mouth is dry.' And oftentimes they just get told 'Oh you're just getting older and things tend to dry out so you're just going to feel more fatigued.' And then they get a pat on the head and sent off and nobody really takes the time to figure it out."

Despite the all too common brush-off, Sjögren's is very real. In fact, it affects more than four million people in the United States, approximately ninety percent of whom are women. Probably the most famous sufferer is tennis star Venus Williams. Williams withdrew from the 2011 US Open because of extreme fatigue. At one point she was the top-ranked player in the world but undiagnosed Sjögren's caused her to fall so far that she was no longer even in the top one hundred players. Even with access to the world's best doctors, it took seven years of struggle before Williams was accurately diagnosed. This isn't unusual, says Dr. McNamara. "Historically, it takes five to seven years for Sjögren's to get diagnosed, because clinicians often don't know how to recognize it."

Sjögren's is an autoimmune disorder which, among other things, wreaks havoc on the body's ability to generate moisture. This is why many patients' first experience of the disease is keratoconjunctivitis sicca, or dry eyes. People often fight the disease unsuccessfully by themselves for years, changing contact lens solutions or using over-the-counter eye drops. Xerostomia, or dry mouth, is another common early symptom. Simply drinking water throughout the day isn't effective and the lack of constant salivary flushing provides an ideal environment for cavity-causing bacteria and the periodontal disease, cavities, and soft tissue infections that follow.

"Despite the all too common brush-off, Sjögren's is very real. It affects more than four million people in the United States."

While dry eyes and dry mouth are often the first symptoms, the disease can take many forms. "Basically as we currently understand Sjögren's, it's an autoimmune process," says Dr. Nancy Carteron, a rheumatologist who works at the Sjögren's Clinic. "The body isn't supposed to react to its own cells, but something happens here and it does." The hallmark of Sjögren's is a faulty lymphocyte, an immune cell that circulates in the blood after having been created in the bone marrow. These lymphocytes primarily impact glands, which are found throughout the body and in most major organ systems. Sjögren's sufferers can experience joint pain, as with rheumatoid arthritis. Up to sixty percent of patients have some sort of lung involvement and some even have inflammation of the heart muscle, leading to pulmonary hypertension. Even the nervous system can be a key component, causing peripheral neuropathy or numbness of the face. The list of potential symptoms goes on and on, affecting fertility, digestion and, says Carteron, "women who have one of the antibodies seen in Sjögren's can actually have those pass the placenta and, in a small number of patients, these can go to the baby's heart and cause myocarditis or congenital heart block."

Fortunately, patients suffering from the constellation of symptoms that make up Sjögren's Syndrome have an ally in Dr. McNamara and the Sjögren's Clinic. In operation since 2019, the clinic takes an innovative approach to treating a complicated and elusive disease. Having established a dry eye clinic at Berkeley's Herbert Wertheim School of Optometry and Vision Science, McNamara found herself with an ever-expanding roster of people with Sjögren's. "And at that point, I thought, 'Wow we have all these patients with Sjögren's and we're doing this piecemeal.' I would send them to UCSF to see Ava Wu [a dentist] and then they'd need a rheumatologist so I'd send them over to Nancy Carteron. But it was three different clinics, three different clinicians, and the patients had to wait for an appointment at all three. And then the communication..." McNamara continues, sounding frustrated at even the memory of how difficult it was to interact with off-site doctors. "We'd send letters to each other, but it just doesn't work very well for these patients who have what is really a very debilitating disease. It's disabling in many ways because they can't work, or they can't read, or they have trouble going outside for a walk because of the wind."

For patients experiencing so much difficulty simply accomplishing the tasks of daily life, it was nearly impossible to make their way to three different offices, navigate three different medical bureaucracies, and then try to get three different doctors to communicate with one another on a common course of treatment. "Sometimes we can solve the problem in a single visit," says McNamara, "or at least get the patient the information they need in one visit versus having them travel all over to different providers to figure it out."

The Sjögren's Clinic condenses all of that chaotic running around into a single, smooth experience. Dr. McNamara joined forces with Dr. Nancy Carteron (the rheumatologist) and Dr. Ava Wu (the dentist), and patients are now able to see all three doctors at the same place and on the same day. "We have different exam rooms, because we all have different procedures and examinations and equipment," Dr. McNamara says, describing the idea behind the comprehensive clinic. "And then the patients can rotate from room to room. But we're all in the same clinic, on the same hallway, with rooms right next to each other." Patients will typically come for the better part of a day, spending thirty minutes or an hour with each of the doctors in turn. "I'll be in the waiting room," says Frances Van Loo, who has been a patient at the clinic since graduate school, "and I'll hear people talking about driving home to Fresno or places even farther away than that." The one-stop shopping of the Sjögren's Clinic undoubtedly makes it possible to provide treatment to people who might not otherwise be able to manage multiple trips.

The value of the all-in-one clinic goes far beyond just convenience for patients. After the patient exams are done, the three doctors sit down together for a "multidisciplinary conference" and discuss their patients one by one. "We present the findings of the day," says McNamara. "We're getting the whole systemic health history from the rheumatology visit, we're getting all the history and findings from the oral medicine specialist, and all the results of the eye exam. And we can bring that all together and come up with integrated recommendations for the patient." Dr. Carteron, the rheumatologist, recalls the days when she'd have to go back and forth with other doctors, often missing the chance to have an in-depth conversation. But at the Sjögren's Clinic, she says, "I'm able to have discussions in real time, rather than just relying on a note. And the immediate access to experts in eye and dental care helps me make a diagnosis, sometimes to exclude Sjögren's as a possibility."

PHOTO: AP

Tennis champion Venus Williams is one of the most well-known sufferers of Sjögren's Syndrome.

And, crucially, combining the visits allows the doctors to begin to treat the disease immediately and in a coordinated fashion. "There are a lot of rheumatologists who don't know that you can have significant corneal damage from Sjögren's even without having the patient complain about dry eyes," says Carteron. "So unless they're seeing the right eye doctor who does the right testing and the full staining, that person could end up with damage before the appropriate diagnosis gets made." Designing a system to prevent future problems for patients saves money, saves healthcare resources, and alleviates needless suffering.

