The fundamental missions of the University of California are teaching, research, and public service. Berkeley Optometry excels in all of these.

Our greatest responsibility as educators in a public university is to foster graduates who are capable of providing for the public good and have the commitment to do so. The message we strive to impart is that our graduates have a responsibility toward humankind as well as to their profession. That responsibility is embodied within the Optometric Oath:

“I will provide professional care for those who seek my services, with concern, with compassion, and with due regard for their human rights and dignity. I will place the treatment of those who seek my care above personal gain and strive to see that none shall lack for proper care. I will do my utmost to serve my community, my country, and humankind as a citizen as well as an optometrist.”

These are not just words that are recited at meetings or graduations; they represent a philosophy that should be embodied within every public institution. Our students come here not only because they are smart; they come because they are passionate about helping others. Whether they are native or foreign born, privileged or disadvantaged, have suffered personal hardship or not, our charge is to inspire that sense of responsibility toward serving mankind. I believe we do a good job of that. As I travel throughout the country and have the opportunity to talk to our graduates, I am proud of what they do as professionals, as members of their communities, and as parents and grandparents helping to prepare future generations.

At Berkeley Optometry, we continue to make an impact on the world through ground-breaking optometric research and by reaching out to provide quality eye care. I hope that will be evident as you read this and future issues of Berkeley Optometry Magazine. I look forward to hearing from you and always welcome your thoughts at dlevi@berkeley.edu.
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WELCOME TO OUR NEW MAGAZINE, Berkeley Optometry. Inside you will discover how your school is touching countless lives—students, patients, educators, and colleagues. We are all extremely grateful for the support from alumni and friends of the School of Optometry. We thank you and encourage your continued support of the work we do in preparing future generations of practitioners and educators.

Early last year we surveyed our graduates to determine what it is you want from our school in order to better serve your needs. (For lack of better contact information, we used the California State Board of Optometry mailing list for our graduates who maintain a California license. We realize this misses many of you, so please e-mail us or use the insert in this magazine to update your contact information.) Fortunately, three members of the Class of 2009, Eileen Ng, Matt Wilkening, and Ben Cheung, were also interested in this subject and were willing to take this on as an OD Project. While they have not finished writing up their results, what is clear at this point is that our continuing education programs, alumni directory, and social and networking events were highest on your list of expectations. It was also clear from your comments that we have not done a very good job communicating with you, and we are doing the following to fix that:

- We are sending broadcast e-mails to those for whom we have good addresses. If we do not have yours, please let us know by e-mailing jmichael@berkeley.edu.
- We have completed an updated University of California, Berkeley, School of Optometry directory—a first step in improving our mutual abilities to communicate with each other. It will be available in December.
- We have published the first issue of Berkeley Optometry Magazine and have plans to do an annual issue for all alumni and friends of the school.
- We have many social events planned—a trip to China, football tailgates, opportunities to meet with the dean, and more. We will communicate those by e-mail, so be on the lookout.

While we know you want better and more frequent communication from us, be assured that we also want to hear from you. Throughout the magazine you will see phone numbers and e-mail addresses to make that easier. Please, stay in touch and let us know how we are doing to meet your needs as alums! We know that our responsibilities to you do not end upon your graduation.

If you have a private practice, please consider putting Berkeley Optometry Magazine in your waiting room after you are finished reading it. Perhaps the magazine will encourage some of your younger patients to consider a career in optometry. And please send us your comments—in future issues we would like to replace this page, Letter from the Editor, with Letters to the Editor.
ACADEMIC EXCELLENCE (from U.S. News & World Report doctorate program rankings; highest possible score is 5; mean rankings listed):

- UC Berkeley ....................... 4.8
- Stanford .......................... 4.8
- MIT ................................. 4.8
- Princeton ......................... 4.6
- Harvard .......................... 4.6
- Yale ............................... 4.4
- Michigan ......................... 4.4
- Wisconsin-Madison ............ 4.3
- University of Chicago ........... 4.3
- Cornell .......................... 4.3
- Columbia ......................... 4.3
- UCLA ............................. 4.2
- Texas-Austin ...................... 4.0

97% of Berkeley’s graduate programs rank among the top 10 in their fields.

TOP UNIVERSITIES (from “World University Rankings” by The Times of London, based on a three-year average, 2004–06):

1. Harvard  
2. MIT  
3. Cambridge  
4. Oxford  
5. UC Berkeley  
6. Stanford

BERKELEY’S ENDOWMENT HAS MORE THAN DOUBLED in the past decade from $1.1 billion to $2.9 billion (data as of June 30, 2008). (Note that it still lags far behind those of peer private institutions.)

- Harvard ..................... $34.9 billion  
- Yale ......................... $22.5 billion  
- Stanford ..................... $17.2 billion  
- Princeton ................... $15.8 billion  
- MIT .......................... $9.9 billion  
- Berkeley ................... $2.9 billion

UC BERKELEY HAS PRODUCED 41 NOBEL LAUREATES among its faculty and alumni. The first of these was Ernest Lawrence, who, at the age of 29, unlocked the gates to the world of the atom with his invention of the cyclotron.

SUCCE$$ SUCCESS IN FACULTY RECRUITMENT AND RETENTION: Despite fierce competition from elite private universities, UC Berkeley has had a 72% success rate in recruiting new faculty in the past decade, and in the past five years has retained almost 70% of faculty whom other institutions tried to recruit.

Optometry National Boards NBEO Examination Pass Rates
BERKELEY 2007

PART I: BASIC SCIENCE

- Berkeley: 87.3%
- National: 74.8%

PART II: CLINICAL SCIENCE

- Berkeley: 100%
- National: 91.5%

PART III: PATIENT CARE

- Berkeley: 100%
- National: 96%

BERKELEY UNDERGRADUATE STUDENTS IN GENERAL

Berkeley is the opportunity of a lifetime for many of our students: 36% of our students come from families with annual incomes under $45,000. In fact, Berkeley educates more students from these income brackets than all the Ivy League schools put together.

- 87% come from public schools.
- 30% are the first in their family to attend a four-year college.
- 75% of all undergraduates receive financial aid.
- 98% of entering freshmen are among the top 10 of their high-school class.
- Berkeley has more Peace Corps volunteers than any other university since the start of the program.
- There are 450,000 UC Berkeley alumni worldwide.
- In 2007–08 over 90,000 donations accounted for more than $409 million in private support to UC Berkeley.

BERKELEY OPTOMETRY STUDENTS

Applicants for the class that started in August 2008: 246
Enrolled: 68

- Mean age at admission: 23
- Number of women: 50
- Number of men: 18
- Number of states represented: 9
- Average GPA: 3.53
- Average OAT score: 360

PATIENT CARE

At the Meredith Morgan and Tang Eye Centers on the Berkeley Campus alone, there are more than 75,000 patient visits each year. The total number of patients cared for by Berkeley Optometry students is significantly increased as a result of their experiences during the three or four 10-week external rotations they complete during the fourth year. The numbers of patient encounters for the average Berkeley Optometry student during training are 560 for third-year students and 2,000 for fourth-year students.
“All the material gain I have in this world I must credit entirely to optometry. The little knowledge I have, by which I am able to render fair service ... has come to me by virtue of those who sacrificed before me. Therefore, if success in life is to leave the world a little better for having been in it, then I feel honor bound to give to that which has given to me."

—GEORGE L. SCHNEIDER, JANUARY 18, 1923

A MEETING WITH UC PRESIDENT BENJAMIN WHEELER

In 1907, a committee of three optometrists from the California State Association of Optometrists met with Benjamin Ide Wheeler, president of the University of California, about establishing a “Course in the Science of Optometry.” The committee consisted of George Schneider of Berkeley, Charles Wood of Oakland, and Frederick Chinn of Sacramento. This would be the first of many meetings between optometrists and the University, comprising a 16-year undertaking leading to the inaugural optometry curriculum in August 1923.

Although President Wheeler responded favorably, he wanted to consult his “oculist” friends. Schneider, Wood, and Chinn immediately understood that there would be troublesome obstacles to overcome, not least of which was determining the role, if any, of the often antagonistic medical profession. They also had to persuade administrators and faculty to support a professional curriculum at the University, as well as finance the course and recruit students.

Schneider and his allies would succeed only after tireless effort and resilience in the face of repeated setbacks and opposition from both outside and within the profession of optometry. The early advocates of a “Course in the Science of Optometry” believed passionately in the righteousness of their cause—for them it was a mission of historical proportions. They wanted to advance optometry through
professional and scientific instruction, to put it on an equal footing with other health-care professions. These were remarkable men, dedicated to the proposition that both the profession and the public would benefit from an affiliation with the University—an institution of international repute with exacting standards of education and growing achievements in research.

George Schneider was foremost among these pioneers—a visionary optometrist who would guide the process from start to finish, and who would become the first lecturer in optometry at the University of California. The early history of Berkeley Optometry serves, in part, as a biography of Schneider’s professional life. Through it all, he stands out as a person of ideals, patience, persistence, cleverness, kindness, and vision. Without him there might never have been a School of Optometry on the Berkeley campus.

THE PROFESSION BEFORE BERKELEY OPTOMETRY

When Schneider and his colleagues began their campaign, optometry was struggling to survive and define itself as a profession. Special interests threatened to foil attempts to organize into optometric associations or gain legitimacy through statutory regulations. The medical profession in particular was determined to maintain its hegemony in health care and the marketplace by excluding optometrists from all but the manufacture of eyeglasses. Standing alongside these medical activists were many opticians and optometrists. They were among the most vocal of obstructionists, not wanting to jeopardize their lucrative businesses by changing the rules or increasing the number of better-trained practitioners. Advocates of a university curriculum also faced widespread prejudice from a public that viewed optometry with suspicion. After all, until the start of the 20th century, anyone could practice optometry—there were no educational prerequisites or any requirements to demonstrate proficiency in the practice of vision care. It was not until 1901 that states began passing statutes defining and regulating the profession (California did so in 1903), and two decades would pass before all the states had optometry laws on their books.

These developments took place in a rapidly changing world. In the San Francisco Bay Area, a land boom and resulting population explosion created a need for more expert vision care. The expansion of the University’s student body, faculty, research, and infrastructure also opened possibilities for a professional program in optometry.

The mobilization for a curriculum was thus intimately associated with urban development, educational progress, legal protections, and professional advancement. Advocates of the course understood these larger issues as they labored to elevate the profession, which was, in their view, a prerequisite to establishing a curriculum at a world-class university.

THE ROLE OF ORGANIZED OPTOMETRY

Optometric practice was changed in California largely through the efforts of the more forward-thinking members of the profession. The lobbying by organized optometry for a curriculum was critical to winning over University officials and faculty. Yet these activists did more than voice their support—they also agreed to pay for the costs of the inaugural courses. In 1922–23, Schneider organized a campaign to collect pledges totaling more than $9,000 (a considerable sum in those days) in support of the first year’s instruction. In the second year, all operating costs were met by the assessment of higher annual license renewal fees (raised from $2 to $10, with $8 going to support the curriculum and research). This represented an extraordinary instance of private practitioners entirely financing a professional program at a public university.

This portrait was taken circa 1926–27 at the Athens Athletic Club in Oakland, California. The men, all practicing optometrists and members of local and state optometric associations, had been active in lobbying for the curriculum in optometry at the University. (Left to right, front row, seated): Charles Mueller, William Fraser, Herbert Schultz, Fred Laufer, George Schneider, and Edward Hardy; (Back row, standing): Morris Kittredge, Fred Watson, Charles Wood, Wallace Doig, William Burns, and Paul Eckley.

Le Conte Hall, the home of the Department of Physics, circa 1925–26, with the Campanile and a corner of Bacon Hall (no longer standing) in the background. Beginning in 1923, the curriculum in Optometry was assigned temporary offices and clinic space on the attic floor, plus an optics lab with spectacle-making equipment in the basement.
PHYSICS-OPTOMETRY

In the fall of 1923, Berkeley Optometry offered its first classes. The fledgling program was, however, a poor relation to well-established University departments, and it had much to prove. Optometry was not an independent department or school, nor even a division within a home department—it was merely a two-year curriculum for junior and senior undergraduates. Initially, students graduated with a BS degree in Physics and a Certificate in Optometry; in 1929, the major was revised to Physics-Optometry. The program was thus a curious hybrid of physics courses and practical/theoretical optometry, making it vulnerable to criticism from skeptics among faculty and administrators across the campus. To put it bluntly, people were watching, and some were all too eager to see the experiment fail.

The Department of Physics was an ambivalent host who considered optometry’s occupation of rooms in Le Conte Hall to be, at best, a temporary expedient. It would tolerate the intrusion only as long as space was available. In the meantime, it expected optometry students to hold up their end of the bargain by taking all the required physics courses and performing, on average, at the same level as physics majors. None of these conditions were met, and despite parallel expansion of the physics and optometry programs and the growing need for more space, another quarter century would pass before the interlopers found lodgings in a separate building.

RALPH MINOR’S TENURE AND LEGACY

Berkeley Optometry began when the University appointed Ralph Minor in 1923 as “Professor of Physics in charge of Optometry.” Minor’s challenge was to transform what amounted to an experiment in professional instruction into an independent school of optometry. Undergraduates had to complete the curriculum, pass the state board examinations, and find gainful employment. Anything less would be seen as a failure of the curriculum to prepare its graduates for a professional life. Minor also believed (correctly) that gaining the endorsement of University administrators and faculty for an independent school would require long years of effort.

