Dear Friends,

We have much to celebrate.

Once again, the UCLA College and our programs in Humanities, Life Sciences, Physical Sciences and Social Sciences have been ranked among the best in the world. Our incoming freshman and transfer class is the most accomplished in history. And our historic Centennial Campaign entered its first year with resounding success, with more than $1 billion out of a five-year goal of $4.2 billion already raised.

This issue of the College Report showcases the many reasons we have to celebrate, from boundary-breaking research to game-changing philanthropy to students defying all odds on their paths to fulfilling their aspirations.

Much of our success can be attributed to the dynamic interdisciplinary work that can be found in the College. To illustrate the world-class education and research that emanates from the College, from cancer research to the study of languages thousands of years old, we created a map that can be found on p. 12 of this issue. As impressive as this is, it is merely a sampling of the diverse opportunities and resources offered to our students and the breadth and scope of our research within the context of UCLA.

We truly are the academic heart of UCLA.

Sincerely,

**Joseph Rudnick**  
Senior Dean, UCLA College  
Dean of Physical Sciences

**Alessandro Duranti**  
Dean of Social Sciences

**David Schaberg**  
Dean of Humanities

**Victoria Sork**  
Dean of Life Sciences

**Patricia Turner**  
Dean and Vice Provost for Undergraduate Education

Left to right: Alessandro Duranti, Victoria Sork, Joseph Rudnick, Patricia Turner and David Schaberg
Rankings Put UCLA at the Top; Wallace Centennial Celebration; Faculty Honored


The 2015 report places UCLA in a tie with the University of Virginia, another public university. Four other University of California campuses were among the top 10 public institutions: UC Berkeley, the No. 1 public and No. 20 overall; UC San Diego at No. 8 (37 overall); UC Davis at No. 9 (38 overall); and UC Santa Barbara at No. 10 (40 overall).

“By any measure, UCLA has earned its reputation among the top institutions of higher learning,” UCLA Chancellor Gene Block said. “I’m proud of the remarkable accomplishments of UCLA faculty and students to break new barriers and improve our world through discovery and service, and of our work to ensure opportunities for those who continually strive to reach their potential.”

UCLA topped all universities in the survey for economic diversity; 39 percent of UCLA undergraduate students receive Pell Grants. Also contributing to UCLA’s high ranking were its high graduation and freshman retention rates.

Among national universities, UCLA was tied for No. 9 for ethnic diversity and No. 22 in the “high school counselors’ picks” category, which is based on academic advisers’ impression of which institutions offer the best undergraduate education. In addition, UCLA was named as one of the magazine’s “programs to look for” based on opportunities for undergraduates to conduct research and participate in creative projects that result in original scholarly papers or presentations.

At the top of the overall rankings were Princeton, Harvard and Yale, with Columbia, Stanford and the University of Chicago tied for fourth. The rankings’ methodology emphasizes factors that tend to favor private universities, such as endowment size, rate of alumni giving and student-faculty ratio.

Regardless of the methodology, UCLA performs well in a wide variety of rankings. In August, Washington Monthly ranked UCLA No. 1 in its compilation of “affordable elite” universities, and No. 5 in its list of national universities that contribute to serving the public interest. Also in August, Shanghai Jiao Tong University’s Academic Ranking of World Universities placed UCLA second among U.S. public institutions and No. 12 overall. In compiling its rankings, Shanghai Jiao Tong University takes into account factors such as faculty publications and research citations and the number of alumni and faculty who have won Nobel prizes and Fields Medals. UCLA also placed No. 12 in the London Times Higher Education’s 2014–15 World University Rankings.

The A.R. Wallace Centennial Celebration

Commemorating the 100th anniversary of the death of British naturalist Alfred Russel Wallace, the Department of Ecology and Evolutionary Biology sponsored a public event on November 15. Organized like a TED conference, the daylong event in Schoenberg Hall featured prominent speakers and intellectual luminaries, including winners of the Pulitzer Prize, MacArthur Fellowship and Turner Prize.