Unfortunately, there isn't a single, definitive treatment for Sjögren's, no pill or infusion that can eliminate the root causes. So a lot of the effort of doctors working on Sjögren's is aimed at managing symptoms and ameliorating the worst effects of the syndrome. "We have a treatment toolkit," says McNamara, which includes scleral contact lenses and autologous serum, for which "we draw blood from the patient, spin out the serum and formulate it as an eye drop that works much more like natural tears than an artificial tear you would buy at Walgreens."

But, Dr. McNamara says, "we don't have a total cure for dry eye. We want to care for these patients but we also want to come up with novel therapies and innovative approaches to treat their disease." McNamara's lab has a new therapeutic that is currently in Phase Three clinical trials. "This type of situation is a great way to marry the clinic to the research," she says, "and we're very well positioned for research studies and clinical trials."

Some of the greatest strengths of the clinic aren't even strictly medical. Instead, having an entire team dedicated to this often-dismissed disease allows patients to feel as though they're being taken seriously, to have in-depth discussions with specialists who validate and understand how disruptive Sjögren's can be to a patient's entire life. "I've had to educate my best friends about what this is," says Van Loo. "And sometimes you get someone who is a nurse or even a doctor and they've never heard of this or, if they have, they wave it away as a non-disease." Van Loo appreciates being part of the interaction between the doctors at the Sjögren's Clinic. "One of them will pick up on something that the others may not have noticed and then they deal with it as a group. And the openness of all of them is just amazing. They'll admit when they don't have the answer to a question and then they're so good about emailing or calling back once they figure it out."

"I get excited talking to optometry students about this," says Dr. Carteron, "because they may meet someone in their career and be able to ask some questions and then they say 'Oh I wonder if...' and they'll be able to make the next referral step." Dr. McNamara agrees wholeheartedly. "I would love to see more clinics get started to do this kind of care. And not even just for Sjögren's. There are so many diseases where this type of model and integration would be so valuable to patients."

Because at the end of the day, the best doctors recognize that their work isn't narrowly about a disease or a drug or a procedure. The underlying reason for it all is the patient who shows up seeking help. "A patient is not just their eye," says McNamara. "They're not just their mouth, not just their systemic condition. What we do here is care for the whole person."

ILLUSTRATION BY MATT CHINWORTH

Eye Tech

A growing number of Vision Science PhDs are finding scientific satisfaction in a demanding and rewarding new industry environment

BY GORDY SLACK

Many recent PhD's from UC Berkeley's Vision Science program have altered their presumed career trajectories from traditional academic or clinical ones to instead enter the high-tech industrial world. There are a few reasons for this trend, says Austin Roorda, professor and former chair of the Vision Science program. One important reason is that several distinct technological frontiers have advanced to the point where expert knowledge of the ins and outs of the visual system is a key to progress. Foremost among those frontiers are virtual reality and augmented reality.

Augmenting Academic Realities

Kavitha Ratnam, who completed her PhD at UC Berkeley's Herbert Wertheim School of Optometry and Vision Science in 2017, expected to follow the academic path. She chose vision science because she loved biology and engineering and wanted to fuse them to make a positive impact. In her fourth year, Ratnam's advisor, Roorda, whose lab focuses on how our visual systems create rich perceptual experience out of the two-dimensional images that enter our retinas, asked if she would be interested in an internship helping a company developing a perceptual testbed for virtual reality displays. She spent four months at Oculus Research (now Meta Reality Labs Research). During this time, she worked with both vision and optical scientists, several of whom were Berkeley Vision Science alumni or colleagues in the adaptive optics field. The experience was "as collaborative, rigorous, and gratifying as my research in academia," Ratnam says. She completed her postdoc at Meta (formerly Facebook) Reality Labs Research investigating the visual quality of novel near-eye displays and developing a wide-field-of-view retinal eye tracker.

Today, as a technical program manager at Meta Reality Labs, Ratnam works with a cross-functional team of optical scientists, engineers, perceptual scientists, product managers, and experience designers on the future of augmented reality.

"My vision science background gives me a unique perspective as to how engineering decisions will impact visual quality, which ultimately impacts the quality and immersiveness of users' experiences," Ratnam says. "With display technologies, typical engineering design processes need to be adjusted as these ultimately require perceptual, not engineering, optimizations. The eye is an imperfect optical system, so you don't want to over-index on specifications where the eye is the bottleneck. Additionally, vision is a temporal process, which introduces a novel dimension to consider when designing a display. My vision science training enables me to drive these complex decisions with perceptual quality being the paramount goal."

"As amazing as the technology emerging from VR and AR companies is, if their engineers don't fully appreciate the complexity of the human visual system, the whole thing won't come together," says Roorda. "They need to consider how the eyes work together to form a multi-dimensional view of the world. How the eyes move, for example: always changing their positions, even when a person is focusing on a single small letter on the visual acuity chart. And when surveying a scene, a person's eyes are constantly undergoing drifts and saccades, fast jerk motions redirecting gaze from one position to another. Those aren't things engineers instinctively focus on, but a good VR or AR display will have to factor them in."

Gene Therapy

Gene therapy is another burgeoning field where vision science has recently taken center stage. A robust understanding of human eyes and the visual system's processes are key to companies racing to develop products. Cécile Fortuny, who got her Vision Science PhD from Berkeley in 2019, now works for Scribe Therapeutics, co-founded by UC Berkeley biochemist Jennifer Doudna, winner of the Nobel Prize for her work developing CRISPR technology.

Human eyes are "pseudo-immune privileged," meaning that they have a milder immune response than other organs to the viral vectors used to deliver gene therapies, a quality that allows for study without extreme immune suppression. Eyes are also relatively isolated from other tissue, organs and blood circulation, which makes it safer to introduce genetic modifications without unintended consequences elsewhere. Additionally, compared to say the brain, liver, or other organs, eyes are easily accessible for quick and safe drug delivery. That we each have two separate eyes is helpful too; when researchers need a control, they can administer a drug to just one eye but take data from both.

At Scribe Therapeutics Fortuny is using the eye not only as a testbed for systematic treatments, sometimes addressing diseases beyond the visual system, but also for treating diseases of the eye itself. In 2017, the first FDA-approved gene therapy for a monogenic disorder targeted Leber congenital amaurosis, a retinal disease.