Support from California optometrists remained critical for the survival and expansion of the program. Organized optometry was the curriculum’s financial lifeline, for in the early years the sole support of the program came from the redirected $8 portion of state license renewal fees. Should the program fail in the view of optometrists, they might call in their fees legislatively and force the University’s hand—to either support the program on its own or shut it down.

Minor’s concerns went beyond monetary considerations. He wanted optometrists to believe that the program would advance the profession for the benefit of both the practitioner and the public. With the approval and occasional direct involvement of optometrists at large, he could build the professional program and guarantee its long-term survival. This period in the history of Berkeley Optometry was characterized partly by Minor’s effort to foster an ongoing cooperative relationship with optometrists and their professional organizations.

For 23 years, Minor directed and expanded the program, working toward independence from physics while improving the range and depth of a curriculum suitable for the practice of optometry. He did this despite a rather unsteady start. At first, student recruitment faltered—a cause for great concern in an unproven curriculum, but then it took off. Enrollment for all optometry registrants increased from 13 students in 1929 to 64 in 1933. In 1934, Minor graduated the so-called “Wonder Class.” Eighty percent (11 of 14 graduates) were honor students, an astonishing percentage within a single program at the University. This group represented the highest scholastic achievement of any
class during the first 10 years of the program. Minor and others frequently cited the “Wonder Class” as evidence of bona fide scholarship among its graduates, which boosted the effort to expand the program and gain independence. Included among these graduates was Meredith W. Morgan Jr., destined to become the third dean of Berkeley Optometry.

DEVELOPING THE FACULTY AND CURRICULUM

From the beginning, Ralph Minor displayed a talent for recruiting excellent faculty. Frederick Mason (1886–1954) was the first, accepting a position as full-time instructor in 1924. (Schneider continued his private practice in downtown Berkeley and thus lectured part-time.) The irascible Mason became an outstanding figure in the history of Berkeley Optometry, notable for introducing high standards of scholarship and advancing professional development. A taskmaster who was as demanding of himself as of others, Mason had a significant and enduring impact on an entire generation of optometry students. Minor also established Berkeley Optometry’s first instructional alliance with medicine when he appointed Milton Shutes, MD, as a lecturer in ocular pathology. Others would follow, particularly Marshall Atkinson (’40, MD UCSF ’46), who resisted sustained criticism and threats of sanctions from organized medicine. (Atkinson had committed the unpardonable sin of teaching ocular pathology in an optometry school.) He remained undeterred, believing that medicine should cooperate with optometry for the benefit of public health.

Minor worked continually on curriculum development, gradually toning down the emphasis on mathematics and physics (much to the displeasure of the physics department) while introducing more instruction and training in the physiological and pathological aspects of vision. He also oversaw the re-equipping of refracting rooms and the optics laboratory, as the number of patients receiving eye-care services increased.

The research component, too, needed expansion and guidance in order to produce vision science investigations that University faculty and administrators, optometrists, and the public could appreciate and support. Physiological optics became a primary focus. As he was nearing retirement, Minor would rely increasingly on Kenneth Stoddard (PhD Stanford University, OD Berkeley Optometry ’36), who by June 1938 had left private clinical practice to join the optometry faculty. Minor admired the energetic direction provided by Stoddard, who succeeded Minor as dean in 1946, the inaugural year for the Graduate Program in Physiological Optics (now called Vision Science).

ALUMNI AND STUDENTS

Optometry alumni and student associations were also launched during Minor’s tenure. The Optometry Alumni Association of the University of California began in 1926 as a small, loosely knit group holding educational meetings in Le Conte Hall. Angus McLeod ’25, from the first graduating class, and Albert Reinke ’26 were instrumental in establishing the association and making it a more formal organization by writing its first by-laws in 1931.

The student association was closely allied with the Omega Delta National Fraternity of Optometrists until 1941, when they drafted the first constitution for the Associated Optometry Students of the University of California.
INDEPENDENCE

On July 1, 1941, the Regents finally approved an independent “School of Optometry” (although it was still housed in the physics building). Minor was named its first Director (he would become the first Dean in 1945, one year before his retirement).

Now that the program had evolved into a professional school, Minor continued to work for the funding of a new building. On November 16, 1939, he and Thomas Peters (1886–1956; president of the California State Association of Optometrists, 1938–40) wrote a report providing the association membership with a cogent summary of events leading up to an independent school of optometry and the possibility of a new optometry building. California optometrists, as they had in 1923, responded enthusiastically, and by May 1941 they had pledged seed money totaling more than $80,000. Despite the tragedies of World War II and the ensuing economic disruptions, leaders in the state association kept their eyes on the prize, collecting the money behind the pledges during the years 1942–1946 as they waited for the opportunity to promote the new building once again.

As if the war were not enough of a diversion, the school narrowly escaped relocation when, in 1942, some UCLA alumni, aided by faculty at the private Los Angeles School of Optometry (later the Southern California College of Optometry), attempted to persuade UC president Robert G. Sproul that construction of the proposed building should be moved to the UCLA campus. Sproul was willing to accept either Berkeley or UCLA as the new home for optometry (he seemed to prefer UCLA), but he would not decide without hearing from the California State Association of Optometrists (once again, a remarkable acknowledgment by the University of the role played by organized optometry). Berkeley alumni and other sympathetic optometrists quickly rallied to protect the Berkeley site. In September 1943, the state association voted unanimously in favor of Berkeley.

In early 1947, the state legislature drafted assembly bill AB-2118 to appropriate $300,000 (to be added to the funds already raised by organized optometry) for a new optometry building. On July 8, 1947, Governor Earl Warren (1891–1974, future Chief Justice of the U.S. Supreme Court) signed the bill. By this time, however, post-war inflation had made it unfeasible to construct a building of sufficient size and quality for a mere $380,000. President Sproul and the Regents then provided an alternative by approving the conversion of Durant Hall into the optometry building.

More than a half century of program change and development would follow the early period of Berkeley Optometry—a story that will be told in detail in a forthcoming book.* After more than 80 years of clinical and research program development and facilities enhancement, Berkeley Optometry—once only the dream of pioneering optometrists—stands as the premier institution of its kind, graduating the best trained optometrists in the profession and hosting a world-renowned vision science research program.

*L. View of the “Optometry Building” during the 25th Anniversary Celebration and Dedication on June 22, 1948. The audience (partly visible on the left) was composed of faculty, staff, students, and members of the American Academy of Optometry (whose annual congress was held in San Francisco that year). The building, formerly called the Emergency Classroom Building and then Durant Hall, would undergo five years of interior remodeling before Berkeley Optometry enjoyed full occupancy. It was rededicated as Ralph S. Minor Hall in 1970.

Students conducting visual function studies in the physiological optics laboratory in Le Conte Hall, circa late 1940s–early 1950s, using haploscopes mounted on laboratory tables.

Photograph, Berkeley Optometry Archives

Reproduced from the Berkeley Gazette, June 23, 1948, from negatives in the Berkeley Optometry Archives

*This text has been excerpted and adapted from John Fiorillo’s forthcoming Berkeley Optometry—A History.
ALVARO CASTILLO

Alvaro was born in Nicaragua, but his family moved to the United States when he was one year old to escape the political turmoil in Nicaragua. After Alvaro completed high school in Florida, he moved with his family to Fresno, where his father had gotten a job. Interested in healthcare but not yet decided on a specific career, Alvaro spent a couple of months looking for a job. During this time he found he needed to see an optometrist, where he overheard a conversation among the office staff about hiring someone for data entry. He applied for the position and was hired. He found working at a small office to be a great way to learn about optometry, and he decided to become an optometrist. With an undergraduate scholarship in hand, Alvaro returned to Florida for college before being accepted into Berkeley Optometry, where he could be close to family again.

Now in his final year at Berkeley Optometry, Alvaro has discovered a passion for community service. At Berkeley Optometry, Alvaro learned about Volunteer Optometric Services to Humanity (VOSH), and he saw that VOSH went to countries like Nicaragua to provide vision services to the indigent. Alvaro found a genuine desire to help the people of Nicaragua, and in VOSH he found the perfect vehicle. His participation in VOSH, with two trips to Nicaragua and one to the Dominican Republic, led him to become even more active in school and the community. He has served as president of VOSH at Berkeley Optometry, and he has been honored to receive the Thomas B. Hewitt Volunteer Public Service grant. Alvaro believes that his volunteer experiences at Berkeley Optometry have given him skills that can benefit his community both locally and worldwide. His current plans are to pursue private practice, but Alvaro always intends to remain active with VOSH.

PATTY OH

Patty grew up in Seattle in the pre-Starbucks/Microsoft/Nirvana era. More hippy than trendy, she went to Reed College in Portland, Oregon to get her bachelor’s degree in biology. She then continued southward to the Bay Area, where she worked as a research assistant at UCSF and UC Berkeley. At Stanford University Patty earned her MS in biology, but then she decided to make a career switch. Unsure where her future lay, she worked a few years in the high-tech industry and then lived in Brazil for two years. She then decided to move back to the Bay Area to pursue optometry.

Believing it is important to take time from studies or work to participate in the community, Patty continues to be active in public service. In her first year at Berkeley Optometry she served as the Class of 2010 Philanthropy Chair, helping to organize and recruit students for numerous philanthropic activities, including nine vision screenings. As a second-year student, Patty was the school’s Bay Area Optometric Council Representative, serving to bridge the local optometric professional societies with Berkeley Optometry. Since the professional societies have a large philanthropic component, many of her responsibilities extended to community vision screenings. During her first two years of optometry school, Patty volunteered at diabetes health fairs, children’s health fairs, senior citizen vision screenings, Latino health screenings, Special Olympics exams, and vision services for the indigent. In January 2007 she traveled to Palau as part of the Volunteers of Optometric Services to Humanity (VOSH) program. There she and other students examined nearly a thousand Palauans and distributed hundreds of pairs of glasses.

Patty feels fortunate to have found a career that values public service. Her public service activity and academic achievement have resulted in several awards: the 2006–2007 UCBSO Student Leadership and Service Grant, the 2007 Summer NEI T35 Research Grant, the 2008 Great Western Council of Optometry Scholarship, and the 2008 Raymond L. Eng Family Professional Student Support Award.
Student Financial Aid

Optometry students graduate with a debt load, on average nationwide, of $135,000. While a Berkeley Optometry graduate's average debt has historically been lower, recent increases in tuition (to about $20,000 per year for California residents and $30,000 for nonresidents) will drive this up. Increasing student debt places the profession in some jeopardy. In order to address this crucial issue, this year we were able to provide student financial aid to every student who was making adequate academic progress—for a total of over $850,000.

Last fall the Graduate Division announced a new program for student support, the Named Fund Initiative, which provides the opportunity for current and retired UC Berkeley faculty to establish named endowed funds, matched (up to $10,000) by the Graduate Division. Both our optometry and vision science faculty and the Alumni Association stepped up to the plate. To date we have 26 new endowed funds. When fully endowed, these funds will provide over $500,000 in new endowment for student fellowships.

White Coat Ceremony for Second-Year Students

Berkeley Optometry held its fourth White Coat Ceremony at the end of the spring semester. As a result of the enhanced second-year curriculum, which provides students with significant patient care experience, a true milestone is reached when they become third-year students. This passage was officially marked by the White Coat Ceremony held on May 23, 2008. The event was highlighted by the presentation of a white clinic jacket (provided by Alcon) to each student, and it included a group recitation of the Optometric Oath.

Clinics Go Paperless

The clinics have completed the transition to paperless Electronic Medical Records (EMR) with the upgrade to version 9.0 of Compulink's Eyecare Advantage (a computerized patient-management system). Berkeley Optometry is the first among the Association of Schools and Colleges of Optometry (ASCO) members to take this step. Our patient care environment is now EMR based (i.e., paperless) as opposed to EMR supported (basic information computerized but supplemented by test results, etc., in a patient's chart.) Why go paperless? It's a near-term goal in U.S. healthcare, driven by mandates of the Centers for Medicare & Medicaid Services (CMS). The push toward EMRs began in 1996 with the HIPAA legislation and regulations. Generally, EMR systems reduce the chances for reading or transcription errors in working with a patient's chart. They provide easy and reliable access for a

patient record, especially in a complex multi-department environment such as our clinics. It also enables the portability and sharing of this information, especially with CMS and similar agencies for claim payment and reimbursement.

Commencement under the Big Top

Optometry and Vision Science graduation ceremonies were held Saturday, May 24, 2008, on Minor Plaza (you might have known it as Minor Beach) under a huuuuuuuge tent! On this very special day we honored 56 new Doctors of Optometry and seven new Doctors of Philosophy in Vision Science.

A Roadmap for Faculty Searches

Last fall, the chair of the faculty appointed a committee to develop a long-term strategic plan for faculty renewal and recruitment. This plan, adopted by the entire faculty, provides a plan and rationale for the recruitment of 15 new faculty colleagues to replace an estimated 10 faculty retirements over the next eight years. It includes the additional faculty needed to meet the goals of the school in maintaining and advancing its pre-eminence in its teaching and research programs and to begin to approach the faculty/student ratio required for a 21st century obligation to train optometrists and future generations of optometry faculty.

