TRANSITIONS
A major turning point for the profession, the School and the campus
ABOUT THE USC SCHOOL OF PHARMACY

One of the top 10 pharmacy schools nationwide and the highest-ranked private school, the USC School of Pharmacy continues its century-old reputation for innovative programming, practice and collaboration.

The School created the nation’s first Doctor of Pharmacy program, the first clinical pharmacy program, the first clinical clerkships, the first doctorates in pharmaceutical economics and regulatory science, and the first PharmD/MBA dual-degree program, among other innovations in education, research and practice. The USC School of Pharmacy is the only private pharmacy school on a major health sciences campus, which facilitates partnerships with other health professionals as well as new breakthroughs in care. It also is the only school of pharmacy that owns and operates four pharmacies.

The School is home to the International Center for Regulatory Science at USC, and is a partner in the USC Leonard D. Schaeffer Center for Health Policy & Economics and the USC Center for Drug Discovery and Development. The School pioneered a national model of clinical pharmacy care through work in safety-net clinics throughout Southern California. A focus on clinical pharmacy, community outreach, regulatory science, drug discovery and development, and health economics and policy positions the USC School of Pharmacy as a leader in the safe, efficient and optimal use of medication therapy that can save lives and improve the human condition.

Results magazine, published semi-annually, highlights some of the School’s latest advances and achievements, as well as the faculty, students, alumni and donors who make this work possible.
IN THIS ISSUE

Transitions

The Class of 2015 is entering the workforce during an exciting era of change for the profession. Take a look at what’s on the horizon for graduates, the School and the campus.
I am pleased to report that, with the provost’s announcement of Professor Glen L. Stimmel as interim dean, the USC School of Pharmacy is in expert hands to steer our continued trajectory of success.

I’ve sat in the dean’s chair for a decade and felt it to be a very special privilege and responsibility. It has been the greater part of my life these past 10 years. Leaving the deanship reminds me of when you send your child off to college — or your School’s graduates into the world. It’s an emotional moment fraught with trepidation and anxiety. Will they be OK? Will they find their way, realize their potential and follow their dreams? For me, leaving the School carried the same kind of, frankly, parental worry.

But no more. Glen Stimmel is an amazing pharmacy leader with excellent administrative experience and a keen eye on extending our School’s impact on the future. With Glen taking the keys to my office, I know the School will keep thriving and I look forward to being a faculty member under his leadership.

I actually remember Glen from before I even knew him personally because of his innovative work in the 1970s, including a pivotal pilot project examining the safety and efficacy of having pharmacists serve as prescribers. (See article on page 24.) Glen pioneered the charge for pharmacists to have an expanded role on the healthcare team, which makes him the right person to guide our School during this auspicious time of Senate Bill 493’s implementation.

Likewise, Glen’s deep understanding of all the components of our School, and his dedication to each, make him an ideal leader. As many of you may know, Glen headed the development and implementation of our strategic plan in 2010–11. It was his leadership and insight that helped develop the road map that put our School on its current upward trajectory. And it was his leadership that created an inclusive environment in which all stakeholder voices — faculty, students, staff, alumni and friends — were represented and heard.

As I leave the dean’s office to focus on policy that will further advance our profession and improve healthcare, I am pleased to hand my keys over to the newly appointed interim dean, Glen Stimmel.

Fight On!

R. Pete Vanderveen, PhD, RPh
Dean
John Stauffer Decanal Chair in Pharmaceutical Sciences
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Since its inception, the USC School of Pharmacy has been at the vanguard of education, practice and research. With an eye always on the future, the School is now preparing for exciting changes underway for the profession and healthcare in general, the School’s curriculum, the USC Health Sciences Campus and the deanship.

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RHO CHI

4
times USC has been awarded Rho Chi chapter of the year {2012-13, 2009-10, 2006-07, 2001–02}

8
USC’s Theta Chapter name is Greek for the eighth chapter chartered

20
percent of PharmD and PhD students from each class eligible for Rho Chi membership

110
Rho Chi chapters in North America (Canada boasts one chapter, at the University of British Columbia)

1922
year first Rho Chi chapter chartered

1925
year USC’s Theta Chapter chartered

RHO CHI @ USC

The Rho Chi Society, the international academic honor society for pharmaceutical sciences, moves to USC later this year. Longtime Rho Chi adviser, Associate Professor Michael Wincor, will lead the organization, and outgoing Dean R. Pete Vanderveen will assume the role of chapter adviser.

Known as the Phi Beta Kappa of pharmacy, the society admits members only from the top 20 percent of pharmacy students, each of whom must be recommended by their department chair and approved by the dean. Rho Chi’s primary aim is to advance the pharmaceutical sciences and to promote lifelong scholarship and community among its thousands of initiates.

THE THETA CHAPTER

Since it was the eighth chapter chartered, USC’s Rho Chi is known as the Theta Chapter, for the eighth letter in the Greek alphabet. It has garnered numerous Rho Chi honors over its nearly century-long history, including Chapter of the Year, Chapter Project Proposal Award and Faculty Advisor Award. Most recently, USC won Rho Chi’s 2014 National Chapter Achievement Award.

Initiates of the Theta Chapter actively promote academic achievement among their peers by providing tutoring to first- and second-year students. The chapter even distributes snacks and provides moral support to pharmacy students studying for midterms. In addition, fourth-year members share advice about rotations and residencies at
the Fourth-Year Clerkship Workshop. Members also provide an important community service by screening for mental health issues — including depression, sleep disorders and anxiety — at local health fairs and safety-net clinics.

**USC LEADERS SPEAK**

Rho Chi’s yearly national gatherings are held as part of the Annual Meeting of the American Pharmacists Association (APhA), which most recently convened in San Diego in March, at which Wincor was formally installed as executive vice president.

“I am honored to serve as the leader of Rho Chi at my home base of USC,” said Wincor. “I’ve worked with Rho Chi for many years and know that its members — here at USC and around the country, both current students and alumni — are extraordinarily bright and committed to promoting pharmacy locally and globally. I’ll do all I can to support them in those efforts.”

—MICHAEL WINCOR

Michael Wincor Takes Rho Chi Helm

Rho Chi’s new national executive vice president, Michael Z. Wincor, is associate professor of Clinical Pharmacy, Psychiatry and the Behavioral Sciences, and associate dean for Technology and Global Initiatives at USC. His research on sleep and sleep disorders began when he was an undergrad at the University of Chicago, which awarded him a BS in Zoology. He earned a PharmD and a Residency Certificate in Psychiatric Pharmacy Practice from USC and has been a member of its clinical faculty since 1983. A local, national and international leader in pharmacy education, and a dedicated and beloved teacher, he has received faculty adviser awards from the Rho Chi Society and the APhA Academy of Student Pharmacists, has been named USC School of Pharmacy Professor of the Year 13 times and was appointed a fellow of the USC Center of Excellence in Teaching in 2012.

**Did you know?** The Greek letters Rho (P) and Chi (X) on Rho Chi’s insignia were selected for the organization’s name because together they are emblematic of the prescription symbol, as seen on the Rho Chi key.
How do the endeavors of a 17th century Paduan relate to the research of a 21st century USC PhD candidate? When Junko Yaegashi, PhD ’15, earned her doctorate for work conducted in the laboratory of Professor Clay Wang at the School of Pharmacy, she received a genealogy of her degree that revealed the answer. Wang prepares genealogies for all of his graduating PhD students so they can see their place in chemistry's progress and impact.

Enjoyable and inspirational, Wang’s “family trees” result from a premise that infuses his entire philosophy of teaching and learning. He believes that, even as science advances, the methodology propelling that progress remains basically the same. This proposition also guides how he runs his lab, which engages in natural product drug discovery by examining fundamental questions. This approach leads to breakthroughs, even when the underlying answers sought still prove elusive.

“We now have new tools to understand old questions,” says Wang. “Some of my teachers were the smartest scientists in their generation, yet they weren’t able to answer all the questions.” Wang’s genealogies place this pursuit of answers in perspective for graduates such as Yaegashi, who will further that lineage as they pioneer future discoveries.
Frances Richmond, director of the USC International Center for Regulatory Science, featured on ABC7 Los Angeles Eyewitness News in a story about fast tracking an experimental drug — GM6 — for amyotrophic lateral sclerosis (ALS), the devastating condition that destroys motor neurons, has no viable treatment and has an average prognosis of two years.

"This drug, if it’s good, if it’s safe, if it works, it will be approved."

Patients who used an Internet tool to conduct price comparisons on routine medical services saved 13 percent on laboratory tests and 14 percent on advanced imaging, according to a recent study conducted by Neeraj Sood, director of research at the USC Leonard D. Schaeffer Center for Health Policy & Economics. The report was published in the Journal of the American Medical Association. Without cost-comparing tools, patients would remain unaware of variations in pricing among available providers, the study notes. Such a tool enables patients to save money for themselves, their employers and payers.

Sood emphasizes that this is only the beginning of the anticipated impact on healthcare costs and competition among providers expected to result from increased transparency in pricing.
A New Approach to Treating Staph Infection

The chart below shows the failure rate of current treatments for staph bloodstream infections. Professor Annie Wong-Berenger’s research, fueled by the Bensussen Innovation Challenge grant funding, is focused on developing a customized approach to such infectious diseases to improve patient outcomes.