Unlike Ratnam, Fortuny knew she wanted to work in industry from the start. For several years in graduate school, she was a member (and director) of Beyond Academia, a Berkeley-based group that helps graduate students and postdocs in both the sciences and the liberal arts to explore career options beyond the academic track.

"There's nothing wrong with an academic career. But it's not the golden path for all PhDs," says Fortuny. "Even when I first entered the PhD program, I was aware that I didn't want to be a PI and have a lab and students under me. You can be a good scientist but not necessarily a good mentor, not necessarily a good fundraiser. I've always just wanted to do the science."

Fortuny likes her job at Scribe and she appreciates the efficiency of industry, the emphasis on speed and results. But there are downsides too, she says. "Sometimes I miss the open, exploratory aspect of academia, where you can ask any question even if it's not going to make a product down the line." There is also less cross-institutional collaboration than you find in the academic world, where techniques and resources are often shared across research groups, she says.

Smarter Lenses

One industry career option has long been open to vision scientists: working for optical companies that develop and manufacture contact lenses. The merging of optics and digital technology, however, has opened a new area of opportunity for vision scientists in the contact lens world. Eric Li, OD, PhD, went to work for Verily Life Sciences, an Alphabet / Google company, after getting his PhD from the Vision Science program in 2016, and is now working on contact lenses with sensors and microchips integrated into them. These smart contact lenses will soon be able to monitor biometrics, such as blood sugar level for diabetics. More recently, the group began developing lenses that can automatically shift focal powers to accommodate presbyopia and enable on-demand, dynamic focus change in a comfortable hybrid lens.

After a year of teaching and clinical practice, Li realized his greater passion was for research and he returned to Berkeley to get a PhD in Vision Science. Though he had assumed then that he would seek an academic position after graduation, when the time came to look for a job, it wasn't so straightforward. Finding a professorship would most likely have involved leaving the Bay Area. For family reasons that was not an option at the time. He looked to industry instead. "At the end of the day, it depends on the individual's circumstances," Li says. "I think I made the right decision."

Next Gen Data Transmission

Sanam Mozaffari, who earned her PhD from the Vision Science program in 2021, is now an opto-mechanical engineer at X Development (formerly Google X), Alphabet's "moonshot lab," where she works on a wireless optical communication system called Project Taara. The system uses beams of light to transmit high-speed data through free space. Mozaffari compares the project's engineering challenge to that of ocular imaging. "In both cases, you have to send a clear image through a turbulent media," she says. "In the eye it's the lens and the vitreous and in optical communication its atmospheric turbulence."

When she was in Roorda's lab, Mozaffari applied adaptive optics to correct for distortions. At X, she applies a different set of correctives, but in both cases the objective is the same: to preserve the fidelity of the signal sent safely at the lowest energy cost. "It's a completely different application," Mozaffari says, "but the science and the engineering problems that we're solving are very similar."

Mozaffari chose the Vision Science program because both engineering and eyes fascinate her. She especially appreciated the diversity of students, professors, and subjects of study in the program. At any one time, she remembers, every student in the program might be focusing on a different thing. "Some were doing anatomy-based research and others optics-based research, and others were putting a bit of one together with some of something else. But everyone was sharing and collaborating. That's what makes vision science thrive."

That cooperative, multi-disciplinary approach has served Mozaffari well at X, where she works on a small team that is always considering the many aspects of their project from multiple points of view. "When you have expertise in so many different areas of optical systems, and when these all come together, you really see the benefits," she says.

"As amazing as the technology emerging from VR and AR companies is, if their engineers don't fully appreciate the complexity of the human visual system, the whole thing won't come together."

"I was definitely on the professor track," says Mozaffari. "But I was naïve about what that meant. Yes, it's liberating to choose your own research questions, but with that comes a lot of responsibility, a lot of writing, a lot of fundraising in addition to just the engineering. As it turns out, just focusing on engineering is my preference."

When he first noticed a growing number of his students heading toward industry, Roorda admits he worried a little. "I always had the mindset that the ultimate achievement for my PhD students was to become a professor like me. But I've totally changed my thinking on that. For one thing, the opportunities for industry-based careers in vision science pay very well. At least as important, our graduates can work effectively and have an impact, they can develop products that help people. All in all, it's another enriching environment."

Today, Roorda actively cultivates relationships between his students and industry partners. Three years ago, along with his colleague Marty Banks, he co-founded the Center for Innovation in Vision and Optics (CIVO), an industrial membership organization whose mission is "to promote the development, use, and dissemination of innovative display, graphics, and optical technology for the healthy and diseased eye." For a membership fee, companies get a working relationship with Vision Science professors and doctoral students.

"The benefits go both ways. Everyone gains from the associations," says Roorda.

Fortuny agrees. "It's part of the crossflow of people, knowledge, and technology moving between the academic and industrial realms," she says. "There isn't just one path anymore. Everything is flexible, blurry, dynamic, and crossing over in a confusing but beautiful way. And I think that's great."

WhereAreTheyNow

Our recent grads are out in the real world making a big impact. See where they ended up.

Ece Turhal, OD 2018

Where are you living now? Fremont, CA

What are you doing now for work? I currently work in a private practice setting in Fremont, CA. I find private practice to be very rewarding because it allows me to practice optometry to the fullest and gives me the time to give better care for my patients. I get to manage disease and get to practice the specialties our profession has to offer.

I focus on a lot of different specialties to keep my days interesting. I enjoy all things contacts. Myopia management is a big part of our practice, so we see a lot of pediatric patients. I also enjoy fitting scleral lenses, which can be challenging to fit at first, but their impact on patients' vision is worth the effort. I also started my own binocular vision program and have been slowly growing it.

What is the web address for where you work? fremonteyehealth.com

What bit of advice or wisdom would you have for students just beginning their degree program? Always volunteer to see that extra patient. Always pick the hard cases and rotation sites. Remember to thank your support system regularly as you go through the next four years, as it will be difficult, and they will help you survive it. Finally, travel and attend conferences whenever you can!

Benjamin Szu, OD 2018

Where are you living now? I now live in Irvine, CA near my alma mater the University of California, Irvine.