The plan calls for recruitment in four tracks, three of which are related to specific areas of content relevance and opportunity for the next ten years:

1. Human optics and imaging
2. Brain mechanisms of visual disorders
3. Ocular disease/biology
4. Clinical/translational research

Our search earlier this year for faculty in the ocular development and disease biology area produced a very strong pool of candidates, and the search committee recommended we pursue two outstanding candidates: Karsten Gronert and Lu Chen. Both accepted our offers. (See the Faculty Spotlight section of this magazine.)
Our Current Search

Our current search is for a new faculty member with an OD degree in the area of clinical/translational research. This area provides a venue for basic discoveries to be translated into patient-based advances in optometry.

Our new Clinical Research Center (CRC) has the potential to bring together students, clinicians, clinical faculty, collaborating “bench science” optometry faculty, and industry for the express purpose of advancing patient care through patient-based research. Indeed, we have moved beyond proof of concept with this Clinical Research Center, which has the potential to become the focus of future training efforts in patient-based research. Under the strong leadership of Meng Lin, the CRC already has over $1 million of industry support for cornea and contact lens research, and $600,000 of support for a remote telemedicine program for optometric consultation on diabetic retinopathy. In addition, our recently acquired almost $5 million K12 NIH Training Fellowship Program (Ken Polsky, Program Director), specifically for established clinicians seeking patient-based research training, provides a superb forum for training the next generation of clinician-scientists. The proposed recruitment would enable us to expand our training in patient-based optometric research.

Opto-Camp

In 2006, the Admissions and Student Affairs Office (ASAO) launched “Opto-Camp.” The goal of Berkeley Optometry’s Opto-Camp is to introduce underrepresented pre-health science majors to optometry as a potential future career track and to prepare them to be successful applicants to optometry school. The objective of Berkeley Optometry’s Opto-Camp is to present a three-day “in residence” experience that will provide participants with opportunities to learn about the profession of optometry and the process of becoming an optometrist. The days are spent attending lectures, touring the facilities, meeting current optometry faculty and students, and socializing with each other. The Opto-Campers are hosted over the course of the three days by Opto-Camp Counselors, current students who attend events with the participants, stay with them in the dormitories, and join them at all meals.

In the inaugural class of 2006, 20 prospective students attended Opto-Camp. Upon completion, participants were asked to complete a survey so that we could ascertain if we had met our objectives. It was clear that the participants not only enjoyed the program but also learned a great deal about the profession.

Given the success of the program, we have expanded our reach and now offer two sessions of Opto-Camp, one in June and one in July, with 30 campers invited to each session. This year, we received 154 applications for the available seats. For the June 2008 session, we had 21 first-generation college students attending, and for July 2008 we had 20 first-generation college students attending. Both sessions had broad ethnic representation as well.

Berkeley Optometry is now beginning to see the results of the Opto-Camp program. Two students in the Class of 2011 were in the 2006 Opto-Camp, and six Opto-Campers from 2007 have been accepted to the Class of 2012. See http://optometry.berkeley.edu/opt_tcpp/admissions/admitoptocamp.html.

There Is So Much Happening Here

In April, the Berkeley Clinical Scientist Development Program (BCSDP) hosted the Second Annual Conference on Translational Research, From Discovery to Application. The event was a huge success, bringing together representatives from academia, industry, and the National Institutes of Health. More than 80 researchers gathered to discuss the future and application of vision research. Please visit the website at http://optometry.berkeley.edu/opt_tcpp/program/bcscp/bcscp.html.

On June 6-7, 2009, the ophthalmic community will celebrate the 50th Anniversary of the Orinda Study at our Third Annual Conference on Translational Research. The Orinda Study, completed by Berkeley faculty and local optometrists, was the first significant study of the development of myopia in children and is still considered the landmark study of its kind. The follow-up Orinda study is on the leading edge of a wave of research that is yet to crest. This conference will focus on myopia with an emphasis on translation. Speakers include world-renowned vision researchers Professor Brien Holden from University of New South Wales in Australia, chair and CEO of the International Centre for Eye Care Education and chair of the Refractive Error Working Group of the World Health Organization; Professor Jane Gwiazda from the New England College of Optometry and lead investigator on the COMET study; and Professor William Good from the Smith Kettlewell Eye Research Institute, recognized for his research on retinopathy of prematurity. Invited world-renowned alumni include Professors Karla Zadnik ‘82, PhD ‘92; Don Mutti ‘82, PhD ‘92; Raymond Applegate, PhD ’83; and Mert Flom ’51, PhD ’57.

Re-accreditation

Last spring the school was up for re-accreditation by the ACOE (Accreditation Council on Optometric Education). This normally happens every seven years, and it entails an extensive written self-study as well as a site visit by the ACOE team. The visit was very positive and we were re-accredited for the next eight years!
THE DEVELOPMENT OF RETINAL IMAGING

After one year of training, optometry students will learn that the optical principles behind ophthalmoscopy are quite simple. In fact, the optics of the eye were well described by Kepler in the 1600s. A series of technical insights involving a partially silvered mirror and a properly directed light source led to the invention of the direct ophthalmoscope by Helmholtz in 1850. Since then, ophthalmoscopy has improved by employing better ways to get illumination into the eye and to properly capture the light exiting the eye. The development of photography and the electronic flash lamp, for example, represented major advances.

One of the most significant developments in ophthalmoscopy was the invention of the scanning laser ophthalmoscope (SLO). This is a specialized version of a scanning laser microscope, which builds an image by recording the scattered light from a focused spot as it is scanned across the region of interest. The only difference between a microscope and an ophthalmoscope is that in a microscope, one uses a high-quality objective and can look at whatever sample is placed on the microscope stage, whereas in an SLO, the optics of the eye serve as the objective lens and the retina is always the sample.

Having the optics of the eye serve as the objective lens in an SLO imposes a major limit on performance. High-quality microscope objectives are well designed for one specific task—that of focusing light to a small spot. The optics of the eye, however, are designed for a multitude of tasks, including wide-angle viewing, dynamic focusing (accommodation), operating in a variety of lighting conditions, and lasting the lifetime of the person using it. As such, the eye rivals any manufactured imaging system in functionality; but when it comes to pure image quality, it leaves a lot of room for improvement.

The primary limits to image quality in the eye imposed by defocus and astigmatism are relatively easy to overcome. Spectacles have been used for centuries, contact lenses in the last 50 years, and more recently, corneal reshaping has been accomplished using lasers. But there are imperfections in the eye that are not correctable with conventional methods. In optometric lingo, such eyes have been classified as having irregular astigmatism, but this term is rapidly being replaced by high-order aberrations, which can be quickly and accurately measured using a host of commercially available devices called wavefront sensors. No sooner had wavefront sensors become available to measure these high-order aberrations than efforts were underway to correct for them. Wavefront-guided refractive surgery, for example, uses aberration measurements to generate a custom correction that will not only relieve your need for glasses but also give you sharper vision. You can even purchase spectacle lenses that will correct your high-order aberrations.

In the Ophthalmic and Visual Optics Lab at Berkeley Optometry, we employ a technique called adaptive optics, or AO, to correct for high-order aberrations. Our correction is done on a bench-top, so it is not portable, but it does enable us to test vision with images that are sharper than the patient has ever experienced in their lifetime. Moreover, it allows us to see inside the eye with a resolution that is unprecedented.

ADAPTIVE OPTICS: FROM THE TELESCOPE TO THE OPHTHALMOSCOPE

AO was developed by astronomers, who were faced with blurry images of distant objects caused by turbulence in the earth’s atmosphere (the twinkling-star phenomenon). To overcome the problem, they developed ways to measure the effects of the turbulence and invented deformable mirrors to correct for them. Today, most major telescopes employ some type of AO system and, as a result, large ground-based telescopes can take pictures with resolutions rivaling that of the Hubble Space Telescope.

These technical developments by astronomers set the stage for vision scientists to attempt the same. In 1996, David Williams, Donald Miller, and Junzhong Liang completed the world’s first adaptive-optics ophthalmoscope. They showed the first extensive mosaics of cone photoreceptors ever taken from living eyes.

After completing a PhD at the University of Waterloo (where I had been frustrated in my attempts to take high-resolution images with a modified SLO), I had the opportunity to work with the AO ophthalmoscope at the University of Rochester. By 1998, we managed to map the trichromatic cone mosaic, representing the first major scientific outcome
of this new technology. However, that ophthalmoscope had limitations in image frame rate as well as image contrast that scanning laser methods could potentially overcome. So I spent three years at the University of Houston developing the adaptive-optics scanning laser ophthalmoscope, or AOSLO. Completed in 2001, the AOSLO could record real-time videos of the living retina on a microscopic scale. The real-time aspect allowed us to see single leukocytes coursing through the smallest retinal capillaries and track the motion of the eye better than any other device. Moreover, the AOSLO was confocal, making optical sectioning of the retina possible.

A NEW WAY TO SEE EYE DISEASE

By offering microscopic views of the inside of the eye, AO imaging is driving a paradigm shift in how ophthalmoscopy is used for clinical and basic science. In collaboration with Jacque Duncan, an ophthalmologist from UC San Francisco, we have been measuring the structural properties of patients with a variety of retinal degenerations. Little is known about how many of these diseases progress on a cellular scale. In fact, the tissue structure of some conditions, such as NARP (neuropathy, ataxia, retinitis pigmentosa) has never been studied. Seeing these cells in living eyes, therefore, can shed new light on how these diseases progress.

In an era where our understanding of the genetic basis of eye disease is blossoming, AO imaging will be useful in determining the complex ways in which these mutations affect the retina. Furthermore, knowledge of the molecular underpinnings of these diseases is beginning to generate novel therapies, and AO imaging represents possibly the most sensitive technology to measure their outcomes. Without sensitive outcome measures, the development of therapies is hampered. Dry AMD, for example, progresses so slowly that the amount of time and money required to determine whether a drug is effective is prohibitive for drug companies. Sensitive, cellular-level imaging biomarkers for the disease have the potential to reduce the time and cost significantly.

THE FUTURE

The potential applications of AO are far-reaching, as any ophthalmic imaging modality can benefit. Some labs are already working on incorporating AO into OCT systems. As the technology matures, costs will fall and AO may become part of routine clinical practice. Your standard retinal camera, for example, might use a basic AO system to quickly correct for defocus and astigmatism. Your phoropter may eventually employ an AO system with a built-in autorefractor to replace the myriad of lenses they current use. Not only could the AO phoropter converge quickly to the desired refractive correction, but the AO system could demonstrate what vision would be like if high-order aberration were corrected. You could also have patients preview multifocal or progressive-addition lens designs.

At the other end of the spectrum, new developments in AO will also facilitate the most advanced ophthalmic imaging systems. Already, researchers are using AO with autofluorescent imaging as well as extrinsic fluorescent dyes to help visualize otherwise invisible cells in the retina, like ganglion cells. By offering microscopic access to the retina, AO systems will be used not only to image the anatomy but also to measure functional properties of the cells that we see.

In the Ophthalmic and Visual Optics Lab we continue to work in both directions, from the most applied to the most advanced applications, and Cal is the best place to develop and use this technology. Berkeley Optometry leads the way in basic and clinical vision research and offers access to the best researchers in other disciplines, both on campus and in the Bay Area. ■
Educated in Australia, Professor Wildsoet joined Berkeley Optometry in 2000. Professor Wildsoet teaches systemic and ocular pharmacology as well as clinical optometry. She is also heavily involved in mentoring student researchers, at both the undergraduate and graduate levels. The overriding goal of research in the Wildsoet lab is the development of preventative treatments for myopia.

Myopia, or short-sightedness, while not a modern disease, is now present in epidemic levels in Asia—over 90% in some university student populations. In the U.S. in 1999, spectacles, contact lenses, and doctor visits accounted for $8.4 billion/year, and LASIK surgery another $2.1 billion/year in healthcare costs. Spectacles alone cost $15 billion in 2002, with over 150 million Americans using corrective lenses to compensate for refractive errors.

Myopia is a leading cause of blindness. Although there is general agreement that human myopia is mainly due to excessive elongation of the eye, the causes of that elongation are poorly understood. Genetic factors likely play a role, but myopia’s increasing prevalence suggests environmental factors may also contribute. This notion is not new. In Juler’s 1904 *Handbook of Ophthalmic Science and Practice*, there is a section devoted to the treatment of progressive myopia: “All work must be stopped,” he advised, “No reading or writing is to be permitted.” Other equally impractical recommendations followed. But the urgency of Juler’s concern is understandable, because progressive myopia can lead to sight-threatening staphylomas, or scleral bulges.

The Wildsoet Lab studies refractive development, particularly myopia. We are a multidisciplinary team—clinician researchers, molecular biologists, bioengineers, and optical engineers—working toward new understandings and therapies for this old problem. We perform human studies to learn more about the problem, and we use animal models, cell cultures, and molecular biological techniques to investigate the mechanisms underlying myopia and test potential therapies. To supplement our approaches and anchor us to real-world problems, we collaborate with other research laboratories as well as with clinical and industrial researchers. Our collaborators include researchers from the Moscow Helmholtz Research Institute of Eye Diseases, where refractive surgery (radial keratotomy) originated. Our lab also participates in the NEI-funded Summer Research Training program for OD students and UC Berkeley’s Undergraduate Research Apprenticeship Program, providing mentors for future clinicians and scientists.