Wallace was the co-discoverer with Charles Darwin of evolution by natural selection. Although his career was largely overshadowed by Darwin’s, Wallace, by the time of his death at 90, was arguably the world’s most famous scientist and hailed as England’s greatest naturalist. He is known for his contributions to our understanding of the mechanisms of evolution, the development of biogeography (the study of how plants and animals are distributed), the impact of behavior on evolution, humanity’s place in nature, the rise of societies, and the quest for meaning and purpose in human life.

The event was part of the A.R. Wallace Centenary Celebration, a suite of nine projects designed to raise awareness of his monumental scientific contributions among contemporary audiences.
Osher earns highest honor in applied mathematics

Stanley Osher, UCLA professor of mathematics and former director of applied mathematics, is the third person ever to be awarded the prestigious Gauss Prize, the highest honor in applied mathematics. The citation honoring Osher said he has made “influential contributions to several fields in applied mathematics and his far-ranging inventions have changed our conception of physical, perceptual, and mathematical concepts, giving us new tools to apprehend the world.”

Osher was among the top 1 percent of the most frequently cited scholars in both mathematics and computer science between 2002 and 2012. His research was the subject of three-day “Osher Fests” at UCLA in 2002 and 2012.

“I am grateful to the UCLA administration and to my colleagues in the mathematics department for their support in building up applied mathematics, and to my many colleagues outside of the department for the incredibly pleasant interdisciplinary research atmosphere that exists here.”

“I’d also like to thank my sister, Sondra Jaffe, for convincing me that we could both join the middle class by becoming mathematicians in the post-Sputnik era.”

Osher has created innovative numerical methods to solve partial differential equations, and analyzed algorithms and their underlying partial differential equations. He also produced a new method for accurately describing how objects change shapes — predicting how, for example, a drop of oil floating in water will morph based on currents in the water, including what would happen if the drop of oil divided in two or merged with another drop of oil.

“Stan Osher is a superb applied mathematician who has made major advances in the solution of important real-world problems,” said Joseph Rudnick, senior dean of the UCLA College and dean of physical sciences. “His work is marked by elegance and efficiency. He richly deserves this important honor.”

Osher has trained and mentored more than 50 Ph.D. students and even more postdoctoral scholars, many of whom have become distinguished professors and researchers in applied mathematics. His students, one of whom received an Academy Award, have used mathematics to create special effects in dozens of movies, including Pirates of the Caribbean.

Osher said he is proud to be a professor at UCLA, whose applied mathematics department is ranked No. 2 in the U.S., per U.S. News & World Report, and whose pure mathematics department is also regarded among the best in the country.

He has said of his own research, “I write the algorithms that make the computer sing. I’m the Barry Manilow of mathematics.”

Tao honored with 2014 Royal Medal, Breakthrough Prize

UCLA professor Terence Tao has been selected by the Royal Society to receive the 2014 Royal Medal for physical sciences for his “many deep and varied contributions to mathematics.”

The Royal Society, based in London and founded in 1660, is the oldest scientific academy in continuous existence. The organization awards three Royal Medals each year in the physical, biological and applied sciences.

Tao also received the Breakthrough Prize in Mathematics, an award established by Facebook founder Mark Zuckerberg and Russian tech billionaire Yuri Milner.

Tao was hailed for his numerous breakthrough contributions to harmonic
analysis, combinatorics, partial differential equations and analytic number theory. As one of five inaugural recipients, he was awarded a $3 million prize.

The Breakthrough Prize in Mathematics, which recognizes major advances in the field, honors the world’s best mathematicians, supports their future endeavors and communicates the excitement of mathematics to the public.

Hubbell honored for expanding understanding of tropical forests

Stephen Hubbell, a distinguished professor of ecology and evolutionary biology at UCLA, was presented with a Scientific Achievement Award during the opening ceremony of the International Union of Forest Research Organizations World Congress. No American has won the award in more than 40 years.