What are you doing now for work? I am currently practicing in Costa Mesa, CA at Grant Optometric Group. I bought 50% of the business and partnered with Dr. Kevin Grant, Berkeley Optometry Class of 2007, in June 2020. I've kept busy focusing on the business side of private practice while building up my patient base. Navigating the game of managed care and optimizing the optical has been especially challenging. Creating a great team has been my main focus since I've started working. I can still hear Dr. Andrew Mick's reenactment of Bo's Speech... "No man is more important than the team....the team. the team. the team...it's gonna be Michigan again, Michigan." My team makes work fun and keeps me performing at my best. I feel blessed because I love my job and enjoy going to work each day. Working in a group setting reminds me of the third and fourth years of school. Dr. Grant has been great to me and it is awesome to have a brilliant mind to bounce ideas off of when complicated cases walk through the door. Private practice has provided a lot of freedom for me as I got married and also have a new job as a husband.

What is the web address for where you work? www.drgrant.net

What bit of advice or wisdom would you have for students just beginning their degree program? Have a good attitude! Take negative criticism well and learn as much as you can. You have just four years to learn as much as you can about one organ. Never forget that you dedicated your career to the betterment of others!

Billie Beckwith-Cohen, PhD 2021

Where are you living now? Okemos, MI

What are you doing now for work? My current position is a 4-year fixed term faculty position at Michigan State University as a comparative ophthalmology resident. This position will prepare me for the board certification of the American College of Veterinary Ophthalmologists, and train me in the clinical and surgical aspects of comparative ophthalmology. Our week on the clinic floor can include examinations of ocular diseases in horses, dogs, cats or any other species presenting to the veterinary teaching hospital. We perform corrective surgery on structures such as the ocular adnexa, cornea and lens.

While the position is predominantly clinical in nature, it does incorporate teaching aspects while interacting with a future generation of veterinarians. Additionally, approximately 25% of time is dedicated to non-clinical duties such as those associated with research. At MSU I am part of the Petersen-Jones lab, which uses predominantly large animal models to study retinal degeneration and potential treatments for those conditions. Large animal models with naturally occurring mutations are particularly useful when studying therapy for human diseases, or exploring retinal function. I am fortunate to be able to expand on research interests and skills that I gained at UC Berkeley as part of the Kramer lab, which is also focused on the retina.

What is the web address for where you work? https://cvm.msu.edu/

What bit of advice or wisdom would you have for students just beginning their degree program? Enjoy and take full advantage of the amazing resources you have at the Vision Science program and UC Berkeley! UC Berkeley offers an amazingly diverse scientific community. Some of the best ideas might arise while listening to a lecture by a scientist working on a completely different field. By interacting with the community and utilizing the resources you will make connections that will help you throughout your life-long career as a vision scientist, in academia or the private sector.

Amanda Dieu, OD 2020

Where are you living now? Portland, OR

What are you doing now for work? I am currently an Assistant Professor at the Casey Eye Institute at Oregon Health & Science University (OHSU), which is an academic medical center eye clinic in Portland, Oregon that serves patients in the Pacific Northwest Region and beyond. I work as a clinical optometrist in the Medical Contact Lens service and provide a mix of comprehensive care with problem focused medical contact lens cases. I work with complex cases including ectatic corneas (keratoconus, pellucid marginal degeneration), irregular corneas secondary to trauma, post-surgical corneas (corneal grafts, keratoprosthesis, post-refractive surgery ectasia), aphakia, severe dry eye (ocular graft-versus-host disease, Sjögren's Syndrome), neurotrophic corneas, and much more. I also specialize in pediatric contact lenses and myopia management. As a faculty member, I teach and oversee our current medical contact lens fellow and our ophthalmology residents by teaching them about anterior segment pathology and treatment/management with specialty contacts. Outside of clinical practice, I like to engage in various research projects that include myopia management with atropine, scleral lens fitting techniques, anterior segment OCT, and pediatric corneal diseases.

What is the web address for where you work? https://www.ohsu.edu/casey-eye-institute

What bit of advice or wisdom would you have for students just beginning their degree program? The most memorable moments of optometry school were the good times that I shared with my classmates. So my advice is to make and treasure your friendships in school. They are going to be your biggest and best support system. My optometry friends were the reason why I didn't miss an assignment; they stayed up late with me to study for a test, or helped me pass a lab practical by letting me do gonioscopy on them a million times. They are also the reason why I am where I am today, as they helped me with my job interviews and encouraged me to challenge myself daily. Make sure to attend the social events and network with your classmates. They are going to be your colleagues in the future and will continue to be great resources. Another bit of advice is to also get to know your professors and clinical faculty. They are the smartest people in the field, and will teach you so much! Even until this day, I still message my previous faculty instructors and ask them for advice.

Dr. O

Reverend Dr. Clyde Oden, Jr. talks about his quest to overcome inequities in health status and health services, the importance of acknowledging the spiritual needs of patients, becoming a community healthcare advocate and leader, and his belief that "To whom much is given, much will be required" (Luke 12:48).

PHOTO BY ELENA ZHUKOVA

Q What led you to optometry?

In high school, I applied for a Naval Reserve Officer Training Corps (NROTC) scholarship. I was an excellent student and a star athlete: fit in every way except one — I had myopia. I was motivated to do whatever it would take to pass the U.S. Navy physical examination, so I visited my optometrist seeking solutions. He saw my profound disappointment when I failed the vision test but knowing my aptitude for math and science — he asked me if I had ever considered being an optometrist rather than an engineer or majoring in physics. I was surprised by his question. After all, I had never thought about it because I had never heard of or even seen an African American optometrist.

He then told me that there were no Black optometrists in my hometown of San Diego, and in the entire state of California, he knew of only three! He told me opportunities were wide open if I were to pursue that profession. Additionally, he was a graduate of Berkeley's School of Optometry — and I should look at what it had available. I not only investigated the school, but I also successfully applied and was awarded a Berkeley Optometry Alumni scholarship — and as they say, the rest is history!

Q: Who were your early influencers in life? Who inspired you?