Animal studies have taught us a great deal about how refractive errors are regulated during development in the process known as *emmetropization*. From chicks, we learned that young eyes grow in response to their visual environment. When spectacles lenses are fitted to chicks to impose refractive errors, their eyes adjust their growth to compensate. Amazingly, their eyes can distinguish hyperopia (where the eye is too short for its optical power) from myopia (where the eye is too long) and increase or decrease eye growth appropriately. We also learned that eye growth is regulated within the eye—the brain is not needed, although the nature of the visual information is critically important. These observations have reinvigorated myopia research, raising many questions about how eyes decode defocus and the signal pathways underlying eye-growth regulation.

Our lab is currently using chick and guinea pig models, *in vitro* cell and tissue models, and human subjects to study fundamental questions such as these:

- What aspects of visual experience influence the development of myopia?
- How are growth signals relayed from the retina (where image defocus is detected) to the sclera (which grows to correct defocus)?
- Can myopic growth be inhibited pharmacologically or with engineered tissue scaffolds?
- What are the roles of optical aberrations, accommodation anomalies, and peripheral refractive errors in myopia development, and can they be manipulated optically to control myopia?
- Does myopia affect retinal structure and gene expression in ways that predict myopia-related pathologies?

We have three on-going current projects of particular interest, described on the next page.
CAN CONTACT LENSES CONTROL MYOPIA PROGRESSION?

An unexpected but potentially important result from our animal studies was that bifocal spectacle lenses are able to slow eye growth. It was therefore fascinating to learn that Berkeley Optometry alumnus Thomas Aller (OD ’83) had noted in his clinical practice a slowing of myopia progression with bifocal soft contact lenses. Similar to chicks reared with our special “multizone” spectacle lenses, myopic children wearing concentric bifocal contact lenses showed little or no increase in their eye length, whereas children wearing standard soft contact lenses showed the familiar pattern of progression. We are currently testing optimized lens designs in chicks and guinea pigs. Accommodation (near focusing ability) and peripheral (as opposed to central or foveal) refractive errors are thought to be involved in myopia progression, so in separate studies, we are testing the effects of bifocal contact lenses on these factors. Disentangling such multiple mechanisms is a major research challenge. Clinician scientists Janice Tarrant, MS, OD, and Maria Liu, MD, OD, are directing these studies. They are also studying orthokeratology (ortho-K), which uses rigid contact lenses worn overnight to flatten the cornea. There are intriguing parallels between ortho-K effects and those of bifocal soft contact lenses, not least of which is that ortho-K slows eye growth.

USING TISSUE ENGINEERING TO STRENGTHEN THE MYOPIC SCLERA

We are also engineering new materials to reinforce eyes damaged by high myopia. The weakened scleras of highly myopic eyes can become unstable and develop bulges called staphylomas, with serious visual consequences. Surgical reinforcement with cadaveric tissue is the only available treatment. We are making and testing injectable hydrogel polymers that stiffen after implantation. These can then be used as tissue scaffolds to facilitate cell attachment, migration, and proliferation, and also as vehicles for drug delivery directly to the sclera. Similar to the materials used in contact lenses, they are well tolerated by the body. Bioengineer James Su is leading this project, and bioengineer Prema O’Brien is developing a bioreactor to screen drugs for their anti-myopia potential.

MULTIDISCIPLINARY COLLABORATIONS ARE THE KEY TO OUR SUCCESS

Our multidisciplinary, translational research relies on the expertise of many collaborators: Professors Kevin Healy and Song Li from the Bioengineering Department at the University of California, Berkeley; Brian Ward, MD, a Los Altos–based retinal surgeon involved in scleral support surgery; Thomas Aller, OD, a San Bruno–based optometrist; Jie Song, PhD, from the University of Massachusetts Medical School (formerly of the Molecular Foundry); Brad Boyle, PhD, and Reese Jones, PhD, of Sandia Laboratories; Vicki Nguyen, PhD, from the Mechanical Engineering Department at Johns Hopkins University; Sally McFadden, PhD, of the School of Psychology of the University of Newcastle, Australia; Elena Tarruta, MD, and Elena Iomdina, PhD, from the Moscow Helmholtz Research Institute of Eye Diseases, Russia; and Likun Ai, MD, of the Beijing Tongren Hospital, Capital Medical University, China.
The private sector has long had a keen interest in opportunities to collaborate with Berkeley Optometry’s world-class research faculty. Indeed, industry has funded a variety of studies in our faculty’s research laboratories. Some of these investigations have produced significant results, leading to important discoveries in both fundamental and applied science. Until the spring of 2004, however, Berkeley Optometry did not have an independent research center capable of accommodating a wide array of industry sponsored, patient-based clinical trials and product development studies. Consequently, the school had to decline most industry proposals for patient-based investigations because of insufficient space and personnel within its individual basic science laboratories.

All this changed on April 15, 2004, when Berkeley Optometry established the University of California, Berkeley, Clinical Research Center (CRC). The CRC’s initial objective was to bridge the gap between clinical and basic science research through industry driven, patient-based research known as translational research.

Dean Dennis Levi and former Associate Dean Suzanne Fleiszig selected Meng C. Lin as director of the CRC. As both a clinician and research scientist, Dr. Lin was extremely well qualified to lead the CRC. She had earned her OD degree from The Ohio State University School of Optometry in 1996 and a PhD in Vision Science from Berkeley Optometry in 2002. She first conducted patient-based research during a residency in advanced contact lens and ocular diseases at the University of Alabama School of Optometry (1996–97). Dr. Lin accepted a position as a post-doctoral research fellow at Berkeley Optometry (1997–99) and entered the Vision Science graduate program in 1999. She was appointed Assistant Clinical Professor in 2001 and Senior Research Optometrist in 2002 before accepting the directorship of the CRC. Dr. Lin was intrigued by the challenge of establishing a clinical research center that could accommodate a broad spectrum of research with direct applications to improved patient care.

Given very modest startup funds (helped in part by the Sarver Foundation and CIBA Vision), Dr. Lin recruited an expert research staff and simultaneously searched for funds to pay their salaries for the long term. She developed project proposals whose study designs were guided by her knowledge of industry needs as well as her desire to answer questions about ocular surface response to contact lenses. As Dr. Lin’s expertise was focused on the effects of contact lenses on tear film and corneal physiology, she sent her first research proposals to contact lens companies eager to find ways to improve contact lens products and lens care. Within months, industry responded enthusiastically to her proposals, and the CRC bloomed from one person with a dream to a research team that today numbers 20. The acquisition of fully equipped, state-of-the-art imaging systems with automated data-management software followed a similar trajectory. With these, the CRC is able to complete 45–60 patient visits per day and promptly complete data management and analysis, efficiency that is attractive to R&D divisions in biomedical device companies.

Despite the eager response from the private sector, changes in University procedure were necessary for the CRC to respond with the procedural agility and speed required by industry. Dr. Lin negotiated with the assistant vice chancellor of research, as well as representatives of Extramural Funds Accounting and the Industry Alliance Office, to establish practical and efficient methods for collaborating with the private sector. The new procedures represent a critical and sustaining achievement for the CRC and Berkeley Optometry.
RESEARCH PROJECTS IN THE CRC

The CRC’s diverse research studies have been interrelated and share the ultimate goal of improving the safety and comfort of contact lens wear. They feature interdisciplinary methodologies that make use of epidemiology, advanced statistical analyses, cutting-edge laboratory techniques, and clinical knowledge and skills.

SOFT LENS SURFACE PROPERTIES AND DEPOSITS

The relationship between lens surface properties and lens performance in the eye has long fascinated Dr. Lin. In the winter of 2004, Dr. Lin initiated joint studies between the CRC and UC Berkeley’s Chemical Engineering Department to understand the effect of wetting agents and the thickness and stability of the pre-lens tear film on lens wearing comfort. Dr. Lin verified that wetting agents do not have a uniform effect across different lens materials. Rather weak correlation was also found between laboratory findings (e.g., in vitro and ex vivo advancing contact angles of a buffered saline on pristine and worn contact lens surfaces), clinical results (e.g., in vivo lens surface quality and tear film stability testing), and subjective lens wearing comfort—a triad of investigations exemplifying translational research. These findings produced a new direction of research on lens-induced dry eye among soft lens wearers, who experience different degrees of symptom relief when using various lens care products. Preliminary data show that protein removal efficacy differs significantly among lens care regimens. This finding suggests a number of possible interventions for treating the deposits that cause ocular reactions to lens wear. In May 2007, Dr. Lin began a series of very promising projects with Tatyana Svitova, PhD, the first chemist employed by the center, to develop methodologies for analyzing lipid and protein deposits on worn soft contact lenses. They are also studying the interfacial phenomena in tear film, that is, protein and lipid interactions at the tear film/air interface and the role of these tear constituents in providing overall tear film stability.

CORNEAL EPITHELIAL BARRIER FUNCTION AND CONTACT LENS WEAR

Clinicians remain concerned that hypoxia (insufficient oxygen levels) during overnight contact lens wear may compromise corneal epithelial integrity. Researchers once believed that improvements in oxygen transmissibility of lens materials would neutralize the threat of hypoxia during overnight lens wear. Dr. Lin designed a clinical trial to test this assumption. The results indicate that even with newly developed oxygen-transmissible lenses, the integrity of the corneal epithelial barrier can be greatly compromised. As the corneal epithelium recovers much faster with rigid than with soft lenses, Dr. Lin is currently examining whether irrigation with unpreserved saline solution upon awakening might enhance post-lens tear mixing under a soft lens, thereby speeding up the recovery process. Concurrently, Dr. Lin is also conducting a longitudinal trial to understand the relationship between corneal epithelial barrier function and lens wear duration.

THE ETHNICITY FACTOR

Dr. Lin’s patient-based investigations include studies in ethnicity effects on corneal response to contact lens wear. She discovered that fundamental differences in ocular anatomy and physiology (primarily in the eyelid structures) between Asian and non-Asian eyes lead to distinct ocular responses in each group. After developing a method to measure the tear film thickness between a soft contact lens and the cornea (post-lens tear film, PLTF), she confirmed that Asian PLTF is significantly thinner than that in non-Asian eyes. The combination of a thinner PLTF and tighter upper lids applies...
higher shear force to the ocular surface, resulting in greater stress to the corneal epithelial cell layer. Asian eyes are thus more susceptible to micro-trauma to the corneal epithelium during lens wear. This finding is notable because changes in corneal epithelial integrity following overnight lens wear, even with high oxygen-transmissibility lens materials, are significantly greater among Asians.

Dr. Lin found ethnicity differences played an important role in the severity and frequency of dry eye disease (DED) within a large population of contact lens wearers and nonwearers. Results suggested that Asians have much less stable pre-corneal and pre-lens tear film. Therefore, tear breakup time, a traditional cutoff for clinical assessment of tear film stability, may not always be an adequate parameter for Asian patients.

Dr. Lin plans to expand her research into ethnicity differences to ophthalmic treatments including overnight orthokeratology and refractive surgery. Joint research projects with basic science faculty are also on the menu. One such investigation is underway with Berkeley Optometry’s Clifton Schor, OD, PhD. Drs. Lin and Schor are investigating the ethnic and usage factors influencing the onset of presbyopia by measuring dynamic focusing ability and the optical properties of the eye.

Dr. Lin is concerned that most clinical studies in the contact lens field have ignored the effect of ethnicity and typically do not stratify into Asian and non-Asian eyes. Therefore, Dr. Lin has adopted as a guiding principle of CRC research that study populations must be ethnically diverse.

A PLACE FOR PROFESSIONAL DEVELOPMENT

Dr. Lin sees the CRC as a training ground for post-doctoral fellows, residents, and optometry students interested in clinical research. The center welcomes the creative thinking necessary to develop, conduct, and complete successful clinical studies. Dr. Lin has established one-year clinical research training fellowships, in which post-doctoral trainees are taught how to obtain approval from an institutional review board, design studies and methodologies, plan sample sizes, and manage and analyze data. Two recent alumni have successfully completed fellowships—Tan Truong (OD ’04) and Carol Hsiao (OD ’00). Dr. Truong had extensive experience in laboratory research but was interested in combining his clinical and research skills. After five years of clinical experience at an HMO in Washington State, Dr. Hsiao took a one-year sabbatical to learn how to carry out small sample size clinical studies. Upcoming fellows include Thao Yeh (’07) and Bill Liu, MD, a visiting ophthalmologist from Taiwan.

For OD residents, Dr. Lin hopes to create, in collaboration with the directors of the Berkeley Optometry residency program, a patient-based research program within the CRC that culminates in a residency-master’s degree. Residents would improve their clinical skills while learning research methodologies, which might lead some to pursue careers in clinical research or motivate others to collaborate in clinical trials while running their own private optometric practices.