In announcing the award, IUFRO praised Hubbell as a “visionary scientist who has made unparalleled contributions to understanding the biological diversity and ecology of tropical forests.” He is an international leader in advancing our scientific understanding of complex tropical systems, which is essential for their conservation and management.

“We need much better data on the distribution of life on Earth,” he said in a 2011 interview. “We need to rapidly increase our understanding of where species are on the planet. We need citizens to record their local biodiversity; there are not enough scientists to gather the information. We also need much deeper thought about how we can estimate the extinction rate properly to improve the science behind conservation planning. If you don’t know what you have, it is hard to conserve it.”

Hubbell is renowned for his research on tropical rainforests and theoretical ecology. He has published four books — including *Neutral Theory of Biodiversity and Biogeography*, which has been cited more than 4,100 times — and more than 200 scientific papers on tropical plant ecology, theoretical ecology, plant-animal interactions and animal behavior. His unified neutral theory of biodiversity and biogeography explains the diversity and relative abundance of species in ecological communities.

Hubbell has said that humans are already using 40 percent of all the plant biomass produced by photosynthesis on the planet, a statistic that’s disturbing because most life on Earth depends on plants. Some three-quarters of all species thought to reside on Earth live in rainforests, which are being cut down at the rate of about half a percent per year, he said.

“When I was a kid, I spent a lot of time doing non-macho things like collecting butterflies and turning over rocks,” he said. “The only way we’re going to save nature is by making sure future generations experience nature. People who have never seen wild nature don’t miss it and don’t realize how impoverished their lives have become due to its loss. I worry about the loss of a conservation ethic among the public. Go to the tropics. Experience a rainforest — while you still can.”

Environmental Humanities’ Allison Carruth

Plays the L.A. River

A Colorado native, Allison Carruth grew up enjoying free-flowing alpine rivers fed by snowmelt. So the UCLA associate professor of English is not an obvious advocate for the largely channelized Los Angeles River that is fed by urban runoff, treated wastewater and other less pristine sources. Yet Carruth fell under its spell shortly after moving to L.A. to join the UCLA English faculty two years ago. Today, she is helping to lead Play the LA River, a massive effort to draw the public to the waterway.

“As a scholar, I’m interested in how the arts shape environmental movements and how they might do so more powerfully in the future. Artists and writers have spearheaded much of the activism, policy and civic engagement that have been part of the story of the river since the 1980s — starting with the poet, journalist and activist Lewis MacAdams and the Friends of the Los Angeles River,” Carruth said.

Play the LA River is a yearlong project designed to inspire the public to explore the waterway from its headwaters in Canoga Park to its mouth in Long Beach. The project, which Carruth helped plan and attract funding for, comes at a time of mounting interest in the river. In light of the federal government’s May announcement of support for a $1 billion plan to extensively revitalize an 11-mile stretch from near Griffith Park to downtown Los Angeles, city officials have begun acquiring property for a 51-mile greenway and bike path alongside the river envisioned to become a reality by the end of the decade.

“The most powerful cultural images of the L.A. River that we have are images from Hollywood that amplify the view that it’s not a river at all — that it’s a different kind of space — a concrete channel with aliens or drag races rather than a natural habitat with dragonflies and egrets,” Carruth said. “Reenvisioning the river has required and invited a powerful response from artists, and artists have really stepped up to that challenge.”

Learn more:
Visit http://playthelariver.com/. Reporting by Rebecca Kendall, Stuart Wolpert and Meg Sullivan
Mural in Student Lounge Rediscovered as Campus Treasure

By Emilia Barrosse

ONE OF THE LAST REMAINING WORKS OF ACCLAIMED MURALIST TERRY SCHOONHOVEN AND THE LA FINE ARTS SQUAD, A RENOWNED STREET ART GROUP HE HELPED FOUND, IS LOCATED IN THE HISTORY DEPARTMENT STUDENT LOUNGE IN BUNCHE HALL. ITS SIGNIFICANCE WAS RECENTLY RECOGNIZED WHEN PLANS FOR RENOVATING THE SPACE WERE BEING MADE.