My parents were the most significant influencers in my life, period. My mother was from Mississippi, and my father was born in Alabama. They grew up during the Great Depression, and life was hard on both. Their grandparents were enslaved African Americans, and every generation in my family lived harsh lives. My father joined the U.S. Navy in the 1930s. He found that the only opportunity available to him was to be a messman — a servant to officers and enlisted sailors in the segregated Navy. The structural racism of all the armed services limited my father's ability to achieve, which did not change until after World War II. My father served our country for 26 years and retired as a chief steward. My father wanted me to walk through doors closed to him. I pursued the Navy ROTC option — until my vision challenges closed doors that optometry opened — and new horizons manifested themselves.

Q: You have four degrees from Berkeley (BS, Master of Optometry, OD, MPH), and you've talked about your experience at Berkeley as being transformative. How did Berkeley change you?

When I stepped on Cal's campus, the mix of social activism and civil rights and student rights was beginning to percolate. The Free Speech Movement, the Anti-War Movement, the Civil Rights Movement, the Black Student Union movement, and the Third World Liberation Strike Movement were beginning to express themselves in a tangible way to me. I was touched and engaged in all of them. My consciousness and societal awareness were radically altered by what was happening around me.

I arrived at Berkeley intending to become the first Black optometrist in my hometown of San Diego with the expectation of becoming a successful practitioner. I had met the role model, Dr. Marvin Poston — the first African American to graduate from Berkeley Optometry. More than 25 years elapsed between his graduation and the next two African Americans to graduate in optometry. He had a successful practice, and his impact on the profession and other business activities was profound.

However, by 1969 my self-awareness and my life's mission had changed. After graduating with my OD, I enrolled in Berkeley's School of Public Health. I was greatly influenced by Professor Henrik Blum and some of his colleagues at the SPH and their insistence that health care was a right and not a privilege. They opened my eyes to the inequities in health status and health services, particularly for African Americans and communities of color. I left Berkeley with a determination to be part of the solution addressing health disparities in low-income communities. Being a successful clinician was no longer my top priority. I wanted to become a community health care advocate and leader.

Q: In addition to being an optometrist, you served as CEO and President of Watts Health Systems (WHS) in Los Angeles for over 20 years. What inspired you to transition from seeing patients to more broadly engaging in community health?

I left Berkeley's School of Public Health with a master's degree and was offered an opportunity to serve a public health externship in Washington, DC, at the Office of Economic Opportunity (OEO) headquarters. They had just started developing Neighborhood Health Centers. I completed my service in OEO and was offered an opportunity to serve in an administrative capacity at the Watts community in Los Angeles. I served there for 33 years. A few years later, I became its President and Chief Executive Officer — and we experienced phenomenal growth. The organization eventually operated an HMO, 12 community health programs, including substance abuse, home health agency, and school-based health clinics. WHS also owned the controlling interest in a community savings and loan company. By the end of my service at that institution, we served about 250,000 persons per year in the nonprofit enterprise known as Watts Health Systems, Inc.

> "I left Berkeley with a determination to be part of the solution addressing health disparities in low-income communities."

Q: How did you prepare for taking on this new challenge?

Frankly, my public health education did not prepare me for the responsibilities of managing a health care enterprise with an annual budget that was a quarter of a billion dollars. I enrolled at Pepperdine University's Graziadio Business School in an MBA curriculum designed for presidents and senior executives of large and growing companies. That experience prepared me for the management challenges that emerge in operating a large company providing health care services to medically underserved and under-resourced communities.

Q: You've spoken about a spiritual encounter that led you to seek a master's degree in divinity, and ultimately you became an ordained minister, working full time as a pastor with the African Methodist Episcopal Church (AME) for 24 years. What parallels do you see between your work in direct patient care, delivering community health services, and ministry?

As a person of faith, providing care to persons with significant healthcare needs and limited financial resources kept me on my knees. I soon felt a calling to engage in a more meaningful way in my church, not knowing that it would eventually lead to becoming a pastor. While leading the Watts Health Systems, Inc., I enrolled in Claremont School of Theology and pursued a master's degree in divinity. At the time, I did not know what doors might be open to me. I wanted to be of more service in my local church; however, soon after graduating from seminary, I was appointed to pastor at a church in Long Beach. I eventually had the privilege of serving as senior pastor at three different churches in Southern California.

My faith directed me to serve people of need: spiritually, emotionally, socially, financially, and medically. As a pastor for 24 years, one of the most common needs of my congregants was in healthcare. Some of my members came to the church with acute health care problems because of accidents or disease. However, many more of my members suffered from the challenges of advanced or chronic illnesses. The glaring inequities of healthcare services are magnified in the church setting.

It was important to me then, as it is now, to do something constructive. I wanted to help members to navigate their personal lives in such a way as to receive whatever kinds of services and assistance they need. A pastor must look at the whole person: mind, body, and spirit, and seek harmony for them. It is in that holistic theme that I see parallels in healthcare and ministry.

It was important to have healthcare ministries in the churches, and health providers must recognize and acknowledge the spiritual needs of their patients. I see this now more than ever.

Q: You've had a long and distinguished career, but you don't seem the type to sit still. What are you doing now?

In 2019, I retired as pastor, relocated from Southern California, and moved back to Oakland. Not long after I moved, the COVID-19 pandemic struck our nation and, of course, every community. To paraphrase a scripture (Luke 12:48): "To whom much is given, much will be required." This season of the pandemic calls for "all hands-on deck."

I could not remain retired with the skills and experiences I had been blessed with, so I explored how I could be part of the solution in this new situation. In early 2021, I accept the position of assistant director of the Alameda County Collaborative Alliance (ACCA-AICP). This nonprofit organization is a faith-based, person-centered, lay care navigation intervention serving predominantly, but not exclusively, African American adults with advanced illness and their caregivers in Alameda County, Contra Costa County, and San Francisco County. Today, with over 40 churches in its network, including partnering with health systems and community organizations, the ACCA program is designed to help to bridge the gap between health delivery systems, community organizations, faith-based communities, and communities of color in managing advanced illness.

I'm helping in a way that combines all my previous experiences and healthcare knowledge and training. This season of sickness and pain is a special moment in my life, and I'm "all in."