The CRC offers optometry students the opportunity to be directly involved in clinical studies, learning firsthand how small and large-scale studies are conducted, how patient recruitment is accomplished, and how data are collected. Some also have the opportunity to present research findings before annual meetings of the American Academy of Optometry and the Association for Research in Vision and Ophthalmology.

THE FUTURE OF THE CRC

Although much has already been accomplished, the CRC is still in its infancy. Dr. Lin is planning to seek funding for broader research, including pharmaceuticals, ophthalmic optics, and functional vision assessment and enhancement. To accomplish this, the CRC will call upon the expertise of Berkeley Optometry’s faculty clinicians and research scientists. With sufficient funding, an expert staff, and a wealth of ideas for future investigations, there is no telling how far the CRC may go in advancing clinical research and engaging vision scientists in translational patient-based research.

Dr. Lin is grateful to the Berkeley Optometry community for its generous support, as well as to friends and alumni in the private sector for their collaboration. She especially wants to acknowledge the dedication of her research team—optometrists and fellows, researchers and scientists, professional support personnel, and undergraduates and OD student assistants.

Dr. Lin, Dr. Svitova, and Research Assistant Helen Wier, MS make final adjustments to a captive-bubble apparatus. This device is used to measure advancing and receding contact angles to evaluate solid-surface wettability. The photograph on the right shows the optical glass chamber containing aqueous solution and an air bubble sandwiched between the lens placed in a holder (lower part) and a bubble holder (top part) of the device. The digital video camera transmits images to a computer, where a LabView program analyzes images and calculates contact angles between the soft lens surface and the air bubble moving on top of it.
Of the school’s nearly $20–million annual budget, only $3.4 million comes from the state of California. This has changed dramatically from earlier days, when nearly the entire cost of education at the University of California was supported by the state.

Research funding includes funds from private industry, the federal government [National Institutes of Health [NIH], Department of Defense, National Science Foundation], the state, the University of California, and various nonprofit organizations.

Other sources include continuing education revenue, contract and grant overhead funds, STIP (short-term investment pool) income on endowments, and other miscellaneous funds.

Professional degree fees (PDF) are paid by students and are designated by University policy as two-thirds for the support of the school and one-third for student awards. Note that no tuition comes directly to Berkeley Optometry, as tuition goes to the Graduate Division of the University.

General funds are funds provided by the state. Berkeley Optometry receives state funds only for salaries paid to ladder-rank faculty.

Student support includes funds provided to students in the form of awards from training grants and paid positions [research, teaching, and work-study].

Faculty salaries and benefits includes payments for research, clinical faculty, and other academic titles.

Berkeley Optometry Fund Sources
Fiscal Year 2007–08*

- Research Funding 31%
- Other Sources 3%
- PDF School Support 8%
- PDF Student Support 3%
- Gifts & Endowments 2%
- General Funds 17%
- Optometry Clinic Revenue 36%

Berkeley Optometry Expenditures
Fiscal Year 2007–08*

- Supplies, Operations, Maintenance 21%
- Equipment 2%
- Student Support 8%
- Staff Salaries & Benefits 28%
- Faculty Salaries & Benefits 41%

*Estimated—year-end amounts were not finalized at press time.
XIAOHUA GONG, PHD
Xiaohua Gong is an associate professor at Berkeley Optometry’s Vision Science program. He teaches anatomy and physiology of the eye and the molecular basis of vertebrate eye development and related diseases. He also teaches undergraduate and graduate research programs on the campus.

Born in China in 1964, Xiaohua received a BA in pharmacy at the former Shanghai Medical University (renamed the School of Pharmacy at Fudan University) in 1983. After graduation, he worked as a teaching and research assistant in pharmacokinetics and drug metabolism at Shanghai Medical University. He received his MS in molecular genetics at Shanghai Medical University in 1989.

In 1990 Xiaohua went to Boston University as a visiting fellow, later moving with his lab to the Cardiovascular Research Center at MGH, Harvard Medical School. In 1997 he received his PhD in macromolecular and cellular structure and chemistry at The Scripps Research Institute in La Jolla. Xiaohua did a one-year postdoctoral fellowship at the University of California, San Diego. At the end of 1998, Xiaohua joined the Department of Cell Biology at The Scripps Research Institute as an assistant professor. In 2000, he received a five-year R01 grant from the National Eye Institute to study the signaling pathways in the lens. In 2002, he received a second R01 grant to study the genetic models for cataractogenesis and was also a co-investigator of a vision science core grant funded by the NEI.

Since joining Berkeley Optometry in 2003, Xiaohua has served as instructor, admission chair of the Vision Science graduate program, member of the graduate advisory committee, faculty member of the chancellor-regents scholar program, and faculty member of the School of Optometry admissions committee.

Xiaohua’s primary research areas are lens development and cataract formation, and retinal development and degeneration. He has published a number of papers in top-tier peer reviewed scientific journals. His long-term research goal is to understand the basic mechanisms of eye development and disease and to develop new intervention methods to either delay or prevent aging and disease-related vision loss.

He lives in Moraga with his wife and their three boys and enjoys sports, music, and outdoor activities.

BRUNO OLSHAUSEN, MS, PHD
Bruno Olshausen received his BS and MS degrees in electrical engineering from Stanford University in 1986 and 1987, and his PhD in computation and neural systems from the California Institute of Technology in 1994. He did his postdoctoral work in the Department of Psychology at Cornell University from 1994–1996, and he was a postdoctoral fellow at the Center for Biological and Computational Learning at the Massachusetts Institute of Technology in 1996. He joined the faculty at the University of California, Davis in the fall of 1996, and in 2005 moved to UC Berkeley, where he is currently associate professor of neuroscience and optometry. He also directs the Redwood Center for Theoretical Neuroscience, a multidisciplinary group that is developing mathematical and computational models of brain function.

Olshausen’s research focuses on understanding the information processing strategies employed by the visual system for tasks such as object recognition and scene analysis. Computer scientists have long sought to emulate the abilities of biological vision systems in digital computers, but achieving performance anywhere close to that level has proven elusive. Olshausen is studying the response properties of neurons in the brain and attempting to construct mathematical models that can describe what neurons are doing in terms of a functional theory of vision. He aims not only to advance our understanding of the brain but also to devise new algorithms for image analysis and recognition based on how brains work. This work is highly interdisciplinary in nature, so Olshausen advises PhD students from a wide variety of graduate programs, including vision science, neuroscience, biophysics, and engineering.

Olshausen is also co-founder of IQ Engines, a startup company that is developing novel algorithms for mobile image search. He lives in San Francisco with his partner, Raul Gorospe, and when not in the lab can be found playing piano, hiking, or sailing on the bay.
In 2003, Karsten was awarded “Young Investigator in Inflammation” at Kumamoto University and was promoted to associate professor in pharmacology and ophthalmology. He moved to New York Medical College in 2003, and in 2005 he was promoted to instructor in 1999 and assistant professor in 2002. He moved to New York Medical College in 2003, and in 2005 he was promoted to associate professor in pharmacology and ophthalmology.

Karsten is also the co-inventor on a patent application for the discovery and use of omega-3 PUFA (fish oil) derived signals as neuroprotective agents. In 2003, Karsten was awarded “Young Investigator in Inflammation” at the 8th International Conference on eicosanoids and other bioactive lipids relative to cancer, inflammation, and related diseases. Recognized as an expert in the formation and molecular mechanism of action of lipid mediators in inflammatory diseases, Karsten serves as an ad hoc reviewer on numerous specialty journals, the National Institutes of Health, and the Department of Defense, as well as for foundations such as the Wellcome Trust and the Kentucky Science and Engineering Foundation. He is currently on the board of associate editors for Prostaglandins & Other Lipid Mediators.

Karsten, his wife Jacqueline, and daughter Zoe reside in Walnut Creek and enjoy traveling, hiking, and swimming. He also enjoys herpetology as a hobby.

Michael Silver became involved in vision research as a graduate student at UCSF. His doctoral thesis focused on the effects of impaired vision on the development of the visual areas of the brain. This work measured changes in the density of connections between neurons in the visual system resulting from impaired vision. This line of research helped characterize animal models of amblyopia to better understand the brain abnormalities associated with this disease. Following graduate school, Dr. Silver was a postdoctoral fellow at the RIKEN Institute in Wako-shi, Japan and the Max Planck Institute for Biological Cybernetics in Tübingen, Germany, where he continued conducting animal research on the structure and function of visual areas in the brain.

The development of functional magnetic resonance imaging (fMRI) allowed a number of research topics that had previously been limited to animal research to be studied in the human brain for the first time. Dr. Silver received training in fMRI at Stanford University and in the Helen Wills Neuroscience Institute at UC Berkeley before joining the Berkeley Optometry faculty in summer 2005. His research is on the neural bases of perception, attention, and learning in the human visual system. This work produced the discovery of two new brain areas, IPS1 and IPS2. Silver’s laboratory continues to study the functional connections between IPS1, IPS2, and other visual areas in order to better understand the flow of information in the visual areas of the brain.

Dr. Silver also conducts research on the medication Aricept. In addition to being prescribed to patients with Alzheimer’s disease, Aricept is a useful research tool. Studies in the Silver laboratory have shown that Aricept reduces the spatial spread of activity in some brain areas in response to a visual stimulus, increasing the spatial precision of neurons in the visual system. Patients with macular degeneration suffer from a loss of vision in the central part of their visual field. Their remaining peripheral vision has very low precision, resulting in difficulties in visual functions such as reading or recognizing facial identity. Laboratory members are currently testing whether Aricept increases spatial precision at the perceptual level and whether this can enhance visual abilities in patients with macular degeneration.

Dr. Silver lives in Berkeley with his wife Jennifer Mitchell (also a neuroscientist) and their sons Talyn and Gryphon.
ALUMNI AND FRIENDS
TRIP TO CHINA

We are planning a trip to China of approximately 14–17 days in October or November 2009. We anticipate that the cost would be in the range of $3,500–$4,000 per person including airfare, first-class accommodations, entry fees, and most meals. The highlights would include as many of the following as possible: the Great Wall, Terracotta Warriors, Summer Palace, Forbidden City, Three Gorges Dam, Beijing, Xian, Temple of Heaven, Shanghai, Guilin, Yangshuo, 2008 Olympic sights, Hong Kong, and a Yangtze or Li River cruise. Stay tuned and be sure we have your e-mail address for further information.

OPTOMETRIC TECHNICIAN TRAINING

Through Boston Reed College, training for your optometric technicians is available at a significant discount. A 260-hour course is being offered to which our alumni can send techs to be trained for under $2,300. The course includes everything an optometric technician needs to be competent, starting day one. The faculty for this course is from Berkeley Optometry. Boston Reed is the largest provider of allied health training nationwide. Training is scheduled for Saturdays, so technicians can work for you while they train. For more information contact Boston Reed at 800-201-1141 or online at www.BostonReedCollege.com.

FREE LEGAL SERVICE CONSULTATIONS

We are pleased to announce that we have arranged with two prominent law firms in San Francisco for free legal consultations and reduced fees for alumni and faculty who might need legal services. If you think you might need an attorney or have a quick legal question, you may call 888-392-1960 to receive a free 15-minute consultation from attorneys at Sideman & Bancroft LLP and Futterman & Dupree LLP. If more time is needed, you may choose to take the information you’ve already received to any attorney of your choice, or you may engage the attorney you just spoke with at rates discounted as much as 21%. The services covered by the program include representation and counseling in transactions and disputes commonly arising in the practice of optometry and related business matters: employment/human resources issues, state board regulatory issues, commercial law, business contracts, real estate matters (including leases), professional liability, federal and state tax controversies (including tax audits), and partnership/entity formation and dissolution. If you require services in areas not covered by the program, the program attorneys may be able to refer you to appropriate professionals outside the program. Again, if you have any questions, please feel free to call 888-392-1960.

BERKELEY OPTOMETRY HISTORY PROJECT

Thanks to John Fiorillo, who has spent nearly two years working on the project, we are very close to having a comprehensive published history of our school. The history is divided into four periods (preliminary years to 1923; 1923–1948; 1948–1978; and 1978–present). According to John, “I have browsed through more than 1,200 journals from the 1890s through the 1930s, searching for information on the early days of optometry and the negotiations between local optometrists, President Wheeler, key campus faculty, and campus officials to initiate an optometry program on campus (1907–23). It has been worth the effort!” Those who have had the privilege of reading portions of this have agreed this is a “must-have” addition to our libraries. (We have included “The Early Years of Berkeley Optometry,” a much-condensed summary, in this magazine to whet your appetite.) The expected publication date of the book is the first half of 2009.

BERKELEY OPTOMETRY ALUMNI DIRECTORY

We have just completed work on the 2008 University of California, Berkeley, School of Optometry Alumni Directory, which provides complete and up-to-date references of all Berkeley Optometry alumni. For those who have authorized us to publish it (for alumni use only), we are including home address; names of spouse and children, if applicable; and professional information. Listings will appear under class year, geographical area, and area of practice. Our goal was to make this all-new alumni publication the most comprehensive graduate reference available.
Students, faculty, and alumni of Berkeley Optometry can take great pride in our school. Our students lead the nation in National Board scores, our faculty regularly receive high honors and recognition for their research, and our alumni are leaders in the profession and the academy.