CURRENT APPROACH

Staph Bloodstream Infection in a Heterogeneous Patient Population
Relative Predominance of Outcome Determinants
Prescribed Regimen
Outcomes

NEW PARADIGM: Personalized Treatment for Staphylococcal Bloodstream Infection

Heterogeneous Infected Patient Population
Lab Tests Showing Relative Contribution of Outcome Determinants
Individualized Treatment Plan
Outcomes
Each spring, pharmacy students wanting to know more about industry career paths can get a head start in the course Pharmaceutical Development and Commercialization.

“Pharmaceutical and biotech companies are always seeking PharmD graduates,” says Ed Lieskovan, PharmD ’85, MBA, who coordinates the elective class. “This course augments our students’ education with critical technical and business skills that allow them to hit the ground running when they take their first industry jobs.”

Professionals from a range of pharmaceutical and biotech companies visit the class throughout the semester, sharing their experiences regarding product marketing, lifecycle management, regulatory and safety issues, and other vital topics.

Rose Marie Christopher, president and CEO of MEIRxRS and a member of the School’s Board of Councilors, helps line up the industry leaders who donate their time and expertise. She also matches students with top professionals for mock phone interviews to provide experience in the job-hunting process.

To further build key skills, Harry Varav, director of medical information for Amgen, encourages students to seek out six-week rotations in industry to “get your foot in the door and make initial connections.” So these future careers gain momentum, David Bruhn, PharmD/MBA ’02, manager of U.S. health outcomes for GlaxoSmithKline, stresses the importance of emotional intelligence and the ability to work on a team.

Duane Mauzey, DRSc ’12, a manager of scientific affairs at Allergan, echoes the sentiment. “At Allergan, like other companies, all work is done in teams,” he explains. “Collaboration is one of our highest cultural values. If you can’t work in a team, you can’t work in industry.”

Students put these and other insights into practice as they form teams to develop a comprehensive business plan for a new pharmaceutical agent close to FDA approval. The class culminates with each team presenting its plan to a panel of industry experts.

“By the end of the course, we want students to fully understand the high-stakes business and scientific process that companies go through when bringing a new compound to market,” says Lieskovan. “But we also want them to know how vitally important it is to be able to successfully work on a team and be a good collaborator.”

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**FACULTY EARN INNOVATION CHALLENGE GRANTS**

Five faculty members have received grants from the inaugural Bensussen Innovation Challenge, which the School launched last year to support cutting-edge translational research.

“I’m hoping this seed funding will prompt creative thinking and open a new door,” says Gale Bensussen, who generously endowed the program along with his wife, Jane.

**THE FACULTY RECIPIENTS ARE:**

- **Associate Professor Kathleen Rodgers**, who received a $50,000 grant to study how agonism of the mas receptor may improve outcomes in Type 2 diabetes (on which she is collaborating with Associate Professors Stan Louie and Bangyan Stiles)

- **Professor Annie Wong-Beringer**, who garnered $50,000 toward more personalized treatments for staph bloodstream infections — which affect an estimated 50 out of every 100,000 people

- **Professor Wei-Chiang Shen**, whose grant of $46,100 will support his examination of proinsulin-transferring fusion protein as a drug to counter diabetes

- **Associate Professor Curtis Okamoto**, whose grant of $24,300 will support study of the protein kinase LKB1 in liver disease (on which Associate Professor Bangyan Stiles serves as co-principal investigator)

- **Assistant Professor Michael Jamieson**, who received $17,550 for a project focusing on ensuring the quality and reproducibility of preclinical research data at the School
Walter Wolf, PhD, Distinguished Professor of Pharmaceutical Sciences, died on December 25. He was 83.

Wolf was internationally renowned for his innovations in radiopharmacy and noninvasive biomedical imaging. He used those technologies to examine drug biodistribution, targeting and metabolism to improve diagnostic and therapeutic uses. The longest-serving member of the current USC faculty, he educated hundreds of scientists and pharmacists over a career that spanned generations.

“Walter Wolf was an exceptional member of our Trojan Family.”
—USC President C. L. Max Nikias

“Walter Wolf was an exceptional member of our Trojan Family,” says USC President C. L. Max Nikias. “His commitment to innovative pharmaceutical research — and the profound impact he had on countless students — have assured his extraordinary legacy at USC, and in the world. We will miss him dearly.”

Wolf came to USC in 1959 to join the Department of Chemistry, moving to the School of Pharmacy in 1962, making him the 11th member of the faculty. In 1968, he established the School's radiopharmacy program, which he headed for 20 years. This pioneering program prepared pharmacists to safely and effectively work with radioactive drugs for diagnostic and therapeutic purposes. As a result, nuclear pharmacy became the first specialty recognized nationwide by the Board of Pharmacy Specialties.

“Dr. Wolf was my inspiration — the exemplary scientist and an enlightened friend and mentor,” says John R. Yuen, PharmD ’88, a nuclear pharmacist who studied under Wolf and now directs the radiopharmacy service at LAC+USC Medical Center. “I often remember Walter's famous adage, 'What has been done is interesting. What remains to be done is exciting.'”

In addition to his research and his work as an educator, Wolf directed radiopharmacy services at the LAC+USC Medical Center from 1971 to 1987. He also chaired the university-wide Multidisciplinary Advisory Committee on Noninvasive Imaging Studies and the Biomedical Imaging Science Initiative. He served in various capacities, including president, on the Faculty Senate (now the Academic Senate).

Wolf spent his childhood in Uruguay after escaping Nazi Germany with his parents in 1938. He earned both his bachelor’s degree in natural science and master’s in organic chemistry from the University of the Republic, Montevideo, Uruguay. Wolf went on to the Sorbonne (now Paris Sorbonne University), earning his PhD in biochemistry in 1956. His first position in the U.S. was at Amherst College, where he served until joining USC.

His work in nuclear medicine was honored in 2006 with the Georg Charles de Hevesy Nuclear Medicine Pioneer Award, one of the most distinguished nuclear medicine scientific awards. Other honors included the Pioneer Award in Nuclear Pharmacy of the American Pharmaceutical Association (1996, 2000), the Genia Czerniak Prize in Nuclear Medicine (1980, 1986) and the Paul C. Aebersold Award of the Society of Nuclear Medicine (1999). In 2007, the Correlative Imaging Council, Society of Nuclear Medicine, established the Walter Wolf Young Investigator Award recognizing original research in the field of molecular imaging and therapy.

A celebration honoring Wolf’s memory was held at the School in February. The City of Los Angeles Commission on Disability paid him a posthumous tribute at its meeting in March.

Wolf’s wife of 53 years, Gladys D. Wolf, died in 2008. He is survived by his children, David (Cecil Ingram) Wolf and Jeanette (Raymond) Wolf-Seamans, and his adopted daughter, Nelda (Edgar) Alvarez.
Grant Sets Stage for Breakthroughs in Human Disease

Assistant Professor J. Andrew MacKay knows that the next big step toward understanding and treating disease will start on an extremely small scale.

MacKay’s research on microdomains — functional structures that are 10 to a thousand times smaller than a cell — has earned him his first Research Project Grant from the National Institutes of Health (NIH). The five-year, $1,587,885 RO1 grant supports the use of genetically engineered protein microdomains to trigger intracellular switching.

“By using biological materials to assemble structures, process information and harness energy, the emerging field of synthetic biology may bridge the gap between current technology and that needed to study and intervene in disease,” explains MacKay.

His interdisciplinary team is the first to report that intracellular elastin-like-polypeptides (ELPs) generate microdomains that exert control over cellular pathways, and MacKay hopes to design microdomains for specific functions, including stimulating, deactivating or responding to target cellular processes.

“Through design, we envision microdomains as tools that turn ‘off’ or ‘on’ biological pathways with high spatio-temporal control,” he says.

The study has three aims: manipulating of endocytotic pathways using microdomains; interrogating cell signaling using ELP microdomains; and expanding microdomain technology. This grant represents the next phase of research for MacKay and his team, who have been developing polypeptide-based drug carriers that can be used in the treatment of cancer, ocular diseases and other human diseases.

“When completed, this project will deliver a biomolecular toolbox of broad utility to study biological processes associated with human disease,” says MacKay. “Our goal is to repackage drugs into bioreponsive nanocarriers, which activate site-specific drug release and reduce toxicity.”

The project’s co-principal investigators are Sarah Hamm-Alvarez — executive vice dean and the Gavin S. Herbert Professor — and Curtis Okamoto, associate professor and chair of the Department of Pharmacology and Pharmaceutical Sciences.

The NIH grant builds on MacKay’s previous funding, provided by the U.S. Army Telemedicine and Advanced Technology Research Center, the Stop Cancer Foundation, the American Cancer Society, the USC Research Center for Liver Disease, the USC Ming Hsieh Institute, the L.K. Whittier Foundation, the Wright Foundation, the Southern California Clinical and Translational Science Institute, and the USC School of Pharmacy.

Dana Goldman (right) — director of the USC Leonard D. Schaeffer Center for Health Policy & Economics and the Leonard D. Schaeffer Director’s Chair — shares a moment with Leonard Schaeffer at the installation ceremony celebrating dedication of the new endowed chair. Goldman is a nationally recognized health economist influential in both academic and policy circles. His work is frequently featured in major media outlets. Schaeffer is the founding chairman and CEO of WellPoint, the nation’s largest health benefits company by membership, and chairs the Schaeffer Center advisory board.
In a front-page story in the April 6 Los Angeles Times, reporter Soumya Karlamangla discussed how USC is reinventing the pharmacist’s role by fostering a more personalized role in patient care. Karlamangla reported on the USC School of Pharmacy’s federally funded pilot program that aims to enhance care while reducing costs by having pharmacists engage more directly with patients in a team-based approach.