Q: As the fourth African American graduate of Berkeley Optometry ('67 and '68), and a current member of the DEIB Council, you have been a witness to over five decades of slower-than-hoped-for progress regarding the school's goal of improving the diversity of students and faculty at the school, and in the profession. In your opinion, why has change been so slow?

Structural racism is the answer and the problem. There has been institutional insensitivity to the reality that few optometry students come from underserved and ethnically underrepresented populations. Since my graduation in the 1960s, there have been few national efforts to address this under-representation. To my knowledge, there have been insufficient efforts by schools of optometry and professional associations of optometry (except for the National Optometric Association) to prioritize addressing this glaring problem — until very recently.

Back in the 1960s, I asked the leadership at Berkeley's School of Optometry this question: "Why aren't there more African American and Latino students in our classes?" The responses were, "We don't know where to find qualified students." In 1968 I appointed myself, with the blessings of Dean Meredith Morgan, to become a one-person recruiting team. I traveled to Atlanta, Georgia, and asked permission to speak to students at Spelman, Morehouse, and Clark colleges. I was just a Berkeley Optometry student, but I was able to get several students to indicate interest during my one week of visiting classes.

Unfortunately, after I graduated, there was no one to pick up the mantle. Few African American or Latinx students matriculated to Berkeley, and no one, at that time, pursued recruiting more students. When I returned to the Bay Area in 2020 and met with Dean John Flanagan, I asked the same question I asked in the 1960s, as I once again observed a scarcity of African American and Latinx students when I visited the School of Optometry for the first time in many years. Something was different, however. I found leadership who were not only open to the idea of diversity and inclusion but were actively moving to make some institutional changes. I am thrilled and excited about Dean Flanagan's leadership. There is now a DEIB Council and a strategic plan that speaks to Berkeley's commitment to change the trajectory related to having a more diverse and inclusive student body, staff, and faculty. I am so pleased with this institutional response to a disappointing history. Things are changing, and I am so grateful.

Q: Are you optimistic about the school's current efforts to make lasting changes in this area?

I am very optimistic regarding the changes that are now happening. Changes are happening at this moment. I celebrate the recent hiring of Dr. Ruth Shoge as the Director of DEIB and Associate Clinical Professor. There are now African American and Latinx faculty and staff and a diversity of persons of racial and ethnic backgrounds seeing persons with diverse cultural and personal experiences. There is a new "welcome mat" at the entrance of the School of Optometry.

What I see is not an effort of tokenism or appeasement but rather a recognition that optometry and vision care students, faculty, and staff need to represent the full diversity found in our society. But this must be only the beginning. New pipelines need to be developed with HBCUs and HSIs — so that future optometry students, vision science students, and faculty members will emerge from these schools and colleges. There must be substantive, institutional, and permanent changes for Berkeley Optometry to become and remain a leader for the world to see and applaud. Diversity, Equity, Inclusion, and Belonging must not just be a slogan or a contemporary expression of "political correctness" but be as much of a symbol of UC Berkeley and Optometry as Sather Gate, Sproul Plaza and the Campanile.

Q: We'd like you to look back for a moment. What is a favorite Berkeley Optometry memory?

Professor Gerald Westheimer is my favorite memory. He was teaching my first course in physiological optics. Dr. Westheimer was so scholarly and, at times, difficult to understand because of his German/Australian accent. He was a challenge for me. Additionally, physiological optics is a complicated subject matter. However, I hung on to every word he spoke and studied hard to try and master the subject matter. I wanted to impress him. When I earned an "A" in his class, I jumped so high in the hallway in Minor Hall that I fell flat on the seat of my pants. But I knew then that I had arrived. I earned an "A" at Berkeley! Later, as a student, I made the Dean's list.

For me, academic achievement at Cal was a total vindication — after the discouragement I received in high school. My guidance counselor in high school told me I could never succeed at Berkeley — the implication by my White counselor that I, as an African American, was not smart enough despite my high school grades and aptitude for science and math. She told me I could never be successful there because she couldn't get in as an undergraduate. Fortunately, I didn't listen to her.

I graduated with four degrees from UC Berkeley, but most important: I got an "A" from Dr. Westheimer in physiological optics! I'll never forget the "thrill of victory."

> "For me, the School of Optometry was my coming of age: from the science of vision to the art of caring for patients."

Q: Now that you are reflecting back, can you see the beginnings of the thought process that led you to embark on a career dedicated to caring for people from a "whole person" perspective?

Attending Cal in the '60s amid the student movements, the civil rights and anti-war movements caused a shift in my worldview. By the time I left Cal, it was no longer about "me" but rather about "we." The combination of my optometric education and my public health education promoted in me a new gestalt. The gestalt was further informed by my religious grounding related to the "Golden Rule" — doing for others and caring about others as much as I would care for myself. That was the beginning of a journey that took me to those major destinations in my life. Health as a community affair, seeing economic, social, and health disparities lit a fire in me that still burns. Things must change.

The School of Optometry, if you excuse the pun, opened my eyes to new possibilities. It was not just the grounding about vision care, but there was a "holistic ethos" that allowed me not just to have a narrow focus — but to look at a bigger picture. For me, the School of Optometry was my coming of age: from the science of vision to the art of caring for patients. Both perspectives were critical.

Q: What are you most proud of?

I am most proud of my family, my friends, and my faith. Each day I rise grateful for the blessings of life. Each day I'm asking God for the strength and inspiration to make this world a better place. I'm proud of my journey, and I believe there is so much more to do.

AlumniNotes

We've tracked down all of your favorite classmates. Here's what they're up to.

1948

Hall of Fame member, assemblyman, and lobbyist **Gordon Duffy, OD '48**, passed away on February 2, 2021 in Santa Rosa, CA. His career as a politician introduced him to his wife Jean Duffy, who survives him along with the couples' 10 children and large extended family. Gordon was a Navy veteran and member of the Cal Track team.

1953

Ramon Burstyn, OD '53, passed away in November 2020. An Army veteran, he practiced for 53 years in the Austin, TX area, following his father Dr. Adolf Burstyn into the profession. Dr. Burstyn is survived by daughter Dawn, a teacher on the Salt River Reservation in Arizona, son-in-law Larry, two grandsons Blake and Brent Meyers, and son Pearce Burstyn of Dallas, TX. His patients included the University of Texas athletes where he served as the team eye doctor.