A key goal of the next fundraising campaign is to ensure that Berkeley Optometry has both the facilities and the infrastructure that we need—not only to maintain our excellence but also to continue to lead the profession in optometric education and vision research.

building for excellence and leadership

A BRIEF HISTORY OF SPACE
Optometry at UC Berkeley had its roots in the Department of Physics in the attic and basement of LeConte Hall in 1923, where it remained for 25 years. The “Optometry Building” was dedicated in July 1948. Formerly known as Durant Hall, the building was actually erected in 1941 to house the Navy V12 program. In 1970 the building was renamed Minor Hall to honor the memory of Ralph S. Minor, the first dean of the school. Minor Addition was built in 1976, providing a substantial expansion of space and facilities. However, a number of optometry research labs were still housed in Cowell Hospital, which was demolished in 1993. Two new floors were added on top of Minor Hall in 1992 to accommodate those labs.

Since 1992 there have been two important renovations: the Eyewear Center in Minor Addition was renovated in 1995, and the 4th floor of Minor Hall was renovated in 2002. This second renovation resulted in a beautiful new library, The Pamela and Kenneth Fong Optometry & Health Sciences Library; a state-of-the-art lecture theater; a computer lab for students; and two new research laboratories.

Despite the expansion and renovations, space and infrastructure remain serious challenges to the continued success of the program. Ralph Minor would have little difficulty recognizing the ground floor of Minor Hall, which has not been updated in decades, and the space is poorly utilized. We have reached our capacity in research, teaching, and clinical space, with no room for expansion.

THE COMMUNITY HEALTH CAMPUS (CHC)
A number of early discussions were held regarding the possibility of a new community health campus on the state Department of Health Services site in Berkeley. It would have housed the School of Public Health, the School of Optometry, and portions of both the Department of Psychology and the Helen Wills Neuroscience Institute. The CHC was envisioned as a place to bring together the fields of public health, neuroscience, psychology, optometry, and vision science to address the major health challenges of our time. However, the site is too small to accommodate all four units with the space we need to expand, there would be no wet labs, and it is unclear whether there would be parking for patients. Finally, the costs would be prohibitive.

EXPANDING WITHIN
We have revised our capital plans to expand and make better use of the space we have. Our plans involve capturing new space under the breezeway between the two buildings and using our existing space better to provide these advantages:

- Improved access and a sense of entry to the School of Optometry and its complex’s assets
- An enlivened exterior plaza between Minor Hall and Minor Addition
- Improved quality of space for students, faculty, and staff
- A new staff lounge and a new student lounge
- A new flexible state-of-the-art classroom that can hold 20–70 students

A NEW SURGICAL SUITE
A key goal of the current campaign is to establish a surgical center in the Meredith W. Morgan University of California Eye Center in Minor Addition. The Berkeley Optometry Eye Surgical Center will occupy approximately 1800 square feet on the first floor of Minor Addition and will include these facilities:

- Three pre/post-op examination rooms with private reception area
- A cutting-edge (literally) surgical suite

We anticipate that the center will be used for cataract surgery as well as other procedures, including minor retinal and eyelid surgery. It will serve as a referral center for optometrists to send their patients for their procedures and co-management. We are optimistic that this new facility will make Berkeley Optometry the leading surgery center in the area.
42 Art Layton has been retired for 17 years in Paradise, CA. He’s still reading the journals and playing music in the community band, and he’d love to hear from classmates (artlay@sbcglobal.net).

51 Bernard Press was elected president and CEO of OcumaRx, Inc. a medical device company that has developed a scleral implant to treat glaucoma and ocular hypertension. This device, the COPRI, provides an alternative, cost-effective treatment in a minimally invasive surgical procedure.

58 George Sanchez is still practicing in Tempe and Miami, AZ. Larry Creasey recently sold his practice to Steven Rosales ’96. He continues to be active in COA and AOA and presently serves as AOA Pac keyperson coordinator. In April Larry and a number of other California optometrists and optometry students were in Washington, D.C., discussing issues of importance to patients and optometry with members of Congress. He serves on three ministry teams at his church (a major time commitment). He and his wife, Betty, take several camping trips each year in their travel trailer. In September ‘08 they’ll go on a tour of Israel, but they’ll be back in time for his 50th reunion. E-mail Larry for reunion details and to help him get all the e-mail addresses of classmates (Lg8ChLarry@aol.com).

63 Charmaine M. Eng retired in 1999 from Santa Clara Kaiser Permanente Medical Group in Optometry after 36 years. Her husband, Stephen Ngin, passed away in 2002. Charmaine has three adult children; her older son married last fall, and her daughter Serene, also an optometrist, married in summer ’08. Since 2000 Charmaine has traveled to Europe, India, and cruised to New England, the Caribbean, and Australia/New Zealand. She belongs to the American Association of University Women and is chairman of the Parkinson’s Patients Support Groups, Inc. Although she is almost completely retired (and enjoying every minute of it!), she still attends optometric programs.

66 Lee Goldstein is currently president of the California State Board of Optometry. He was originally appointed in 2003 and then reappointed for a second (and final) four-year term in 2007. He is past president of the California Optometric Association (’97–’98). Lee is currently the vice chair of the Legislative Committee of the COA and involved in the SCOPE legislation process. He sold his practice in 2006 and moved to Three Rivers, CA. His wife Marcia (Cal grad ’64) and he enjoy the rural and somewhat more “wild” lifestyle, though he comes out of the hills frequently for meetings. He is also a senior volunteer in the Office of the National Chair of Volunteers of the American Red Cross and a moderator of the ARC Chapter Chair Institute. Lee served on the National Board of Governors of the ARC from ’99 to ’05.

Don Schmidt sold his practice after 40 years and has retired to La Quinta, CA. “I may have been one of the first to completely retire, as I have not held an ophthalmoscope in almost two years. Desert life is great and I wish I had done it sooner. Best to all of you, retired or not!”

69 Abraham Bromberg obtained an MS in physiological optics from the University of Houston in 1980. He has been a member of the American Optometric Association since 1967 and a fellow of the American Academy of Optometry since 1970 (the only fellow of Mexico now). He has been in private practice since 1970, mainly in low vision and specialty contact lens cases. He was a professor teaching physiological optics and anomalies in binocular vision at the Career of Optometry, Instituto Politecnico Nacional from 1970 to 1988 and served as dean from 1983 to 1985. He was also a professor at Career of Optometry, Universidad Nacional Autonoma de Mexico from 1997 to 1998 teaching low vision. He served as President Colegio Nacional de Optometristas 1990–1994. He wrote Vision Bajo, a book for patients and relatives but also useful to opthalmologists and optometrists.

70 John Arvizu became a fellow of the American Academy of Optometry in 1974. He began his professional career by founding the Optometry Department at the Alviso Family Health Center in 1970. Private practice beckoned in 1974, and he left to join Kaiser Permanente in 1989. John served on the California State Board of Optometry from 1980 to 1986. He was elected to the Gilroy Unified School Board in 1977 and served as its president three times before retiring from the board in 1996. John’s clinical interests are in general optometry, contact lenses, and refractive surgery. He is board licensed in diagnostic and therapeutic drugs. He also provides emergency eye care for the general physician staff in Gilroy.

Marvin “Marv” Neill has retired from active optometric practice after more than 37 years. He served on active duty as an Air Force optometrist for 19 years and retired from the Air Force in 1990. From 1991 through 2007 Marv was a Northern California Kaiser Optometrist in South Sacramento and Elk Grove, CA. He enjoys being with his grandchildren more often and expanding his hobby of amateur astronomy.

72 Stephen Heiden has been practicing in Hollywood, FL since 1972. He joined his father’s practice (another Berkeley Optometry alum, Herbert Heiden ’39). Stephen is a member of the American Academy of Optometry. He has been an active member of the Hollywood Rotary Club for 30 years. His wife Susan and he celebrated their 38th wedding anniversary in June. They have three children: Zachary, Gregory, and Alexis. Zachary is the staff attorney for the ACLU of Maine. Gregory is an attorney for the California Public Utilities Commission. Alexis Heiden Strauss, OD New England College of Optometry, practices in Washington, D.C. “I have great memories of my four years at Berkeley. Looking forward to reading about the people I was with in school.”

74 Stephen R. Chun is in his 33rd year of private optometry practice in Berkeley, which he started in 1975 with Mark Fujikawa ’73. Their stand-alone office building, erected in 1948 by Henry Takahashi ’26, has always been maintained as an optometry office. Stephen served on the California State Board of Optometry (1986–1994) as its president and chair of the licensure examination, the National Board of Examiners in Optometry (1989–1995), and recently started global health optometry projects in Asia. As a clinical professor of optometry at UC Berkeley for the past 26 years, he had the opportunity to help bring optometry to China and Korea. He initiated an optometry program between Berkeley Optometry and Beijing University where 51 fourth-year interns from Berkeley Optometry completed their clinical rotations at that university’s three teaching hospitals. Since 1976, when a small group from his

Asian Optometric Study Group, June 2008 meeting: Back row [L to R]: Joseph Wong ’74, Harry Chan ’76, Eddie Haw ’75, Jeff Ko ’73, Ken Owyang, Thomas Chong ’72, Gary Louie ’79, Roger Chan, Edward Low ’74, Arthur Siu ’74, Stephen Chun ’74. Front row: Grace Leong, Keri Owyang ’07, June Chun ’74, Trish Hom ’97, Barbara Jung, Stephanie Baba ’78, Diana Yuen ’80, Susan Han ’00, Kelly Shintani ’00, Jocelyn Niimi ’07.
Class of ’74 (Arthur Siu, Joseph Wong, June Chun, Bruce Dong, Ed Low, and he) formed the Asian Optometric Study Group (AOSG), they’ve been meeting every month for dinner, an educational meeting, and fellowship. Over the years, AOSG has inducted new members from other Berkeley Optometry Classes (Kelly Shintani ’00, Susan Han ’00, Patricia Nguyen Hom ’97, Sharon Lee ’03, Connie Liang ’03, Gary Louie ’79, Jeff Ko ’73, Diana Yuen ’80, Stephanie Nishimura Baba ’78, Thomas Chong ’72, Harry Chan ’76, Kathy Harano ’75, Eddy Hwa ’75, Mark Fujikawa ’73) and most recently from the Class of 2007 (Jocelyn Niimi, Keri Owyang). In his volunteer time, he serves as both an architectural guide for adults and a storyteller for primary-school children at the Asian Art Museum of San Francisco. His wife of 31 years, Doris Sze Chun, a professor of Asian Studies and Chinese Language and an avid docent at the De Young, Legion of Honor, and Asian Art Museums of San Francisco, has “reopened my eyes to my interests in art, culture, nature, science, history, and travel.”

**Mike Wong** served three years in the U.S.A.F. after graduation. He has been at San Jose Kaiser for 32 years. Still a Cal football season-ticket holder since 1970 and having not missed a bowl game yet, Mike is hoping the Bears reach the Rose Bowl soon. He has been a volunteer leader with the Second Harvest Food Bank for about 15 years. He also handles high-school recruitment and outreach for Cal in the San Jose, Cupertino, and Fremont high schools. His daughter graduated from Cal in 2002 and is now an RN at the Palo Alto VA Hospital. His son graduated from UC Irvine and has been at the Disneyland payroll office for six years.

**75 Art Low** is still involved with the COA after 32 years practicing optometry. He is currently Secretary-Treasurer of Local Societies COA-PAC and working to expand the scope of optometry through Senate Bill 4046. Also, every November he does a Lions In Sight trip to Mexico. This year, classmate Tim Coughlin will be joining him. Art couldn’t get either of his sons to go into optometry, but he’s still proud of them. Ryan is with the Oakland Police Department and Evan is a Campbell City Councilman and delegate to the Democratic National Convention. Art still enjoys fishing and golf but is now spending even more time trying to learn ballroom dancing with his new wife, Swann.

**Larry Thal** retired from his practice in Kensington, CA the early part of this year. His partner of ten years, Russell Cotterall ’88, carries on in the practice Larry started in 1977. Larry still holds an appointment at Berkeley Optometry, where he serves as assistant dean, clinical professor, and practice management instructor. Since graduating in 1975 he has served on the State Board of Optometry and COA Board of Trustees, and he retired from the U.S. Air Force Reserve. Being half retired gives him more time to visit his daughters—Danielle, who graduated from Tulane and is a professional cellist in Vienna, Austria. But it takes them farther away from daughter Jill, who graduated from UCB and is a professional cellist in Vienna, Austria. And daughter Arielle, a freshman at Emory University, is still proud of them. Ryan is with the Campbell City Councilman office and working to help the many outdoor and indoor entertainments of which I am most proud is my 5-year-old daughter who is a professional cellist in Vienna, Austria. With Facing History and Ourselves in the area specializing in wills, estate planning, and elder law. We went on a sight-seeing trip to China in March 2008. The children have provided us with six grandkids. Life marches on. Please stay in touch by dropping a note to perryfamily@hotmail.com.”