Directed by Steven Chen — chair of the Titus Family Department of Clinical Pharmacy and Pharmaceutical Economics & Policy, and the William A. and Josephine A. Heeres Chair in Community Pharmacy — the program partners with 10 clinics in the nonprofit AltaMed network that serves low-income populations throughout Los Angeles and Orange counties.

According to the article, “In a healthcare system that often seems impersonal and intimidating, pharmacists can act as a much-needed sympathetic ear and source of advice, spending extra time with patients.”

“On average, clinical pharmacists in the USC program find 10 drug-related problems per patient.”
— Soumya Karlamangla, Los Angeles Times

Among adults over the age of 65, one in six women is likely to develop Alzheimer’s disease compared to one in 11 men, according to research by Roberta Diaz Brinton, the R. Pete Vanderveen Chair in Therapeutic Discovery and Development. In an interview on the public radio show Science Friday in February, she shared her views on why women face higher risks of the disease as well as the importance of studying women as a distinct population.

“It is true that women live on average around four to five years longer than men, but that probably doesn’t explain the fact that women constitute two-thirds of all persons with Alzheimer’s disease,” she said. “It is more likely the way that they age that puts them at risk.”

Brinton’s research includes examining the connections between a lack of estrogen and Alzheimer’s development. She points to perimenopause and menopause as unique factors in how women age differently from men. Although most will transition quite well, she explained, “a proportion of women will begin to experience neurological symptoms,” including a decline in cognitive function, insomnia and depression.

Associate Professor Curtis T. Okamoto has been appointed chair of the Department of Pharmacology and Pharmaceutical Sciences. A faculty member at the School since 1994, he had been serving as the department’s interim chair since January 2013.

Okamoto’s research combines cellular, biochemical and molecular techniques to characterize the mechanisms by which the sorting of membrane proteins is regulated in epithelial cells, with a primary focus on the roles of clathrin and clathrin adaptors in regulating membrane traffic. He is currently heading a project aimed at discovering novel targets in treating jaundice.

Okamoto received his PhD in physiology from the University of California, Berkeley, and his postdoctoral training at the University of California, San Francisco.

“On average, clinical pharmacists in the USC program find 10 drug-related problems per patient,” wrote Karlamangla. The article also mentioned that many of the pharmacists involved help patients with issues including diet, exercise and stress. They even call insurance companies and drug manufacturers to make sure patients can get needed medications.

In addition to Chen, the piece also provided the viewpoints of Jose Alvarez, a diabetic patient whose health and attention to his own care has improved thanks to the effort, and Sangeeta Salvi, a participating pharmacist who appreciates getting out from behind the counter to help more patients.
ROASTING DEAN VANDERVEEN

When USC School of Pharmacy Dean R. Pete Vanderveen announced he would leave the position at the end of his second term, colleagues at the School decided to honor his deanship with a special event. “Fine,” he replied, “as long as the event is a roast.” Following are highlights from that event, held May 17 on the Health Sciences Campus’ Pappas Quad, and attended by faculty, staff, alumni and friends.

“The term ‘roast’ bridges non-hockey ducks with a ducking-out dean, which is appropriate, as I’ve always thought of Pete as something between rare and well-done.”

—Associate Professor Irving Steinberg, lamenting that the event was held during the Stanley Cup semifinals

“He has made a million dollars for the School just by recycling Diet Coke cans, he thinks he looks distinguished in a biker jacket and he has an open-door policy so that people can see he’s never in his office.”

—Associate Professor Neeraj Sood

“Patients, the profession of pharmacy and healthcare are in a better place because of Pete Vanderveen, and that’s no exaggeration.”

—Associate Professor Steven Chen, tempering the jokes by reminding the audience of Vanderveen’s leadership through the years

On behalf of the School, Chen presented Vanderveen with an engraved USC captain’s chair for his new office at the USC Leonard D. Schaeffer Center for Health Economics & Policy. His new workspace will be fitting, as Vanderveen was instrumental in establishing the Schaeffer Center, in which the School of Pharmacy is a partner with the Price School.

1. Even when he wasn’t officially roasting the dean, Associate Professor Irving Steinberg (left, with Western College of Pharmacy Dean Daniel Robinson and Vanderveen) kept the laughs going.
2. Vanderveen with alumna Andrea Cooper, PharmD ’95, and her daughter, Natalia.
3. Professor Clay Wang, wearing Vanderveen’s Trojan helmet, with Vanderveen.
4. Associate Professor Steven Chen.
5. Professor Wei-Chiang Shen photographs Vanderveen with Professors Enrique Cadenas and Joan C. Shih and Associate Professor Julio Camarena.
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THE PROFESSION

The newly minted graduates of the Class of 2015 are entering the workforce during an exciting era of change for the pharmacy profession. With the ongoing implementation of 2013’s California Senate Bill 493 — which gives pharmacists status as healthcare providers — the important role that pharmacists play in reducing overall healthcare costs and improving patient outcomes is increasingly acknowledged by policymakers, the public and other healthcare providers. The USC School of Pharmacy has long advocated to gain this recognition for the profession, and is at the center of efforts to expand such status nationwide.

California is leading the nation, as SB 493 has already been enacted and the State Board of Pharmacy is devising the regulations for each provision set forth in the law. Once fully implemented, the field of pharmacy in California will expand — notably giving pharmacists a broader role in more healthcare settings. Many believe California’s trendsetting legislation has provided the impetus for the provider status bills under consideration in Washington, D.C.

Some of the new California law’s provisions have already been implemented. For example, pharmacists who have an immunization certificate and CPR training may administer immunizations (as recommended by the Advisory Committee on Immunization Practices) to anyone over the age of 3. Previously, this service could only be done under collaborative protocol with a physician. In addition, pharmacists may now administer drugs and biologics that have been ordered by a physician, including injectable medications, and may order tests (including laboratory studies) for monitoring drug therapy.

By mid-2015, the Board of Pharmacists anticipates finalizing requirements that will allow pharmacists to provide hormonal contraception and travel medicines. Statewide, Kathleen Hill Besinque — assistant dean for curriculum and assessment — led the hormonal contraception effort and Steven Chen — chair of the School’s Titus Family Department and the William A. and Josephine A. Heeres Chair in Community Pharmacy — led the task force that developed guidance for ordering laboratory tests.

As SB 493 becomes fully implemented in California, and the movement to expand pharmacist status as healthcare providers gains momentum nationally, the future is clearly bright for the profession and for the School’s graduates.

Exuberant graduates who are all heading off to fellowship programs in July include: (back row) Tony Luu, Jessie Ho, Eddie Brauer, Derek Kuwahara, Jeff Penzner and Aidan Metzinger; (front row) Katherine Tran, Stephanie Yu, Anna Cheng, Lucie Vu, Cassie Ding and Shannon Dervin
TRANSITIONS

Selfies were everywhere at the 2015 commencement.

Receiving his MS in Management of Drug Development is Isaac Asante with Professor Daryl Davies and Dean Vanderveen.

Cesar Medina accepts his Doctor of Regulatory Science degree from Dean Vanderveen and Professor Frances Richmond.

The School awarded 252 degrees at the ceremony.

Associate Professor Steven Chen with student speakers Anketse Debebe, who received her PhD in Molecular Pharmacology and Toxicology, and Candice Chiaromonte, who received her PharmD

Newly minted Doctor of Pharmacy Thuyet Nguyen
THE PharmD CURRICULUM

The curriculum map excerpt shown here illustrates just three of the dozens of content areas (blue, orange and green blocks) in the School’s current curriculum. A full map is under construction for the new curriculum, which will be launched with the Class of 2019.

To ensure that students continue keeping pace with the rapid evolutions in 21st century healthcare, the USC School of Pharmacy recently undertook an 18-month, comprehensive assessment of the Doctor of Pharmacy program. Under the leadership of Ian Haworth, PhD, chair of the School’s curriculum committee, a curriculum was then built to meet both the faculty-approved revised program outcomes and the newly released 2016 Accreditation Council for Pharmacy Education standards. The resulting new curriculum, planned for implementation in fall 2015, reduces class time while increasing elective, research and experiential opportunities geared toward each student’s interests.

Haworth and his colleague Brian Sutch, PhD ’10, took on the additional task of creating a dynamic mapping program to demonstrate how students will progress toward their goals in gaining key competencies. The map shows how courses interconnect and build upon each other in training future generations of pharmacy professionals to the highest standards. It also illustrates how faculty members combine expertise in basic science
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The new curriculum emphasizes science, achieving optimal therapeutic outcomes and ensuring patient safety, and providing leadership that advances the profession while advocating for and implementing improvements in pharmacy practice and healthcare delivery. The Introductory Pharmacy Practice Experiences (IPPE) program is designed to run concurrently with the didactic courses to promote the application of coursework to patient care throughout the first three years.