S.P.Q.R., the recently restored mural by Terry Schoonhoven and the LA Fine Arts Squad, can be seen in Bunche Hall.

Enigmatically titled S.P.Q.R. (initials that refer to the ancient “Senate and People of Rome”), the mural depicts the UCLA research library in ruins, presumably after a big earthquake wipes out Los Angeles and the language of the region mysteriously reverts to Latin. The painting is one of the few murals associated with the LA Fine Arts Squad that has lasted over the years because it has been protected indoors.

“The fact is that none of their other murals are still extant — or barely visible — because they are out in the Southern California sunlight and have faded or been destroyed,” said UCLA emeritus history professor Thomas Hines, a member of the departmental committee that commissioned Schoonhoven, a UCLA graduate, in 1975 to paint the mural.

Because of the painting’s excellent condition, the viewer can glimpse an amusing detail: On the floor of the rooftop of a nearby building lies a crumpled concert program of “Ancient American Music” featuring the work of Aaron Copland, Bob Dylan and John Cage.

Schoonhoven and the LA Fine Arts Squad were responsible for a number of murals that once freckled the streets of Los Angeles in brilliant colors. Their works focused on apocalyptic topics that placed Los Angeles in shocking climates and scenarios. Their 1970 mural Venice in the Snow presented the vibrant, sun-soaked Venice Boardwalk covered in snow. Isle of California, perhaps their most well-known piece, features a shattered fragment of a freeway overpass hanging precariously off the side of a mountain. One Schoonhoven painting on canvas, Los Angeles Under Water, is in the collection of the Los Angeles County Museum of Art.

But their murals, along with many other works crafted over two decades, have now faded along with the memory of the acclaimed art troupe’s legacy. But Hines refuses to let their achievements be forgotten.

“We need some record so that everything isn’t obliterated or torn down with each generation,” Hines said. “The Fine Arts Squad was a part of a cultural layering, and they were very important in the ‘60s and ‘70s in Los Angeles, and, with Schoonhoven, into the ‘80s. If everything were intact, you’d write a story of their work, with [S.P.Q.R.] being one example. But that’s not the case — [this is] the only one left.”

Over the years the mural had suffered some wear and tear as students, unaware of its importance, backed chairs and tables into it. Hines and David Myers, chair of the Department of History, decided that it was time for the mural to undergo a restoration. A mural conservator determined the most appropriate, least invasive method to remove surface dirt.

Now the mural sits as vibrant as ever behind red velvet stanchions. On display is an introductory piece written by Hines detailing the painting’s place in the history of L.A. art.

The mural “has an interesting mix of allusions to the past and the future, and I think, in a certain sense, that’s what we are concerned about in the history department today,” Myers said. “We’re passionately concerned about understanding the past but with the ultimate goal of better understanding the future. So it’s an interesting reflection both of the fragility of life [and] the mission of the historian.”
Richard Yarborough Takes Top Honors for a Lifelong Commitment to Diversity

When Richard Yarborough joined UCLA in 1979 as the English Department’s solitary specialist in African American literature, he was tapped to teach the only course UCLA offered in that field. In “English 104: Afro-American Literature,” Yarborough sprinted through more than 200 years of history, literature and culture in just 10 weeks, with just 18 students.

By Judy Lin

Today, that introductory survey has expanded to a sequence of four classes, and UCLA’s offerings in African American literature have grown to dozens of courses, due, in no small part, to Yarborough’s wide-ranging scholarship and persevering leadership, noted King-Kok Cheung, a professor of English and Asian American Studies. “Our English department is now considered one of the strongest — if not the strongest — in African American literature, with the richest selection of courses in the country,” she said in a letter to the UCLA Academic Senate.

It was this accolade and many others like it from faculty colleagues, administrators and students that led to Yarborough’s selection by the Academic Senate as this year’s recipient of the coveted Diversity, Inclusion and Equity Award. Included in his thick dossier are details about the awards he has won for teaching and mentoring, and the key positions he has held at the Center for Afro-American Studies (now the Bunche Center for African American Studies) and the Interdepartmental Program in Afro-American Studies (now the new Department of African American Studies) in a lifelong career devoted to diversity.