**79 Janet Carter**: “There is a lot to report, but probably the most surprising thing is that after almost 29 years I have left the Reno/Tahoe area. We loved our home there, and it was a great place to raise our children. But life has its own twists and turns, and my husband Jerry found that his life (and business) was taking him more and more frequently to southern Nevada. This past winter I finally decided to join him (winter is always a good time to move south...)! I have joined a group practice in Las Vegas, and I am busier than ever. Our two sons are living in our house in Reno while they finish their college years at the University of Nevada, Reno, where they anticipate graduating in 2009. Andy plans to go on to study emergency medicine, and Ed hopes to join his long-time love Aya in Tokyo, where she plans to go for an MBA after her ‘08 graduation from UNR. Ed will look for a job teaching English there, and we will look forward to visiting them both! Jerry and I took advantage of the buyer’s market in Las Vegas, and we now live in a large house in the northern LV suburbs. We have lots of room for visitors (that’s a hint)! We love the desert and are enjoying exploring the many outdoor and indoor entertainments this area offers. I continue my time on the NBEO and Association of Regulatory Boards of Optometry (ARBO) Boards of Directors, and this year I am serving as President of the NBEO Board. So it is certainly a busy and productive time in our lives!”

**Steven H. Schwartz**: “After receiving my MD, I continued my research training at the University of Alabama in Birmingham, receiving a PhD in physiological optics. From 1997–2007, I served as dean and vice president for Academic Affairs at SUNY College of Optometry, where I am now an associate professor. The professional accomplishment of which I am most proud is my...”
and has been living in Victoria, Canada, awaiting future assignments. Nida joined VOSH this year and hopes to attend the Canada mission to Viet Nam in October as well as her Berkeley Optometry 20-year reunion.

Karen Griffith writes that the Class of ’88 will have a reunion on the evening of October 18th. Details will be mailed to classmates. If you haven’t received either an email or postcard from us, please contact Edna Lee ‘88 at visionopto@yahoo.com or Karen Griffith at karengod@earthlink.net.

Lester “Les” Silverman was named Commissioner of the Parking and Public Improvements Commission in Manhattan Beach, CA. He opened a new, modern, high-end office in the most visible place in Manhattan Beach.

Joy Ng Sarver ’84 provided this photo of Lassa Frank ’86 with another happy Lions in Sight patient in Chiapas de Coros, Mexico.

Joy Ng Sarver is a volunteer optometrist with Lions in Sight, a Lions Club International organization, whose mission is to provide free eye examinations and glasses to the needy in developing countries around the world. Joy currently coordinates the 10 clinics that Lions in Sight conducts each year throughout Mexico and is always in need of optometrists. Consider bringing your high-school or college-age child along as an introduction to public service. If you are interested, please contact Joy at jsarver@rocketmail.com.

Vengu Lakshminarayanan moved to the University of Waterloo in Canada as a professor of optometry, physics, and electrical engineering in 2006. Previously he had served on the faculty at University of Missouri in St. Louis for a dozen years. Vengu has taught a variety of courses in the optometry curriculum and in the graduate program in both institutions and has trained a number of graduate students (both PhD and MS). He has been very involved professionally both nationally and internationally and has received a number of awards and recognitions. One of the commitments that gives him great satisfaction is his work with a UNESCO project teaching optics and photonics in developing countries using locally available materials and technologies. He sure does miss Berkeley!

Nida Goulding is licensed in Hawaii, California, and Washington. She is available for fill-in positions around Pasadena, CA, and northwestern Washington, or in Hawaii. She recently left a position on Kauai and has been living in Victoria, Canada, 88


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William A. Hare has been a research scientist at Allergan, Inc. since leaving Berkeley in 1993. He leads an effort to discover novel treatments for glaucoma, retinal disease, and other acute and chronic neurodegenerative disorders. In the past year he has been an invited lecturer/participant in the Neuroprotection and the Eye Conference at Duke University, a neuroprotection symposium at the 2007 annual meeting of the American Academy of Optometry, and the Glaucoma 2008 Conference held in Malmo, Sweden. He also presented data at the 2007 World Glaucoma Conference in Singapore, where his presentation received special recognition in the scientific program. He lives with his family in Tustin, CA, a pleasant 35-minute bike ride from Allergan. He would enjoy hearing from any Berkeley friends (hare_william@allergan.com).

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Berkeley Optometry gratefully acknowledges the alumni, friends, foundations, and corporations listed below. These gifts and pledges support every aspect of the school, and we thank all of you for your loyal and generous support. Listed below are the best records we have. If you see an error, please let us know as we want to recognize your generosity properly. Please excuse any omissions, and help us correct our records if needed.

We have included deceased donors for whom we have records in the amounts of $5,000 and above. They are indicated by an *. Unless otherwise noted, class years indicate award of the optometry degree.

**$1,000,000 and above**

Pamela F. Fong '77 and Kenneth S. Fong Foundation Fighting Blindness

**$500,000 to $999,999**

Baush & Lomb Company CIBA Vision Corporation CooperVision, Inc. Minerva Foundation Polymer Technology Corporation

**$250,000 to $499,999**

Alcon Laboratories, Inc. Allergan Pharmaceuticals, Inc. John R. Austin '52 and Norma M. Austin Solon M. Braff '37* and Pearl Braff* Benjamine Nerenberg '56 and Lillian Nerenberg Summit Technology, Inc. UC Optometry Alumni Association Vision Service Plan Vistakon Western Interschool Commission

**$100,000 to $249,999**

Clown Corporation East Bay Community Foundation Herbert A. Meritt '39 and Florence Etwell International Retinal Research Foundation David Marco Seymour R. Marco Family Foundation Elwin M. Ray '40, PhD '50 Multi-Optics Corporation Whitehall Foundation, Inc.

**$50,000 to $99,999**


**$25,000 to $49,999**


**$10,000 to $24,999**


**$5,000 to $9,999**


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Berkeley Optometry’s Endowed Scholarships

Chancellor Robert Birgeneau has observed that “The vast majority of Americans are educated in public universities that cannot provide the financial aid packages of private universities with large endowments. Ironically, it could become more expensive for a student from a family of low or moderate means to attend a public university than for a student from a well-to-do family to attend a private college.”

Why are scholarships important to Berkeley Optometry? Scholarships are important for several reasons: they help the school compete with other schools and colleges of optometry that have many scholarships to offer, they help keep the school tuition rising, students are grateful for any amount of help they can receive!

For further information please contact Tammy Spath at 510-642-2643 or e-mail tspath@berkeley.edu.

Endowed Scholarships

The Tony and Ena Adams Optometry Student Diversity Support Fund
The Dr. John R. and Norma M. Austin Optometry Student Support Fund
The Dr. Steven R. Chua and Dr. Chris Chua Optometry Professional Student Support Fund
The Chia Vision Endowed Scholarship Fund
The Theodore Cohn Vision Science Fellowship Fund
The Contact Lens Faculty Professional Student Support Fund
The Russell DeValois Vision Science Fellowship Fund
The Dr. Raymond J. Eng Family Professional Student Support Fund
The Rupert E. Flower Scholarship Fund
The Dr. Cheryll Gan and Dr. Linda Gaventa Optometry Student Support Fund
The Robert Greenwood/ private Optometric Practice: Patient Management Professional Student Support Fund
The Harris Family Scholarship Fund

The Dr. Michael G. Harris Professional Student Support Fund
The Thomas B. Hewitt, O.D. Volunteer Public Service Grant Fund
The Curtis W. Keswick Alumni Veterans Affairs Research Low Vision Student Support Fund
The Ko Clinic/UC Optometry Alumni Professional Student Support Fund
The Jeffrey and Cynthia Ko Family Professional Student Support Fund
The George Lee/UC Optometry Alumni Ophthalmic Optics Professional Student Support Fund
The Dr. Robert W. Lester Professional Student Support Fund
The Dennis and Marilyn Lew Optometry Student Support Fund
The Carl Moore Contact Lens Professional Student Support Fund
The Pang Family/UCOSO Alumni Association Professional Student Support Fund
The Morton Saron Vision Science Fellowship Fund

In a perfect world, what is a gift agreement? Gift agreements are designed to ensure that a donor’s gift is used exactly as the donor intended. The gift agreement specifies explicit details regarding the uses and limitations of a donor’s contribution. For example, the donor may wish to give preference to students who excel in a certain area of practice.

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How many endowed scholarships does the school need? In a perfect world, the school would have one for each student, with each one large enough to cover all student costs. Our short-term goal is to provide 60 endowed scholarships, which would benefit 25 percent of the school’s students.

How many endowed scholarships does the school have currently? Thirty-four are endowed; however, at the current time none of these scholarships provide a full-ride scholarship. All of the scholarships provide partial assistance. With the cost of tuition rising, students are grateful for any amount of help they can receive!
Under $1,000 (cont.)
Steven K. Weeks ’75 and Chitapong S. Weeks
Bernard Wegman
Michael J. Weider
Richard Weisbart
William M. Weissman ’60
Norman J. Weiss
Barry A. Weissman OD ’72, PhD ’79
Stanley A. Westman ’67
Lester D. Welch ’56
Michael D. Welch and Kelly J. Welch ’90
Paul J. Wendell ’72 and Diane Wendell
Dave Werfel
John S. Wiener
Wesley Jensen Corporation
Lyman K. and Lois L. West
Gerald Westheimer
Westwood Vision Care
James C. White ’49 and Ione D. White
Paul D. Whitesides ’71 and Bonnie M. Whitesides
Frances Whitmore
Robin L. Whitmore
Whitney Family Fund

Berkeley Optometry’s Endowed Chairs

THE SOLON M. AND PEARL A. BRAFF CHAIR IN CLINICAL OPTOMETRIC SCIENCE
The first endowed chair in Berkeley’s School of Optometry was created by a renowned California optometrist who helped develop one of the first corneal contact lenses. Established in 1992, the Solon M. and Pearl A. Braff Chair in Clinical Optometric Science honors the donor and his wife, who died in 1990.

In 1946, Dr. Braff designed and produced with co-workers the first patented, hard plastic corneal contact lens—a major breakthrough in the industry. He also discovered the means of taking impressions of the patient’s eye without the use of anesthesia. In 1971, he developed one of the first soft lenses to gain approval from the Food and Drug Administration. Dr. Braff was named 1982 Alumnus of the Year by the School of Optometry for his long-standing generosity to the school and its contact lens clinic.

Pearl Adelman Braff was also a strong supporter of the University from which her husband and two sons graduated. She earned her undergraduate degree from California State University at Los Angeles and taught elementary school in Arcadia.

In 1987, with gifts from family, friends, colleagues, and the contact lens industry, the Morton D. Sarver Memorial Endowment Fund was established to support programs such as an annual lecture series and research and graduate student support. In 1992, the fund was redesignated as the Morton D. Sarver Memorial Chair, to be held by an outstanding scholar in the basic and applied studies of contact lenses and corneal research.

THE PAMELA AND KENNETH FONG CHAIR IN OPTOMETRY AND HEALTH CARE
The newest chair in Berkeley’s School of Optometry was created by Pamela and Kenneth Fong in June 2008. The Pamela and Kenneth Fong Chair in Optometry and Healthcare addresses the Fongs’ desire to provide research and graduate student support related to health care, vision care, and social welfare that would have an impact on the greater China region.

Pamela Fong, OD, practiced optometry in the Bay Area, Los Angeles, and North Carolina for many years. She was a member of the management team of Clontech Labs, Inc., in Palo Alto. Dr. Fong received her BA in mathematics from San Francisco State University and her OD from Berkeley Optometry in 1977. She is the recipient of the 2001 Alumnus of the Year Award from Berkeley Optometry. Dr. Fong is a trustee of the UC Berkeley Foundation, served on the Board of Vision New America, and has been an Advisory Board member of the U.S. Pan Asian American Chamber of Commerce.

Kenneth Fong, PhD, is the Chairman of Kenson Ventures, LLC. Kenson specializes in venture financing and strategic consulting to biotech companies. Prior to founding Kenson, Dr. Fong was the founder and CEO of Clontech Laboratories, a leader in the molecular/cell biology market. Dr. Fong received his BS in biological sciences from San Francisco State University and his PhD in molecular biology from Indiana University. He is a trustee of the California State University System and a trustee of the UC San Francisco Foundation.

Kenneth and Pamela’s son, John C. Fong, received a BA in Asian American Studies from UC Berkeley in 1998. Pamela and Kenneth Fong have been generous benefactors to Berkeley Optometry. In 2000, they established the Fong Optometry and Health Sciences Library in Minor Hall.