**KEY CODE**

**MC = MEDICINAL CHEMISTRY**
- MC01 = physic-chemical properties of drug molecules I relation to drug absorption, distribution, metabolism and excretion
- MC02 = chemical basis of pharmacology and therapeutics
- MC03 = fundamental pharmacophores for drugs used to treat disease
- MC04 = structure activity relationships in relation to drug-target interactions
- MC05 = chemical pathways of drug metabolism
- MC06 = application to making drug therapy decisions

**PC = PHARMACEUTICS/BIOPHARMACEUTICS**
- PC01 = physical-chemical principles of dosage forms
- PC02 = biological principles of dosage forms
- PC03 = principles of drug delivery via dosage forms
- PC04 = principles of dosage form stability and drug degradation in dosage forms
- PC05 = materials and methods used in preparation and use of dosage forms

**PK = PHARMACOKINETICS/CLINICAL PHARMACOKINETICS**
- PK01 = basic principles of in vivo drug kinetics
- PK02 = principles of bioavailability/bioequivalence
- PK03 = physiologic determinates of drug onset and duration
- PK04 = drug, disease and dietary influences on absorption, distribution, metabolism and excretion
- PK05 = clinical pharmacokinetics of commonly used and low-therapeutic-index drugs
- PK06 = the pharmacokinetic-pharmacodynamic interface
The Health Sciences Campus is in the midst of a major physical transformation with new research and clinical care facilities, a hotel and conference center, additional student housing and childcare, expanded restaurant and parking options, plus a significant beautification and wayfinding effort currently underway — with still more expansion and improvements planned for the coming years. Here is a quick overview of what to expect.

**HSC MASTER PLAN**

- **HYATT HOUSE HOTEL**
  - Opens 2017
  - 200 suites
  - Conference facilities
  - Sit-down restaurant/5 additional eateries

- **PARKING STRUCTURE**
  - Opens December 2015
  - 1,200 cars (hotel, student housing, visitors, some permit parking)

- **STUDENT HOUSING**
  - Opens August 2016
  - 450 beds, 167 units
  - Ground floor includes new childcare center for 130 children

- **ADDITIONAL CAMPUS ENTRANCE**
  - Opens October 2015
  - Norfolk Street buildout to Soto Street
  - New traffic signal
HAZARD PARK UPGRADES
• New jogging/running path
• New toddler play area
• Enhanced facilities and equipment
• Additional security

BY THE NUMBERS

HEALTH SCIENCES CAMPUS

3M square feet on campus
3M additional net square feet (future planning on existing USC land)
80 acres of property
11K population, including 3,200 students
The Deanship
Innovation in Education, Practice and Research

When Dean R. Pete Vanderveen handed leadership reins to Interim Dean Glen L. Stimmel on June 30, they came with the confidence that the USC School of Pharmacy would continue its upward trajectory during this significant transition period. Both men have long served the School and the profession, playing key roles in the move to recognize pharmacists as healthcare providers (an overview of Stimmel’s career follows on page 24), ushered in by passage of 2013’s Senate Bill 493. Following is a very brief look back at the progress made by the School over the past decade under Vanderveen’s leadership.

From the moment Vanderveen took over as dean in September 2005, he set a high bar for faculty, students, the School and the growth of the profession, building on what his predecessors and the faculty had already achieved. From the beginning, Vanderveen was keenly aware of the legacy of the USC School of Pharmacy as an innovator in education, practice and research, and he aimed to build on that legacy.

He received eager support for his vision from alumni, donors and the university’s administration, in addition to faculty, staff and students. Over the past decade, the School of Pharmacy vaulted into the U.S. News & World Report top 10 rankings. This was a reflection on the careful and courageous approach to growing the School in areas that would differentiate it and benefit the field.

“Pete’s leadership has not only moved the School into the ranks of the national elite, but also advanced the entire pharmacy profession,” says USC Provost Michael Quick.

Vanderveen expanded the School’s clinical programs, aiding the region’s most vulnerable patients while also providing invaluable field experience for students. These initiatives include a partnership with safety-net clinics throughout Southern California that earned a $12 million healthcare innovation grant from the Centers for Medicare and Medicaid Services and has become a national model.

His tenure also saw major expansions of the School’s curriculum, including creation of the world’s first professional doctorate in regulatory science, new master’s degrees in the management of drug development and in healthcare decision analysis, joint PharmD/MS degrees in global medicine and in healthcare decision analysis, and a new translational PhD in clinical and experimental therapeutics. Every aspect of this growth aims to promote access to the pharmacy profession and broaden student opportunities for success. With this in mind, the School also launched a Diversity Initiative to attract more students of color to pharmacy careers.

He has always been equally dedicated to supporting the pioneering research of the School’s faculty. Vanderveen hired topflight investigators and fostered investments in promising research aimed at developing therapies for Alzheimer’s and other diseases, as well as reducing unnecessary antibiotics prescriptions. As a result, the School reached No. 2 in National Institutes of Health funding, and faculty research has garnered nearly $103 million in external funding, with six clinical trials in the works.

Private philanthropic support also increased during his 10 years as dean, with more than $68 million in gifts to fund student scholarships, research, programs, facilities and other key advances. One of the
most visible programs made possible through donor support is the School of Pharmacy’s partnership with the USC Price School of Public Policy that established and later endowed the USC Leonard D. Schaeffer Center for Health Policy & Economics. The center immediately became a national leader in finding solutions for improving healthcare value and driving innovation. The School is also nearly halfway toward completion of its $100 million fundraising initiative, part of USC’s historic $6 billion campaign.

Far from retiring, Vanderveen now becomes senior adviser at the USC Schaeffer Center. From this new post he will continue working to promote the pharmacy profession and improve healthcare for all. He will expand his advocacy to promote healthcare provider status for pharmacists across the nation, while taking on new roles advising students in Rho Chi and the Trojan Admission Pre-Pharmacy (TAP) Program, while developing an undergraduate elective that exposes some of the best undergraduates to careers in pharmacy.

BY THE NUMBERS

**THE VANDERVEEN YEARS**

$102.9 million
Approximate amount of external research funding

$68.1 million
Total philanthropic dollars raised

9
New centers/programs

250+
Health fairs

12
New degrees, certificates, residency programs
THE DEANSHIP
National Voice in Expanding the Scope of Practice

Glen L. Stimmel — a national leader in clinical pharmacy practice and a USC faculty member since 1974 — has been named interim dean of the USC School of Pharmacy effective July 1. In this capacity, he will also hold the John Stauffer Dean’s Chair in Pharmaceutical Sciences. He is a professor of Clinical Pharmacy, Psychiatry and the Behavioral Sciences in the School of Pharmacy and the Keck School of Medicine.

Stimmel has long been a national voice in expanding the scope of practice for pharmacists, including advocacy for pharmacist prescriptive authority. He led a pivotal pilot project in the late 1970s that was one of only two funded statewide to examine the safety and efficacy of pharmacists serving as prescribers. The successes of more than 30 pharmacist prescribers in this pilot program — practicing in a wide variety of healthcare settings — led to passage of legislation in California allowing pharmacists to initiate and modify drug treatment, order lab tests, perform physical assessments and administer drugs under physician authority. This law set the stage for further expansion of pharmacist authority passed in California in 1983 and, ultimately, 2013’s Senate Bill 493, which recognizes pharmacists as healthcare providers.

“Dr. Stimmel’s work was foundational to today’s efforts to continue to expand the role of the pharmacist on the healthcare team,” says R. Pete Vanderveen, outgoing dean. “We are very fortunate to have a leader of Dr. Stimmel’s reputation and caliber to lead our School at this auspicious time when we are building on the passage of Senate Bill 493.”

Over the decades leading to that law, Stimmel published numerous studies and opinion pieces in a range of journals supporting this expanded practice role for pharmacists. Meanwhile, his clinical work has focused on psychiatric pharmacy as well as maintaining a longstanding practice in geriatrics and rheumatology at the LAC+USC primary care clinics.

“Our School is on an amazing trajectory that promises to help innovate pharmacy practice, research and education. I’m honored to play a role in this important mission.”

—Interim Dean Glen L. Stimmel

Vanderveen, outgoing dean. “We are very fortunate to have a leader of Dr. Stimmel’s reputation and caliber to lead our School at this auspicious time when we are building on the passage of Senate Bill 493.”

He has long been a prolific scholar in the field. “An author of over 230 articles and textbook chapters, he has pioneered efforts in developing psychiatric pharmacy practice, education and residency

TRANSITIONS
programs,” wrote Provost Michael Quick in the memo announcing the appointment.

Stimmel earned his Doctor of Pharmacy degree from the University of California, San Francisco (UCSF), after which he completed a pharmacy residency in psychiatry at the Langley Porter Neuropsychiatric Institute of the UCSF Hospitals and Clinics in San Francisco. Before joining USC, he was an assistant professor at UCSF and served as the first clinical pharmacist for the District V Mental Health Center in San Francisco, where he helped define the pharmacist’s role on the healthcare team in a mental health setting.

He is a founding member and past president of the College of Psychiatric and Neurologic Pharmacists and of the American College of Clinical Pharmacy, where he is also an elected fellow. He is an original member and past chair of the Board of Pharmaceutical Specialties Council on Psychiatric Pharmacy Practice, a past board member of the American Association of Colleges of Pharmacy and a past vice chair of the American Society of Hospital Pharmacists Commission on Therapeutics. He is also an elected member of the World Association for Sexual Health and of the Sexual Medicine Society of North America.

A full professor since 1984, Stimmel has served in various administrative posts at the School, including as chair of the School’s clinical department, the strategic planning and strategic implementation committees, and the curriculum committee. He has also lectured internationally on pharmacy practice, notably as the keynote speaker at the Asian Conference on Clinical Pharmacy in Hong Kong in 2012, which was attended by more than 1,000 pharmacy professionals from 23 countries.

“I’m looking forward to working with the excellent faculty, staff, students, alumni and supporters of our School of Pharmacy,” says Stimmel. “Our School is on an amazing trajectory that promises to help innovate pharmacy practice, research and education. I’m honored to play a role in this important mission.”