1968

Jeremy Shumaker, OD '07, writes, "My teacher, mentor, and business partner **David Grisham, OD, MS, FAAO, FCOVD-A '68**, has officially retired from more than 40 years of practice. He co-wrote the book we as optometry students at Cal used to first learn about vision therapy, *Binocular Anomalies: Diagnosis and Vision Therapy*. Following an industrious career as an army medical corpsman, professor, researcher, and chief of the Binocular Vision clinic at Berkeley Optometry, David founded Rising Star Optometry, where he expertly treated children and adults suffering from learning-related vision problems, amblyopia, strabismus, and visual dysfunction from acquired brain injuries. This important work helped move our profession forward and improved thousands of lives through optimizing visual function with training, optics, and great warmth and empathy.

1971

1 | **Class of 1971**, in preparation for their 50th year as doctors, looked back at their 25th Reunion which included recognition at the 1996 Commencement (pictured with late Dean Tony Adams), and a social celebration at the home of Don Sarver.

2 | Colleague **Linda Hur, OD '90** writes: "We had a surprise celebration for **Ken Schwaderer, OD '71**, for having completed 50 years of optometric service at Mountain View Optometry. We closed the office and brought him to the Oakland Zoo, one of his favorite places. He still works full-time and has been instrumental in assuring our younger team members to be confident while working through the pandemic."

1975

3 | **Larry Thal, OD '75**, with his newest granddaughter Haley Elizabeth, born within days of his own 75th birthday. Arielle is in her fifth and last year of head and neck surgery residency. Larry has served as the President of the California Optometric Association, led the Berkeley Optometry Development & Alumni Relations team, and was the Alumnus of the Year.

Allan Freid, OD '52, passed away in December 2020, at the age of 92. The Hall of Fame member and Alumnus of the Year honoree accomplished much in his career, practicing overseas in the military, establishing a private practice, and instructing students at Berkeley Optometry and SCCO.

Hey Alumni!

Do you have a story to tell? About your career or your life? We'd love to hear from you! Send us pics and details.

optoalumni@berkeley.edu

Please visit our website to see more updates from our alumni!

optometry.berkeley.edu/alumni-notes

1987

4 | **Julia Edwards, OD '87**, recently retired and sold her practice in DeForest, WI after 33 years. Julia and her husband, John, celebrated with a 30-day camping road trip. They hiked and explored the Badlands of South Dakota, Southern Wyoming, Northern Nebraska, and Northern Colorado including Rocky Mountain National Park, summiting Twin Sisters as their highest peak at 11,427 ft.

Robert Dister, OD '87, though retired, Bob plans to return to Berkeley Optometry to teach in the 200A and 200B first-year preclinic courses, so he's only half-retiring, but is planning to enjoy not being in charge of anything. On his new days off, he's looking forward to having more time to ice skate, play golf, take walks, and spoil Io the cat.

1988

Paul Gollender, OD '88, spent the 2020 Valentine's Day doing eye exams for local children, including many in foster care, with his organization "Eye Love You Back."

Jean Wrightnour, OD '88, "My husband, Dan Lee, and I are retired as of 2020 and now that we're vaccinated, we decided to plan a three-month trip. We left NE Ohio on May 24 and headed west. We've turned into National Park geeks! We hike, we bike. We zip-lined at the Olympic Ski Center in Park City. We've seen more "Lewis and Clark" stuff than any one family has need.

1992

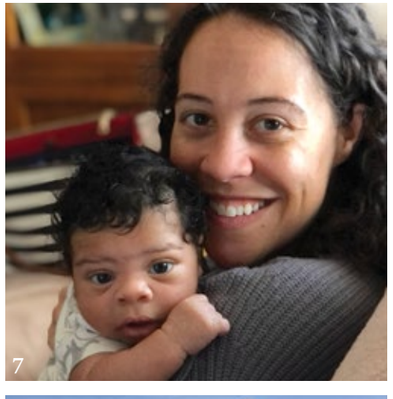
John Corzine OD '92, writes: "Retired after 26 years of teaching. Plans include more bike riding, photography, backpacking, travel, many projects around the house (large and small), and not setting an alarm clock. Still living in the area and will stay in touch with the School."

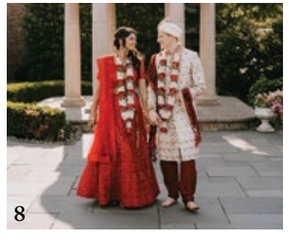
1994

Michelle Hoff, OD '94, "I taught for 4 years as a staff optician while I was an optometry student and 27 years as a faculty member. So in total 31 year as an educator. I'm still going to be on the faculty working with the students on community service events. I'm continuing my work running Mindful Eyes Foundation and have created a new consulting company with two amazing women, **Dr. Isbel Kazemi, '94** and Mindi Lewis (she was an EWC optical instructor '94), called SightLine Ophthalmic Consulting."

1998

Simon Cheng, OD '98, hired a new associate in 2020, **Tin Tran, OD '20**. Tin evened up the percentage of Berkeley ODs at Blackstone Optometry, Simon's four-doctor practice in Los Angeles, CA.





2010

5 | **Tiffany Chan, OD '10**, (L) and **Ellie Kung, OD '10** (R), hiked Lassen in 80 degree weather with snow still on the ground. Tiffany is the Chief of Low Vision at CPMC and also practices at Chan Family Optometry in Grass Valley, CA, the practice founded by her parents **Lisa Moon, OD '76** (retired) and **Jerry Chan, OD '75**. Ellie joined the Kaiser team a few years ago and has become involved in IFTPE ESC L20 Union leadership, along with the Alumni Board.

2011

Sheryl Guillory, OD '11, "I just passed my exam for the American Board of Optometry! I'm now Board certified!"

2013

Anne Tasaki, OD '13, married Paul Taylor in a private ceremony in Petaluma, California on October 3, 2020. She is Chair of the Admissions Committee, a faculty co-chair of Berkeley Optometry's CE Committee, and she teaches in the Pediatrics Clinic.