Teacher, scholar, mentor

Ali Behdad, professor and chair of the English department in the UCLA College, described Yarborough as “a renowned scholar of African American literature whose research has been instrumental in transforming the canon of American literature to include race and the writings of black Americans.”

Wrote Belinda Tucker, vice provost of the Institute of American Cultures and co-chair of UCLA’s College Diversity Committee, “Professor Richard Yarborough has had a profound impact on diversity and equity at UCLA, through his leadership, mentorship, engagement in departmental and university affairs and through personal involvement.”

Yet for all the high praise, Yarborough said he felt “both surprised and humbled” upon learning he’d been selected for the Senate award. “There are countless people who could have received the award … scores of people,” he said. “It strikes me that it has less to do with me receiving the award and more to do with the university’s recognition of efforts that are important.”

Yarborough has taught more than 40 different undergraduate and graduate courses in African American literature, from “The Harlem Renaissance” to a seminar devoted to orator/statesman Frederick Douglass and abolitionist/poet Frances Ellen Watkins Harper. Yarborough was also behind the 1998 launch of “Interracial Dynamics in American Literature, Culture and Society,” a freshman General Education cluster class that’s still going strong, Cheung said.

“To this day,” wrote Cheung, who helped launch the course, “I hear from students … about how much it had transformed them personally by making them aware of social inequality and of their personal biases.”

Professor Richard Yarborough of the Department of English, where he teaches African American literature and 19th- and 20th-century American fiction. He is also a faculty research associate with UCLA’s Ralph J. Bunche Center for African American Studies. Photo: Christelle Nahas
A diverse curriculum, Yarborough said, should not just “make a case for bringing people and voices into the university, but should be more about broadening our students’ awareness of their cultural, social and demographic differences” in the context of a multiethnic community.

Achieving ‘a certain kind of social justice’

“Diversity matters most if we view our society as a community in terms of shared interests and a shared sense of common welfare,” Yarborough said. “If we do, the idea of diversity is directly linked to the idea of equity. Then inclusion becomes simply a way to achieve a certain kind of social justice.”

But the road to such awareness “can get messy” for students, he said. “People get upset. I teach material that often elicits emotional responses,” like the gritty facts of slavery he covers in the undergraduate class “Early African American Literature.”

“Most of the students have very little sense of the reality of slavery and the way that race factored into the formation of the United States,” Yarborough said.

He introduces students to the cruel conditions of slavery told through folk songs, an important form of artistic expression available to slaves. And after reading the work of Thomas Jefferson, many students are shocked by “a very notorious section where he endorses most of the negative stereotypes attributed to blacks. He was simply articulating what was floating around in the culture. ... Somewhere he found a way to live with the contradiction between the American political ideal of equality and the existence of slavery.”

Yarborough’s own education started out as anything but diverse. In the 1960s, he was the only black student at a college preparatory high school just outside Philadelphia. One of his English classes used a thick anthology of American literature that ran to several thousand pages. “But out of the hundreds of writers,” Yarborough recalled, “there was one black writer, and he was at the very end of the book,” covered in roughly three pages. No Latino or Asian American writers were included, and there were only about five female writers.

In graduate school at Stanford, he worked on a dissertation on 19th-century African American literature and discovered that many of the books he needed for research were available only on microfilm. “I remember having to stay up all night reading the books on microfilm in the kitchen of my studio apartment. I had to borrow a big microfilm reader from the library and take it back in the morning.”

Yarborough still owns that anthology from high school, along with every edition of the decidedly more diverse Heath Anthology of American Literature (Cengage Learning), a bestselling text since its launch in 1990 by Yarborough and a cohort of wide-ranging scholars.

Transforming ‘how American literature was taught’

“It took us a long time to find a press willing to take the (financial) risk to bring out that kind of anthology,” said Yarborough, now associate general editor of the publication.