In-Kind Gifts from Corporate Friends

Allcon Laboratories, Inc.
Allergan, Inc.
Anderson Floors
Carl Zeiss Meditec
Complink Business Systems
Eoscor of America
Eye Imaginations
Manhattan Eye
Reichert Analytical Instruments
Signet Armortite, Inc.
Spectra United HealthCare

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The Meredith W. Morgan Society
Berkeley Optometry Annual Fund Donors (July 1, 2007 to June 30, 2008)

Dean’s Circle
($1,000 and up)
- Aikon Laboratories, Inc.
- Alcon
- Thomas Allen ’83 and Virginia Aller
- John Austin ’52 and Norma Austin
- Carl Zeiss Vision
- Jacob Cohen ’52 and Arlene Cohen
- Warren De Haan ’66
- Joseph Farrington ’51
- Sheldon Golden ’59 and Janet Golden
- MaryJane Healey ’00
- Winifred Hirsch
- Jimmy Low ’52
- Howard Pflug ’47 and Marcia Pflug
- Richard Leong ’78 and Davida Leong ’78
- Edward Revelle ’77
- Betty Thal
- Lawrence Thal ’75 and Esther Thal
- Nona Weissman
- Wayne Zimmerman ’73 and Susan Zimmerman

Benefactor ($500–$999)
- Allan and Sydne Bortel
- Tony Chumine ’95
- Steven Howell ’82 and Nadine Brubaker Howell ’82
- Jennifer Kent
- Edward Low ’74 and Ida Low
- Robert Mandell
- Jon Montoya ’98
- Alejandra Reyes ’94
- Joan Rogin
- Donald Schmidt ’66 and Georgenia Schmidt
- Ernest Takahashi ’68 and Jenny Takahashi
- Corina Van de Pol ’90

Partner ($250–$499)
- Howard Abrams ’39
- Shao Pin and Li Li Chen
- Edmund and Nora Chiu
- Jeffrey A. Holbert ’75
- Johnson & Johnson
- Jane Kadota ’80
- Jeffrey Klink ’79
- Lewis Lim ’02
- Henry Linker ’48 and Eva Linker
- Jerry Lombardi ’64
- Warren LoPresti ’51
- Thomas Nagy ’49 and Vicie Nagy
- Gordon Ota ’82
- Jennifer Quirante ’94
- Sigmund Sabin ’53 and Esther Sabin
- Nicolette Sacco-Brown ’87
- Nancy Shejoi ’83
- Marvin Smotrich ’63 and Meher Smotrich
- Michael Sonleitner ’70
- Tammy Spah
- Jamie Totzobo ’82
- Eugene Tsujimoto ’64
- Sheldon Wechsler ’52 and Dorothy Wechsler
- Burton Werrell ’69
- Jean Wrightseur ’88

Friend (up to $249)
- Craig Adams ’97
- Samuel Ahn ’99
- Timothy Albert ’85 and Marina Albert
- Deana Alexander ’87 and Daniel Alexander
- Edward Anderson ’71 and Janet Anderson
- Karlyn Ang ’86 and James Ang
- John Apfel ’80 and Lucy Apfel
- Jaime Arambula ’05
- Kim Asher ’71 and John Asher
- David Baba ’83
- Roslyn Ballard ’83
- David Berke
- Neha Bhojraj ’02
- Eric Bien ’39 and Lily Bien
- Joseph Bonanno ’87
- Jeffrey Breff ’84 and Susannah Briff
- Neal Breff ’81 and Janice Breff
- Karen Walker Brandreth ’68 and Roy Brandreth ’73
- Barbara Brickley ’46 and James Brickley
- Charles Brown ’87 and Elaine Brown
- Daniel Brown ’76
- Susan Bynum ’81 and David Bynum
- Pamela Carlson-Theriot ’00
- Janene Carter ’79
- Gerald Chan ’75
- Robert Chan ’62 and Louise Chan
- Gerald Charlap ’60
- Joyce Chouraqui ’86
- Eric Cohn ’99
- Helen Chen ’89
- Linda Chen ’84
- Scott Lee ’83
- Susan Lee ’88 and Clifford Lee
- Michael Lee ’84 and Judy Oda
- Judith Oh ’05
- Ernest Osbina ’86
- Stanley Ong ’76
- Osamu Iida ’76 and Ruth Iida
- Shirley Jin ’76 and Mark Suzuki
- Glenn Kapielien ’84 and Marsha Kapielien
- Michelle Fessler Kerr ’91
- Sarah Key ’03
- Sanford Koyama ’80
- Vasudev Lakshminarayanan ’85
- Patrick Lauro ’87
- Arthur Layton ’86
- Mary Lehnert ’91
- Alice Lee ’76
- Edna Lee ’88 and Clifford Lee
- Michael Lee ’86
- Scott Lee ’92

Class year denotes year of OD degree.

Partner ($250–$499)
- Howard Abrams ’39
- Shao Pin and Li Li Chen
- Edmund and Nora Chiu
- Jeffrey A. Holbert ’75
- Johnson & Johnson
- Jane Kadota ’80
- Jeffrey Klink ’79
- Lewis Lim ’02
- Henry Linker ’48 and Eva Linker
- Jerry Lombardi ’64
- Warren LoPresti ’51
- Thomas Nagy ’49 and Vicie Nagy
- Gordon Ota ’82
- Jennifer Quirante ’94
- Sigmund Sabin ’53 and Esther Sabin

Charter Hill Society
Annual contributions to Berkeley Optometry (as well as campuswide) are recognized by the Charter Hill Society, Berkeley’s annual giving recognition program. Gifts and pledge payments directed to unrestricted, endowment, and capital funds all count, and will be recognized at the following levels: Members ($1,000–$2,499); Affiliates ($2,500–$4,999); Associates ($5,000–$9,999); Partners ($10,000–$24,999); and Investors ($25,000 plus).
The Benjamin Ide Wheeler Society was established in 1987 to recognize and thank visionary individuals whose planned gifts have provided essential philanthropic support that has enabled Cal to become one of the world’s great universities. Planned gifts include bequests in wills or living trusts; life income plans such as gift annuities, charitable trusts, and pooled income funds; and beneficiary designations of retirement plans, brokerage accounts, and life insurance policies.

The society is named for Benjamin Ide Wheeler, president of the University from 1899 to 1919. Not only did President Wheeler transform Berkeley from a small western public university to one of the most distinguished centers of learning in the nation, he also was responsible for arranging the first life income gift to the University of California—a charitable trust from Jane K. Sather.

According to Dr. Sheldon Wechsler ’52, president of the Optometry Associates of the Benjamin Ide Wheeler Society, “With proper planning, these gifts allow alums to make significant investments in the School of Optometry while not adversely affecting our retirement, the education of our children, or their future inheritances—these gifts to the University come after that, from what may well end up being taxes paid to the state or federal governments.”

Berkeley Optometry appreciates receiving information from members of the Wheeler Society regarding the specific purpose of any planned gift. This allows the University to review your gift language to ensure that your philanthropic intention for the school can be implemented. If you have provided for the University in a planned gift but have not yet informed us, please do. We are very grateful to members of the Wheeler Society for carrying on a vital tradition of support. If you would like to speak with someone about your gift planning needs, please contact Tammy Spath at the School of Optometry: 510-642-2643 or tspath@berkeley.edu.

Optometry Associates of the Benjamin Ide Wheeler Society

Anthony and Elia Adams*
Otto Anderson ’39
Norma and John Austin ’52
Charles Bailey ’82
Ian and Valerie Bailey
Robert Bren ’54
Roy Black ’52†
Roy Brandreth ’53 and Karen Walker-Brandreth ’68
Charles Brown ’47†
Bettina Bruckman†
Lily and Collin Chu ’71
Doris Sue and Stephen Chun ’74
Jeanette and Robert Cibul ’57
Allen Cox ’50
Jack Cohen ’52
Barbara and Theodore Cohn†
Charles Conrad ’40
Lawrence Creasy ’58
Bonnie Curtis Leibe ‘69
John Daly ’52
Scott Daly ’83
Herbert Elefant ’39
Roselyn and Weylin Eng ‘65†
Steven Ngin and Charmaine Eng Ngin ’63
Jay and Rebekah Enoch
Joseph Farringdon ’54†
Bernard Feldman ’52
Kenneth and Pamela Fong ’77
Allan Fried ’52
Michael Harris ’68†
Frank Johnson Jr. ’53†
Barbara and Marshall Kamena ’65
Henry Kawahara ’46†
Cynthia and Jeffrey Ko ’73
David Leibel ’48
Dennis and Marilyn Levi
Joyce and A. Saul Levin ’52
Jeffrey Lieberman ’89
Henry Liner ’48
Warren LoPresti ’51
Jimmy Low ’52
Robert Mandell
Edwin Mehr ’41†
Meredith Morgan Jr. ’42†
Thomas Nagy ’49
Lillian and Benjamin Nerenberg ’41†
Maurice Newman ’48
Leonard Osias ’48
Paul Peng ’86
Jeanette and Edward Revelli ’77
Donald Sarver ’71
Charles Seger ’48
Eliott Shane†
Leonard Shenkan ’44†
Sylvia and Irvin Silberstein ’42
Bette and Mervyn Simon ’37†
Curtis Simmons ’82
Richard Simserian ’54
Branna and Irving Sienwein
Robert Smith
Harry Springer ’42
Eleanor Sweigert†
Jenny and Emeret Takahashi ’68
Betty and Bernhardt Thal ’48†
Esther and Lawrence Thal ’75
Charlotte Tlacac ’78
Bryan Varesean ’89
Lesley Walls ’68 and Mary Ann Keverline-Walls ’67
Sheldon Wechsler ’52
William Wong ’73

* Founding member
† Deceased
Dear Berkeley Optometry Alum,

When Berkeley Optometry asked me to explain why I have donated to the school every year since graduating 13 years ago, I was reluctant at first. I much prefer my anonymity. However, if sharing my feelings helps encourage others to do the same, then it may be worthwhile to step out of the shadow for a moment.

When I reflect on my years as an optometry student, I remember them as 90% hard work and 10% fun. That 10%, however, still outweighs the other 90% by leaps and bounds. (Credit classmate Patrick Clark for this perspective.) I do not view tuition as payment for an education. Rather, it is an investment in Opportunity. We all received the same education: we attended the same lectures, listened to the same instructors, and took the same tests. The Opportunities, however, depended solely on what we chose to make of them before, during, and long after classes were over.

If I based my donations on the courses I took, how hard I had to study, and how difficult it was to pass some classes, then I probably wouldn’t contribute a cent. I paid for, and received, an education. Quid pro quo. But when I reflect on where I am in my life today, all these years after graduation, and how the Opportunities Cal offered me continue to pay dividends, then I find myself still thankfully indebted to our alma mater.

The reason I donate is simple. Tuition pays for a Cal education. My donations help fund the Cal Opportunity. There are so many events and activities Berkeley Optometry wants to sponsor but cannot afford without our donations. So I do my part to contribute, knowing that with my help an Opportunity may present itself to some students slogging through their classes—an Opportunity that might just be the 10% that makes everything so worthwhile.

Tony Chahine '95
Tammy Spath joined Berkeley Optometry in the new position of Director of Philanthropy in the fall of 2006. Many of you have already been in touch with her, and she looks forward to many more relationships with alumni. Here we ask her a few questions about herself and her position:

So what exactly does a development officer do?
I think that the work of a development officer can be summed up as relationship building—from engaging alumni through campus events and communication to identifying, cultivating, soliciting, and stewarding the school’s donors.

How did you get started in this field?
My first experience in university advancement was in the Alumni Relations department at Stanford Law School, where I was involved in increasing the number of programs throughout eight regions. I also did the programming for the Alumni Weekend event in the fall. In addition, I worked with alumni volunteers to launch the Latino Alumni Association, the Black Alumni Association, and the Asian Pacific American Alumni Association. Since the external relations department was considered a “big shop” at Stanford, we saw the connection between alumni relations, communications, and fundraising. I was intrigued by the long-term relationships the frontline fundraisers forged with donors, and I became interested in moving over to the fundraising side. (I also wanted to move to the East Bay.) I accepted a position with the Annual Fund at the Haas School of Business, where I worked with volunteer reunion classes and class giving committee volunteers. I also led the student campaign efforts for both the undergraduate and MBA graduating classes. I was excited when the opportunity arose to work at Berkeley Optometry and move into a frontline fundraising position. Since this was a new department at the school, I looked forward to leveraging the skills and experiences from my other positions to help build the program at Berkeley Optometry.

What sorts of events and fundraising opportunities do you foresee for the coming year?
We are entering an exciting new stage for Berkeley Optometry. The September launch of the “Campaign for Berkeley” includes many new fundraising opportunities to build the school’s endowment pool for student support and faculty recruitment and retention, and also to make essential capital improvements to Old Minor Hall and the Meredith Morgan Eye Center. In terms of events, we hope alumni will join us for football tailgate and CE events on campus. We also plan to coordinate with the University’s Regional Program effort to bring Berkeley Optometry events to Southern California and other areas with large numbers of graduates.

What do you like most about working at Berkeley?
I believe in the public mission of the University of California, Berkeley. I am particularly impressed by the public service performed by the students and graduates of Berkeley Optometry. They are truly making a difference in this world, and I am honored to support this effort. It is gratifying to contribute to work that is impacting the lives of so many people.

One of my favorite aspects of development work is building connections among individuals. For example, some students helped with a “thank-a-thon” event last September. They called to thank donors for making a gift to the school. One of the second-year students spent more than 30 minutes on the phone with an alum from the Class of 1948. It was really inspiring to see the connection made across the generations of Berkeley Optometry graduates. I enjoy meeting people, hearing their stories, and connecting and engaging alumni to one another and the school.

How can alumni give back to the school?
There are so many ways for alumni to give back to the school. I think it is best summed up as sharing your time, talents, and treasures. Exactly how people give depends on what stage they are in their lives and where their focus lies. Our hope is that everyone will participate in some way. Every donation and volunteer effort makes a difference!
Kite photography, courtesy of Charles C. Benton. Minor Hall in the background.