### GLEN L. STIMMEL at a Glance

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1972</td>
<td>Earns PharmD from the University of California, San Francisco</td>
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<tr>
<td>1973</td>
<td>Completes residency at Langley Porter Neuropsychiatric Institute in San Francisco</td>
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<td>1974</td>
<td>Joins the USC faculty</td>
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<td>1979</td>
<td>Becomes founding member of the American College of Clinical Pharmacy (ACCP)</td>
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<td>1983</td>
<td>Elected president of the ACCP</td>
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<td>1984</td>
<td>Becomes full professor at USC</td>
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<tr>
<td>1994</td>
<td>Elected vice chair of American Society of Hospital Pharmacists' Commission on Therapeutics</td>
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<tr>
<td>1995</td>
<td>Joins board of directors of the American Association of Colleges of Pharmacy</td>
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<tr>
<td>1997</td>
<td>Named chair of the board of Pharmaceutical Specialties’ Specialty Council on Psychiatric Pharmacy Practice</td>
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<tr>
<td>1998</td>
<td>Founding member of the College of Psychiatric and Neurologic Pharmacists</td>
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<tr>
<td>1999</td>
<td>Elected member of the World Association for Sexual Health</td>
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<tr>
<td>2003</td>
<td>Elected president and chair of the board of the College of Psychiatric and Neurologic Pharmacists</td>
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<tr>
<td>2005</td>
<td>Elected member of the Sexual Medicine Society of North America</td>
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<tr>
<td>2008</td>
<td>Appointed chair of the School’s strategic planning committee</td>
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<td>2012</td>
<td>More than 1,000 pharmacy professionals from 23 countries attend his keynote address at the Asian Conference on Clinical Pharmacy in Hong Kong</td>
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<tr>
<td>2013</td>
<td>Earns Phi Lambda Sigma Phi Chapter Outstanding Alumni Award</td>
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<tr>
<td>2014</td>
<td>Number of articles and textbook chapters he has authored reaches 230+</td>
</tr>
<tr>
<td>2015</td>
<td>Appointed interim dean of the USC School of Pharmacy</td>
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### DEAN SEARCH

While Glen Stimmel takes the helm as interim dean, hiring a permanent dean remains one of the university’s highest priorities. An international search is underway to identify and recruit candidates of the highest caliber. As the process unfolds, final candidates will meet with key constituencies of the School of Pharmacy, including faculty, staff and students. The final selection of the dean will be made by the president.
PHARMACY STUDENTS THANK SCHOLARSHIP SUPPORTERS

The USC School of Pharmacy Annual Scholarship Luncheon, held April 13, enabled students to personally thank the benefactors who helped open up their educational and professional pathways.

“I am here today because of the generous support of donors like you,” student Danielle Cortez told the more than 100 attendees. She and other students shared experiences illustrating how scholarship support allowed them to overcome personal challenges and to take full advantage of the School’s many study and service opportunities.

Eno-Abasi Inyang explained how his scholarship let him explore and gain experience in professional areas that might have otherwise been beyond his reach. “For example, this summer I’ll be at the FDA office of hematology and oncology products. I could not do this without your support,” he said.

Summer Dyer told the group how her scholarship has enabled her to gain interdisciplinary experiences working with a geriatric population, solidifying her career goal to work in geriatrics. “Your scholarships are vital to students,” Dyer said. “And your generosity will not end here. It is an inspiration for each of us to give back one day as you have done for us.”

Dean Vanderveen also reported that the School awarded more than $700,000 in scholarships this academic year.

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“You make a significant difference and a lasting impact on the education of our students and on the pharmacists they will ultimately become,” added Dean R. Pete Vanderveen.

Have You Joined the Campaign Yet?

The USC School of Pharmacy has launched a $100 million fundraising initiative as part of USC’s $6 billion campaign. Have you joined this historic effort yet? Your support helps fund innovative research, student scholarships and much more. To learn more or make a gift now, visit pharmacieschool.usc.edu/giving/making-a-gift.

The USC School of Pharmacy has received more than $100,000 from the estate of Captain Walter F. Mazzone, BS ’48. His son, Robert Mazzone, delivered the bequest and said his father was very proud to have graduated from the School.

Captain Mazzone, who passed away at age 96, led a life filled with heroic rescues and brave experimentation that led to deep-sea diving protocols still used today. During World War II, he was the diving officer on board the USS Crevalle during a secret mission that rescued 40 women, children and missionaries. In the 1960s, he helped lead SEALAB, which revolutionized awareness of how long humans could safely remain deeply under water.

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USC School of Pharmacy has raised $47 MILLION.
GIVING

YOUNG ALUMS WITH A SPARK FOR GIVING BACK

**DANIELLE COLAYCO, PHARMD ’08, MS ’10**

When Danielle Colayco received her PharmD from the USC School of Pharmacy in 2008, great things were expected from her. After all, she won five awards that year at the School’s annual banquet and was named “Student of the Year” by the California Pharmacists Association. She has not disappointed.

Since receiving her PharmD, she completed an MS in pharmaceutical economics and policy at the School in 2010. She was corresponding author on a study published in *Diabetes Care* that showed that high-risk adults with Type 2 diabetes whose long-term blood sugar levels are very high or very low may be at greater risk for heart attack and stroke than those whose levels stayed at a 7 percent level. Currently, she is the president and CEO of the Komoto Family Foundation, which recently made a $112,724 gift to the School of Pharmacy to establish the Komoto Family Foundation Fellowship.

“We work in Bakersfield where there’s a huge gap in healthcare access,” Colayco says. “We realize that efforts are being made nationwide to work with patients upon hospital discharge to minimize readmission within 30 days and even beyond.”

The foundation set up the fellowship to support research that evaluates the outcomes of these post-discharge efforts, examining outcomes at 30 days and beyond 30 days, as well as overall healthcare costs. Colayco knew that a PhD student in the School’s pharmaceutical economics and policy program would be a perfect fit for this kind of study.

Along with her husband, Kevin Komoto — also a pharmacist — and her parents-in-law, Brian and Mary Komoto, the foundation set up the fellowship to examine the outcomes of transition-of-care programs.

“I learned so much at USC, and I knew supporting a graduate student through a fellowship would help a student while at the same time support important research that may impact today’s healthcare system,” says Colayco.

**STEPHANIE (LIANG) LUO, PHARMD ’12**

Stephanie (Liang) Luo was a trailblazer as the first student from the USC School of Pharmacy to be awarded a prestigious Albert Schweitzer Fellowship. She used her fellowship to implement a student volunteer project at the Community Health Alliance of Pasadena, a safety-net clinic. Her giving spirit followed her after graduation.

“My mother often reminds me how good USC has been to our family,” Luo says. “After all, since my mother worked at the university, I was able to attend tuition-free during my undergraduate years and part of pharmacy school.”

Luo’s mother, Grace Chow, retired from USC in 2013 after working in Auxiliary Services for 28 years. She sponsored PharmD student scholarships in 2013 and 2014. Luo and her husband, Andy Luo, an aerospace engineer who graduated from the USC Viterbi School of Engineering, thought establishing a scholarship for PharmD students would be an excellent way to honor her mother.

The couple pledged $100,000 to create the Grace Chow Endowed Scholarship, which aims to support meritorious pharmacy students who have substantial financial need. “It’s also a great way to invest in the future of pharmacy,” says Luo.

“My mother has always given back to USC and now we can join her by giving back to our alma mater,” she adds. “I hope we are also setting an example for our 14-month-old son, Axel, to be generous in his future.”
Hosted by the USC Pharmacy Alumni Association, the annual USC School of Pharmacy Alumni/Senior Awards Banquet at Town & Gown on May 9 offered a chance to celebrate the School’s friends, faculty, graduating students and alumni — particularly the Class of ’65.

The event also served as an informal bon voyage to Dean R. Pete Vanderveen. In his remarks, he called attention to the pharmacy classes that lay 50 years apart. “I strongly urge this year’s graduates to take special note of those ladies and gentlemen from the class of ’65,” he said. “They are the ones who paved the way for you, and the profession of pharmacy, so that you will be able to practice at the very highest level and make the most impact on the health of your patients.”

Alumni Association President Dolly Harris welcomed soon-to-be graduates as the newest association members. Offering remarks on behalf of the Class of 2015 was Andy Gelejian, class president in 2011, 2012 and 2013, and president of the USC Associated Students of the School of Pharmacy in 2013 and 2014.

Emcee Michael Wincor, PharmD ’78, associate professor and associate dean for Global Initiatives and Technology, was honored as Outstanding Alumnus of the Year. Dean Vanderveen called Wincor, “A professor’s professor, a student’s best teacher and mentor, and a dean’s trusted adviser and friend.”

Pharmacist and Board of Councilors member I. R. Patel, RPh, accepted the award for Honorary Alumnus of the Year. A steadfast supporter of the School, he is also a proud Trojan parent of daughters Sheena, PharmD ’09, and Tina, PharmD ’12, MPH ’14.

The Portaro family had a lot to celebrate as Denis, PharmD ’71, JD, current member and former chair of the Board of Councilors, and his wife, Sandra, received the 2015 Dean’s Medallion for their dedication to the School, and also prepared to see their daughter, Alexandra, receive her PharmD at commencement the following week. Keck Hospital of USC was selected as Preceptor/Site of the Year, with the honor accepted by Krist Azizian ’97, PharmD ’01, the hospital’s chief pharmacy officer and assistant dean for Academic Medical Center Programs.