Jackie Theis, OD '13, Residency '14, "2020 was a year of change! I was humbly awarded the COA Young Optometrist of the year award in February. Then, after 5 years working in neuro-optometry at Northern California Kaiser Permanente, I relocated in March of 2020 to Richmond, VA to cold-start a private practice...during a global pandemic. Virginia Neuro-Optometry is a tertiary care private practice that is located/part of a multi-disciplinary brain injury clinic; the Concussion Care Centre of Virginia. We offer brain-injury specialization in physical medicine and rehabilitation, physical therapy, neuro-endocrinology and of course, neuro-optometry! But most importantly, I adopted a second stray dog named Tucker into the "pack" bringing me nothing but joy and gratitude."

2014

Cory Hakanen, OD '14, has joined Twenty/Twenty Therapeutics as a Product Manager. The startup, founded in August 2020 is a joint venture between Verily (an Alphabet subsidiary) and Santen (the leading Japanese ophthalmics company), focuses on high-tech solutions in eye care to support doctors and generate superior patient outcomes.

6 | **Sarah Singh, OD '14, Residency '15, PhD '19**, (née Kochik) wed Arjun Singh on 2-2-2020. They eloped on the UC Berkeley campus where they fell in love 13 years ago as undergraduate students. Sarah joined the Berkeley Optometry faculty after completing her PhD in Vision Science in 2019, and Arjun works in tech.

2016

7 | **Cristen Adams, OD '16**, welcomed baby James on March 7, 2021. She presented at the 2021 American Academy of Optometry with colleagues **Farah Gulaid, OD '15, Joy Harewood, OD '11**, and **Sheryl Guillory, OD '11** as the principal consultants of Chroma Consulting Group.

Dr. Tony Adams died peacefully with family at his side in July 2021. Tony, who served as dean from 1992 to 2001, was the quintessential academic optometrist; he confronted and removed barriers, won numerous awards, and served selflessly in positions of leadership. Tony's influence was extraordinary. He inspired generations of students, academics, future leaders and change makers. In 2014 he was inducted into the Berkeley Optometry Hall of Fame, and last year he received the inaugural UC Berkeley School of Optometry Tony Adams Lifetime Achievement Award for his impressive, important and enduring accomplishments to the school and the profession. Please follow the link below for a celebration of Tony's life.

https://optometry.berkeley.edu/tony

Britney Kitamata-Wong, OD '16, joined the UCSF Department of Ophthalmology early in the year, after practicing for several years at Lamorinda Optometry in Lafayette, CA. She is the incoming president-elect of the Alameda Contra Costa Counties Optometric Society. Britney was the Gold Retinoscope winner in her fourth year.

2017

8 | **Sloan Rajadhyksha, OD '17**, married Dr. Hunter Morgan (SCO) in New York on June 6th, 2021. The couple met at the AOA meeting during their 4th Year and reconnected during Residency in NYC. They have recently relocated to San Diego.

9 | **Ryan Ngo, OD '17**, after several years in New York City, Ryan Ngo has returned to San Francisco! He moved to NYC for a Residency year at SUNY and stayed. He and partner Thomas Pence look forward to setting down roots on the West Coast and living closer to Ryan's family.

2019

Joelle Chan, OD '19, completed her Residency at the VA Central California Healthcare System in Fresno, CA, and joined San Ramon Optometric Group in 2020. She loves the patients and working with owner **Fletcher Thames, OD '82**.

Seija Roggeveen, OD '19, married Matthew de Gooijer on August 8, 2020 in Calgary. The couple then became "honeymovers" and packed their bags for Yarmouth, Nova Scotia, Canada where Seija currently practices primary care optometry.

2021

Jackie Nguyen, OD '21, started her pediatrics residency at Vanderbilt. Her new colleagues include Berkeley alumnae **Dora Mathe, OD '08**, and her mentor **Stephanie Jian, OD '16, Residency '17**.

10 | **Phoebe Chen, OD '21**, Classmates Phoebe Chen, Marlon Mendoza, Vanessa Huang, and Johnny Cao-Nguyen celebrated their graduation with a trip to Utah. It rocks!

11 | **Mahsa Masoudi, OD '21**, celebrated her graduation with a trip to Aruba before starting her Residency at Omni Eye Services in Atlanta, GA.

Jordan Dulay, OD '21, married Grant, her boyfriend of seven years, just three weeks after graduating. The newlyweds are moving to Orange County and starting their careers.

Herbert & Nicole Wertheim Family Foundation Gift

$100

Million Investment

$75 Million	+	$25 Million
Amount already committed.		To be raised over the next 10 years.

This campaign, a collaboration between UC Berkeley, the School of Optometry, the Vision Science Program, and the Dr. Herbert & Nicole Wertheim Family Foundation, will ensure access for the best and brightest students, build the specialized expertise of the doctors of today, revolutionize curriculum and training for the doctors of tomorrow, expand the profession's reach to broader populations, dramatically increase training opportunities through residency, and strengthen our vision research initiatives. In doing so, we will enable and sustain optometry's pioneering spirit and propel the profession into the future.

Areas of Impact

Funding the Future of Optometry

Elevating optometry as a key component of primary health care. The investment in Optometry and Vision Science — which includes new facilities, scholarships and endowed fellowships for students — addresses an imperative to train the next generation of optometrists to serve as leaders in the spectrum of primary health care.

Networks for the Future

Expanded training, research, and patient care impact through academic networks and collaborations. This investment in collaborative networks will ensure expansion and integration of Berkeley Optometry and Vision Science — including residency training — throughout the UC system and beyond.

Funding the Future of Vision Research

This investment will ensure that Berkeley Vision Science maintains its position as a world leading center of excellence in basic and translational vision research. Funding will include endowed support for PhDs, postdoctoral fellows, faculty and staff scientists, the Herbert Wertheim Chancellor's Chair in Neuro-Optometry, and the Vision Science Institute, a new home for vision science at Berkeley.

Children's Vision

Dedicated Children's Vision and Pediatric Care Initiatives. This investment in clinical training and research leverages the knowledge and networks at Berkeley to deliver primary eye care, vision health and correction to both domestic and global communities. The initiative includes the Nicole Wertheim Chancellor's Chair in Pediatric Optometry.

Berkeley Herbert Wertheim School of Optometry & Vision Science

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