Members of the Class of 1965 were honored for 50 years of service to the profession. In attendance were Drs. Branka Borisavljevic, Robert Boughn, Charles Brahms, Frank Briganti, Charles Cadis, Myron Cherico, Vahe Djknavorian, Robert Feiles, Richard Fond, Howard Green, Robert Hirose, Robert Holbrook, Richard Hultine, Gerald Kado, Roger Lancaster, George Marcarian, James Pontello, Robert Rashkow, Darryl Rubin, Leonor Straeter, Michael Straeter, Norm Willis and Samuel Wong.

The Trojan Band delighted guests, and Trojan Tables were graciously sponsored by Jane and Gale Bensussen, Wendy and Larry Jung, Timothy Chrisney and Keith LaFond, Sandy and Irv Sitkoff, Leonor and Michael Straeter, David Fong and Glen Tao, and Karina Keshishian and Ken Thai.

EVANS NAMED CEO OF SHARP GROSSMONT HOSPITAL

Scott Evans, PharmD ’98, MHA ’12, has been named senior vice president and CEO of Sharp Grossmont Hospital, the largest nonprofit, full-service, acute-care hospital in East San Diego County. He assumed the post in February 2015. Evans previously served as CEO of Keck Hospital of USC and USC Norris Cancer Hospital. He joined USC in 2004 as director of pharmacy services for Keck Hospital and residency program director for the USC School of Pharmacy. As an adjunct faculty member at the School of Pharmacy, he developed several key pharmacist positions, including specialists in psychiatry, infectious disease and ambulatory care transplantation.
**Alum Steps Down as Santa Monica’s Longest-Serving Councilmember**

Robert Holbrook, PharmD ’65, retired from the Santa Monica City Council in November 2014 after serving longer than any previous councilmember — 24 years, which included two terms as mayor.

“I have been privileged to serve Santa Monica and pleased to be part of city councils that brought so many new and wonderful things to our residents,” says Holbrook, who was born and raised in Santa Monica.

Holbrook’s Trojan and USC Pharmacy roots run deep. In addition to his own undergraduate and graduate pharmacy degrees from USC, his wife, Jean Ann ’65, and their three children — Bob III, PhD ’97, Cynthia ’91, JD ’95, and Craig ’94 — are USC alumni. From 1989 until his retirement in 2004, Holbrook was director of USC Pharmaceutical Services in the School of Pharmacy.

**Hong Kong-Based Alumna Wins Teaching and Research Awards**

Vivian Lee, PharmD ’98, received the 2014 Chinese University of Hong Kong (CUHK) University Education Award, one of the university’s highest accolades for teaching excellence. She also received CUHK’s International Partnerships Development Programme Award to establish research collaborations, particularly in health economics, with the USC School of Pharmacy.

“I’m passionate about my work and I hope my students will be well-trained pharmacists and professional goalkeepers for drug safety,” says Lee, who wore her USC academic regalia when accepting the award.

Lee relocated to Hong Kong to become a professor after graduating from the School. She credits her time at USC for providing her with examples of outstanding teaching.

“I was very lucky to have excellent teachers,” she says. “Two in particular, both from USC, made an impression: Dr. Gladys Mitani and Dr. Mary Gutierrez. Both of them were extremely passionate and seemed to have infinite energy despite having been teaching for many years. They also demonstrated that their professionalism could really bring improvement to patients’ health.”

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**ALUMNI UPDATES**

- **Krist Azizian**, PharmD ’01, was inducted into the USC chapter of Phi Lambda Sigma.
- **Amy Gutierrez**, PharmD ’89, has been elected president of the California State Board of Pharmacy.
- **Marx Kamashian**, PharmD ’57, celebrated the 50th anniversary of opening Kamashian’s Pharmacy in Granada Hills in March.
- **Robert Leark**, PharmD ’07, received the Dr. Kathleen Johnson Emerging Practitioner Award from the USC chapter of Phi Lambda Sigma.
- **James H. Roache**, PharmD ’70, is president and CEO of Advanced Pharmacy & Respiratory Care Solutions in Laguna Hills, Calif. The company was recently presented with CalOptima’s Circle of Care Award, which honors excellence in the delivery of high-quality healthcare, and with certificates of recognition from several county, state and national elected leaders.
- **Kelan Thomas**, PharmD resident ’12, published an article in *Annals of Clinical Psychiatry* in February about the impact of clozapine on healthcare use by schizophrenia patients on Medicaid.
- **Parvez Mulani**, PhD, ’03, passed away in December 2014. Mulani was a vice president for Health Economics and Outcomes Research at AbbVie.
- **Geraldine Vidovich**, BS ’51, passed away on January 5. She worked at Torrance Pharmacy and D & D Drugs in Redondo Beach, Calif., and was an active member of the American Pharmacists Association and the USC Pharmacy Alumni Association.
FACULTY UPDATES

James D. Adams, PhD, gave a talk to the Westchester Rotary Club in April about Chumash remedies, and was featured in the Santa Barbara Independent in May for his work using pharmaceutical science to demonstrate the medicinal benefits of California’s native plants.

Liana Asatryan, PhD, gave a presentation about the role of purinergic P2X7 receptors in alcohol-induced brain and liver damage at a Society on Neuroimmune Pharmacology conference in Miami in April.

Paul Beringer, PharmD, received a grant of $188,000 from Cubist Pharmaceuticals for his project on the pharmacokinetics of the cystic fibrosis drug tezisolid.

Roberta Diaz Brinton, PhD, R. Pete Vanderveen Chair in Therapeutic Discovery and Development, was featured in The Washington Post in September 2014 for her role as organizer of the Alliance of Women Alzheimer’s Researchers, and was interviewed by Science Friday in February about whether women are at greater risk for Alzheimer’s.

Julio Camarero, PhD, presented his research on cyclotides at Boehringer Ingelheim Pharmaceuticals Inc., in Danbury, Conn., in July 2014, at the University of Georgia School of Pharmacy and the Boulder Peptide Symposium in September 2014, at The Scripps Research Institute in La Jolla in November 2014 and at a peptides discovery meeting in San Diego in May. He also was co-author of a study about cyclotides and protein engineering that appeared in Frontiers in Chemistry in April and a study on recombinant expression and phenotypic screening of bioactive cyclotides in a forthcoming edition of Angewandte Chemie International.

Betty Mei-Chu Chan, PharmD, has been invited to teach at the Chinese University of Hong Kong’s School of Pharmacy.

Steven Chen, PharmD, chair of the Titus Family Department, has been named the William A. and Josephine A. Heeres Chair in Community Pharmacy. He also was recognized by the University of California, San Francisco (UCSF) Center for Excellence in Primary Care as an exemplar innovator for his coordination of care in the medical neighborhood; gave a presentation on improving care through the collaboration of psychiatric and ambulatory care pharmacists at a College of Psychiatric and Neurologic Pharmacists meeting in Tampa, Florida, in April; and participated in the webinar Integrating Pharmacy Care into Primary Care, hosted by the UCSF Center for Care Innovations, in May.

Roger Clemens, DrPH, was quoted by The Washington Post in December 2014 about the “humanization” of pet foods; by the Los Angeles Times in January about the lack of data showing that juice cleanses are effective; and by NBC’s Today in April about what nutrients make for a healthy snack bar.

Daryl Davies, PhD, participated in a presentation about good preclinical research practices at the Society of Quality Assurance Annual Meeting in Tampa, Florida, in April.

Chuanging Ding, MD, PhD, was awarded a $20,000 grant from the Webb Foundation for his project on dry eye syndrome in cystic fibrosis patients.

Jason Doctor, PhD, had his study on antibiotics protocols selected as paper of the month by the Swiss Patient Safety Foundation in November; gave a presentation about electronic health records in clinical research at a National Institutes of Health (NIH) big data meeting in December 2014; had his research paper on the use of insurance linked to by Marginal Revolution in April; had his research on the effects of fatigue on doctors and prescriptions featured on the blog The Incidental Economist in April; and was co-author of a study on the use of insurance against a small loss as an incentive strategy published in Decision Analysis in April.

Julie Ann Dophee, PharmD, has been named a fellow of the American Society of Health-System Pharmacists; spoke at the American Pharmacists’ Association meeting in March on mental health management in pediatric patients; and presented a seminar on managing mental illness to psychologists from the Los Angeles County Department of Mental Health in April.

Melissa Durham, PharmD, spoke about interprofessional education for health professionals at the Innovations in Medical Education Conference in San Gabriel, Calif., in February, and gave a presentation about chronic pain management at the American Pain Society meeting in May.

Etienne Gaudette, PhD, was appointed policy director of the Roybal Center for Health Policy Simulation, a collaborative effort of USC and the RAND Corporation, in May.

Dana Goldman, PhD, Leonard D. Schaeffer Director’s Chair, authored an op-ed for Forbes in November 2014 about how to provide more private health insurance for military veterans; authored an op-ed for Harvard Business Review in November 2014 about the economics of creating an Ebola vaccine; was quoted by The Washington Post in December 2014 about the potential negative outcomes for patients if pharmacies limit access to medications based on cost; was quoted by The Chronicle of Higher Education in January about why researchers pursue costly and complicated drugs and tests; and authored an op-ed for The Wall Street Journal in February about how the Affordable Care Act pressures hospitals to hold costs constant while costs to recruit and retain employees rise in a competitive hiring environment.

Sarah Hamm-Alvarez, PhD, Gavin S. Herbert Professor, executive vice dean, vice dean for Research and Graduate Affairs, has been appointed a fellow of the American Association of Pharmaceutical Scientists.

Joel Hay, PhD, was quoted by Marketplace in October 2014 about the motivations of drug manufacturers for creating a viable Ebola vaccine, and was quoted by ABC News (Australia) in October 2014 about how the Ebola crisis has grabbed the attention of drugmakers.
Michael Jamieson, DRSc, gave a presentation about good research practices at the Society of Quality Assurance Annual Meeting in Tampa, Florida, in April.

Geoffrey Joyce, PhD, was quoted twice by the Los Angeles Times in October 2014 about a sharp rise in the cost of drugs, and in February about pharmacy benefit managers.

Darius Lakdawalla, PhD, Quintiles Chair in Pharmaceutical Development and Regulatory Innovation, authored an op-ed for Harvard Business Review in November 2014 about the economics of creating an Ebola vaccine.

J. Andrew MacKay, PhD, was featured in the September 2014 cover story of Advanced Functional Materials.

Jeffrey McCombs, PhD, director of Graduate Studies, was interviewed by Capital Public Radio and cited by California Healthline in February about a California state bill that would require greater transparency of production costs associated with medications priced at more than $10,000 a year; he also gave a presentation about community pharmacies facilitating transition of care for Medicaid patients at the Academy of Managed Care Pharmacy meeting in San Diego in April.

Emi Minejima, PharmD, was awarded a $10,000 New Investigator Grant from the American Association of Colleges of Pharmacy.

Edith Mirzaian, PharmD, served as guest editor of the fall 2014 medication therapy management–themed issue of California Pharmacist, and gave several presentations at the CPhA West Coast Pharmacy Exchange in Anaheim, Calif., in April.

Tien Ng, PharmD, gave a presentation on mineralocorticoid receptor antagonists at the American Heart Association Scientific Sessions in Chicago in November 2014, and was appointed associate editor of the Journal of Cardiac Failure.

Bogdan Olenyuk, PhD, was awarded a $110,000 grant from the Elsa U. Pardee Foundation for his project about the use of antibody–drug conjugates in breast cancer, and was featured by Science 2.0 in February for his study showing that a conjugate molecule yields a tumor-targeting tool.

Eunjoo Pacifici, PharmD, PhD, participated in a presentation about good preclinical research practices at the Society of Quality Assurance Annual Meeting in Tampa, Florida, in April.

Susie Park, PharmD, presented a seminar on managing mental illness for psychologists from the Los Angeles County Department of Mental Health in April.

Kathleen Rodgers, PhD, participated in a presentation about good preclinical research practices at the Society of Quality Assurance Annual Meeting in Tampa, Florida, in April.

Seth Seabury, PhD, was featured in The Kansas City Star for his research on the implications of restricting access to psychiatric drugs.

Jean Shih, PhD, University Professor, Boyd P. & Elsie D. Welin Professor, was appointed to the Huzhou Municipal Government Overseas Academician & Experts Advisory Board; was featured by Science 2.0 in February for her study showing that a conjugate molecule yields a tumor-targeting tool; and was inducted into Phi Kappa Phi in May.

Neeraj Sood, PhD, was featured by Forbes, The Washington Post, Bloomberg News, USA Today and Politico in October 2014 for his study showing that price-comparison tools can lower medical costs; is a finalist for the 21st annual National Institute for Health Care Management Research Award as co-author of a study on the association between the availability of health service prices and payments, which was published in the Journal of the American Medical Association in October 2014; joined the editorial board of the journal Health Services Research; presented Schaeffer Center research at two Senate and Assembly hearings in Sacramento in March; and provided expert testimony in California Senate hearings on high-deductible plans and rising healthcare costs in May.

Bangyan Stiles, PhD, was awarded a three-year, $900,000 grant from the California Institute for Regenerative Medicine as co-PI for a project on translating stem cell discoveries into human cellular therapies.

Glen L. Stimmel, PharmD, authored an editorial regarding barriers to quality mental healthcare for the Journal of the Pharmacy Society of Wisconsin in May; in April, he presented a study about integrating psychiatric pharmacists into primary care and conducted a student roundtable at the CPNP Annual Meeting in Tampa, Florida.

Dean R. Pete Vanderveen, PhD, RPh, John Stauffer Decanal Chair, was cited by the Idaho Statesman in September 2014 regarding pharmacists being underutilized; he was also featured in an NBC4 Los Angeles news story about recent graduate Reyna Raya, who realized her dream of earning a PharmD despite battling aggressive breast cancer.

Clay Wang, PhD, will continue to serve on the executive board of the USC Academic Senate in 2015–16.

Bradley Williams, PharmD, was quoted by NPR News in December 2014 about how antipsychotics should be used only as a last resort for the treatment of Alzheimer’s disease and other dementia; had his NPR story featured in the ASHP Daily Briefing in December 2014; wrote an article for the USC Alzheimer Disease Research Center’s blog in February about managing medications for people with dementia; presented his research on interprofessional geriatrics training at an Association for Gerontology in Higher Education meeting in Nashville in February; and presented a seminar on managing mental illness to psychologists from the Los Angeles County Department of Mental Health in April.
FACULTY UPDATES

Annie Wong-Beringer, PharmD, was awarded a $137,125 grant from Cubist Pharmaceuticals for her project about the use of antibiotics for staph infections.

Jianming Xie, PhD, joined the faculty as an assistant professor in the Department of Pharmacology and Pharmaceutical Sciences. His laboratory works at the interface between chemical biology, protein engineering and immunology. He received his PhD in chemical biology from The Scripps Research Institute in La Jolla. Since joining the faculty, he has been awarded a $25,000 American Cancer Society Institutional Research Grant for his project to monitor antigens in unnatural amino acids.

Yong (Tiger) Zhang, PhD, became an assistant professor in the Department of Pharmacology and Pharmaceutical Sciences. His research focuses on the design and discovery of novel drug molecules and therapeutic approaches for the treatment of cancer, diabetes, HIV/AIDS and other life-threatening diseases. He earned his PhD in biochemistry from the Albert Einstein College of Medicine. He received a $2,000 Faculty Development Grant from the Chinese American Faculty Association (CAFA) of Southern California and the CAFA Scholarship Foundation for his work on the role of the PARP14 gene in cancer pathogenesis. He also received a 2015–16 USC Undergraduate Research Associates program award for novel therapeutic tools for breast cancer.

The USC School of Pharmacy has promoted DARYL L. DAVIES, PhD, to full professor in the Titus Family Department of Clinical Pharmacy and Pharmaceutical Economics & Policy. His research focuses on developing new drugs to help treat and prevent alcohol use disorders. Davies directs the Alcohol and Brain Research Laboratory at USC, which investigates how alcohol affects purinergic, or P2X, receptors in the brain. He also serves as associate director of education in drug development for the International Regulatory Science Center and co-director of the School’s master’s program in Management of Drug Development. Davies earned his bachelor’s and master’s degrees in biology at California State University, Dominguez Hills, and his PhD from the Department of Molecular Pharmacology and Toxicology at the USC School of Pharmacy.

CLAY WANG, PhD, has been promoted to full professor. He joined the USC School of Pharmacy in 2003 and also holds a joint appointment in the Department of Chemistry of the Dornsife College of Letters, Arts and Sciences, and serves on the executive board of the USC Academic Senate. The primary focus of his research is natural product drug discovery. Wang received his BA in chemistry from Harvard University in 1996 and his PhD in chemistry from the California Institute of Technology in 2001. He then completed a postdoctoral fellowship in chemistry and chemical engineering at Stanford University.

Another Space Odyssey

Clay Wang, PhD, is a co-investigator on a new grant awarded by NASA and the Center for the Advancement of Science in Space, which manages the International Space Station. The project, conducted in collaboration with colleagues at the Jet Propulsion Lab, focuses on optimizing new technologies to answer old questions about natural product drug discovery in microgravity. The study involves microorganisms originating from the Chernobyl nuclear accident. This is Wang’s and the School’s second grant from NASA.

YEAR 1
Ian Haworth, PhD

YEAR 2
Michael Wincor, PharmD

YEAR 3
Tien Ng, PharmD

YEAR 4
Julie Dopheide, PharmD

PharmD students have honored the following faculty members as Faculty of the Year:

FACULTY PROMOTIONS

FACULTY OF THE YEAR
Pharmacy Projects Garner Ming Hsieh Grants

The Ming Hsieh Institute recently awarded grants of $120,000 each to three pharmacy faculty members for cancer nanotechnology research.

Associate Professor Stan Gee Louie, director of the Clinical and Experimental Therapeutics Program, received funding to support a project to treat resistant breast cancer. Associate Professor Kathleen Rodgers earned the grant to pursue nanoparticle formulations of MAS agonists for chemotherapy. Assistant Professor Yong (Tiger) Zhang collected the award to support his project engineering exosome nanoparticles for targeted cancer therapies.

Louie is also involved in a Ming Hsieh-supported project headed by Nicos Petasis, professor of chemistry at the USC Dornsife College of Letters, Arts and Sciences. Other USC School of Pharmacy faculty garnering multiple previous Ming Hsieh awards are Assistant Professor Andrew MacKay and Research Assistant Professor Jennica Zaro.

The Ming Hsieh Institute for Research on Engineering-Medicine supports pioneering projects that fuse nanoscale science and engineering with medical research to speed discovery and create novel pathways to improve the lives of patients with cancer and other devastating diseases.

Williams Continues Alzheimer’s Outreach

Bradley Williams, professor of Clinical Pharmacy and Clinical Gerontology, serves as director of the Education and Information Core of the USC Alzheimer’s Disease Research Center and has been active with the center since 1985. NPR stories in December 2014 and March 2015 quoted him about how antipsychotics should be used only as a last resort for the treatment of Alzheimer’s disease and other dementia. He also writes for the center’s blog, including an article he authored in February about managing medications for people with dementia.

Williams Continues Alzheimer’s Outreach

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Professor Mel Baron’s new fotonovela — the eighth in his much-acclaimed series — focuses on mammography and breast cancer. The booklets use popular soap-opera storytelling in a comic-book format to provide vital information in an easily understandable, culturally appropriate package that can be widely shared. The latest in his series garnered a $50,000 grant from the Confidence Foundation. He is currently working on a new fotonovela on immunization.

This outreach is increasingly urgent as the financial burden of Alzheimer’s disease on the United States will skyrocket from $307 billion annually to $1.5 trillion, according to recent research released by the USC Leonard D. Schaeffer Center for Health Policy & Economics.

The report also found that:

- From 2010 to 2050, the number of individuals aged 70+ with Alzheimer’s will increase by 153 percent, from 3.6 million to 9.1 million.

- Annual per-person costs of the disease were $71,303 in 2010, which is expected to double by 2050.

- Medicare and Medicaid currently bear 75 percent of the costs of the disease.

According to the U.S. Census Bureau, in 2012, 43.1 million Americans were 65 and older, constituting 14 percent of the population. By 2050, that number will more than double to 83.7 million, constituting 21 percent of the population.
Every year, USC School of Pharmacy students offer counseling services to USC retirees to help them choose the best Medicare Part D plan — which covers prescriptions — for their individual needs. The program is organized by student service group Skull & Mortar and was led this year by PharmD student Charisse Wong. Students are advised by Professor Bradley Williams. Following are highlights from the 2014 sessions:

**NUMBER OF COUNSELING SESSIONS**
4

**NUMBER OF USC RETIREES COUNSELED**
59

**NUMBER WHO CHANGED THEIR PLANS**
45

**AVERAGE AMOUNT SAVED**
$741

**LARGEST AMOUNT SAVED**
$15,290

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**BY THE NUMBERS**

**STUDENT UPDATES**

Terry Church, DrSc candidate, published an article in the *Journal of Oncology Practice* in January about end-of-life services for gynecologic cancer patients at an urban public hospital.

Jordan Despanie, PhD candidate (above), has been awarded a GlaxoSmithKline Science Achievement Award from the United Negro College Fund for his project on enhancing drug synergy in breast cancer.

Yawen Jiang, PhD candidate, published an article in *Annals of Clinical Psychiatry* in February about the impact of clozapine on healthcare use by schizophrenia patients on Medicaid.

Sheraz Khoja, MDD/PhD candidate, won first place for his poster about purinergic P2X4 receptors at the 51st Annual Drug Information Association Meeting in Washington, D.C., in June.

Tianyi Lu, PhD candidate, published an article in *The Geneva Papers* in October 2014 about whether health insurance leads to ex ante moral hazards within a new medical scheme in rural China.

Maira Soto, PhD candidate, has been awarded an Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research from the National Institute of Environmental Health Sciences.

Christopher Yamamoto, PharmD candidate, along with USC’s Rho Chi Society chapter, received a $500 award from the Rho Chi Society Executive Council and Awards Selection Committee for work on the Colonial Drug Project, a 1920s pharmacy exhibit at the Heritage Square Museum in Pasadena.

PharmSC, the USC School of Pharmacy’s student-run clinic, received a certificate of recognition at the City of Alhambra Town Meeting in November 2014 for its participation in a successful community health fair.

USC’s Rho Chi Society-Theta Chapter was a Rho Chi Region 8 finalist for the National Chapter Achievement Award and received the Chapter Project Proposal Award for its Colonial Drug project.

PhD students Ania Papinska (laboratory of Kathleen Rodgers) and Zhigang Liu (laboratory of Enrique Cadenas) were chosen to give oral presentations at the Gordon Research Conference on Oxidative Stress & Disease: The Redox Biology of Age-Related Diseases in Ventura, Calif., in March.
SHEN LAB STUDENTS PITCH AND WIN

Two recent USC competitions were won by PhD students in the lab of Professor Wei-Chiang Shen, the John A. Biles Professor in Pharmaceutical Sciences. The seventh annual USC Graduate Research Symposium required students to tell their story in five minutes, using a single slide. The School of Pharmacy’s Three-Minute Thesis competition posed an even tougher challenge: charging participants with presenting their work in less time with no visual aids.

Fourth-year PhD student Juntang Shao took first place and a $1,000 prize in the campus-wide Graduate Research Symposium. Her slide showed how proinsulin-transferrin could potentially provide the prolonged therapeutic effect of insulin without the side effects. Her novel approach aims to reduce hypoglycemia by treating the liver as a kind of test tube, using its endogenous enzymes to convert the drug into an active state. Targeting the drug to the liver minimizes the side effects of hypoglycemia, which commonly include headache and sleepiness and can even lead to coma and death.

“We’re exploring the machinery of why the insulin has prolonged action and why the liver activates the drug,” says Shao. “Ultimately, this approach presents longer duration and safer insulin action — a great promise for Type 1 diabetes treatment.”

The following day, her Shen lab colleague Zoe Folchman-Wagner won the inaugural Three-Minute Thesis Competition sponsored by the School’s Research & Graduate Affairs Office. Folchman-Wagner, a third-year PhD student, distilled the essence of her work to target tumors while lessening side effects by bypassing healthy cells.

“Cancer therapies can be as bad or worse than the disease itself,” she said, after relating the story of a family friend who died of colon cancer after foregoing a final round of chemotherapy. “We can do better.”

Folchman-Wagner is studying a nanoparticle approach that encapsulates cancer-fighting drugs by sensitizing them to the tumor microenvironment, which is slightly more acidic than the normal environment. Since the drugs are not released until they are within the tumor cell, surrounding healthy tissue is spared the typical chemotherapy side effects.

“The change in acidity is very slight so it has never been fully exploited as a tool for targeted drug delivery,” says Folchman-Wagner. “My project is working to overcome this barrier.”

The two winners are mentored by Research Assistant Professor Jennica Zaro as well as Shen. Shao also received second place in the Three-Minute Thesis Competition, tying with Jordana Jayne, who is mentored by Professor Paul Beringer. Third-place winners were Isaac Asante, mentored by Associate Professor Stan Louie, and Christine Solinsky, who studies in the lab of Professor Roberta Diaz Brinton.

The School also offered a pitch workshop to help students explain their research when vying for funding and applying for jobs.

Students Honored at Alumni/Senior Awards Banquet

Numerous School of Pharmacy students were recognized at the annual Alumni/Senior Awards Banquet on May 9. Among them were 52-year-old mother and cancer survivor Reyna Raya, PharmD ’15, who received the Walgreens Award; Anna Naito, PhD ’15, who earned the Ronald Alkana Outstanding Doctoral Student Award in memory of her mentor; Daniel Kudryashov, PharmD ’15, who received the Dean’s Advocacy Award; Melissa Agnello, PhD ’15, who received the Outstanding Doctoral Translational Science Scholar Award; and Janet Hakopian, PharmD ’15, who won the Boiron Award, a new honor recognizing excellence in integrative medicine in pharmacy practice.

The Class of 2015 PharmD graduates with the highest GPAs — Aretha Lui (who graduated with a 4.0), Kirk Nielsen and Nhat Do — garnered the Merck Academic Excellence Award.
In this issue, we introduce a new standing feature — Photo Shop — in which we will seek your help identifying people in a historic photo from the School. The results will be posted online, and prizes may even be awarded!

In the fall 2014 issue, we misidentified this photo — which ran as part of the remembrance of Dean Emeritus John A. Biles — as being from the 1960s. Ettie Rosenberg, PharmD ’79, JD, wrote to tell us this was actually from the 1970s. She helped identify a number of her classmates. Do you recognize any of the others in this photo? Submit your responses to kuklaver@pharmacy.usc.edu.

Do you recognize any of the School of Pharmacy football team from 1914? Submit your responses to kuklaver@pharmacy.usc.edu.

CLASS OF ’79: We Need Your Help
The USC School of Pharmacy has stood strong for 110 years — with a legacy marked by innovation in education, clinical practice and research.

As you plan your own legacy, please consider joining other generous, creative and inspiring alumni and friends who have helped make the School what it is today. Your gift will help propel our School and our profession far into the future.

USC gift-planning experts can help you design the gift that best fits your needs while supporting the pivotal elements that make our School among the best. To start creating your legacy, contact Joann Tusia at tusia@usc.edu or 323-442-0162.

pharmacyschool.usc.edu/giving/making-a-gift
save the date...

>> AUGUST 3–7
2015 USC School of Pharmacy Hawaii Program
Hyatt Regency Maui Resort and Spa
Information: 323-442-2404 or pharmce@usc.edu

>> OCTOBER 24
Pharmacy-Based Immunization Delivery Certificate Program
APhA program presented by USC School of Pharmacy
Pharmaceutical Sciences Center 104
USC Health Sciences Campus
Information: 323-442-2404 or pharmce@usc.edu

>> NOVEMBER 7
USC Homecoming/Reunion Weekend
USC University Park Campus
Information: 323-442-1738 or stanovic@usc.edu

>> JANUARY 29-31, 2016
21th Annual QSAD Centurion Winter Retreat
Rancho Las Palmas Resort and Spa
Palm Springs, California
Information: 323-442-1738 or stanovic@usc.edu

Right: Actor Sean Astin (Lord of the Rings trilogy) served as this year’s commencement speaker.