“But we were committed to incorporating the voices of diverse communities ethnically, racially and regionally; bringing in new women’s voices; and including new types of materials, such as letters and newspaper cartoons. The Heath changed, in fundamental ways, how American literature was taught.”

Yarborough also cofounded The Library of Black Literature reprint series at Northeastern University Press (now published by the University Press of New England), prompted by his experience as a young professor who had to scramble to build reading lists for his classes. “I would order 10 books for a class and I would get notices from the bookstore that four of them were out of print.” As general editor of the reprint series, he has overseen the publication of dozens of books by African American authors that had gone out of print and been largely forgotten.

Yarborough’s Academic Senate award also recognizes his commitment to student diversity. When he joined the faculty 35 years ago, he saw no African American students in the English department’s doctoral program. He has since actively helped to recruit and mentor scores of students, particularly those from underrepresented groups.

Nominating Yarborough for the award, one student wrote, “I know I speak for many graduate students when I say that we need Professor Yarborough’s scholarship and support. Indeed, his humility and giving nature foster a professional and humane atmosphere in the humanities.”

“People have mentored me, so I really go out of my way to play that role,” said Yarborough, recalling one of only two black teachers he had in his life. During Yarborough’s second year of graduate school at Stanford, that professor taught the very first class Yarborough ever took in black literature and became his mentor. “I certainly had supportive teachers throughout my education, but having an African American teacher at that level opened up the possibilities for me in terms of role models.”

Yarborough also finds himself advising graduate students and junior faculty from other departments and from other colleges who track him down for support and want feedback on their work. So esteemed is he as a mentor, in fact, that the Minority Scholars’ Committee of the American Studies Association presented him in 2012 with the inaugural Richard Yarborough Mentoring Award, established as an annual recognition of scholars nationwide who demonstrate dedication to and excellence in mentoring.

As gratified as Yarborough has been for the recognitions he has received, he sums up his accomplishments this way: “For me, that’s how you behave. All of a sudden, these things are something special, but they’re how I define my job. I get paid to teach, I get paid to do research and I get paid to mentor. “I am very, very committed to doing for other people what was done for me. I’m passing on what was given.”
“Many people are looking at the benefits of digital media in education, and not many are looking at the costs,” said Patricia M. Greenfield, a distinguished professor of psychology in the UCLA College and senior author of the new study, published in the October issue of the journal Computers in Human Behavior. “Decreased sensitivity to emotional cues is one of the costs — understanding the emotions of other people. The displacement of in-person social interaction by screen interaction seems to be reducing social skills.”

The researchers studied 51 sixth-graders from a public school in Southern California who went to the Pali Institute, an outdoor education camp 70 miles from Los Angeles (near Big Bear). The students lived together for five days, and were compared with 54 sixth-graders from the same school who would later be going to this camp.

In a survey, students said they spent an average of four-and-a-half hours texting, watching television and playing video games on a typical school day. In national surveys, the average figure is even higher, said lead author Yalda T. Uhls, a senior researcher with the Children’s Digital Media Center @ Los Angeles (CDMCLA) and Southern California regional director of Common Sense Media, a national nonprofit organization.

The camp has a “no screens” policy. Many students found this policy a little challenging for the first couple of days, but most adapted well to it rather quickly, according to the camp counselors.

Both groups of students were tested at recognizing emotions at the beginning and end of a five-day period. The students looked at photos of 48 faces showing happy, sad, angry or scared expressions, and were asked to identify the emotions. The students also watched videos of actors interacting with one another and displaying emotions; the students were asked to identify the emotions each person was feeling. In one video, students are taking a test and then turn the test in to the teacher; one of the students is confident and excited, while another is anxious. In another scene, one
student is excluded from a conversation and saddened by the exclusion.

The children who had been at the camp for five days improved significantly in recognizing facial emotions compared with the students who lived their normal, screen-filled lives. The students who had been to camp showed significant improvement in their ability to recognize nonverbal emotional cues in the videotaped scenes, while the emotion-reading cues of the other students, as hypothesized by the researchers, showed virtually no change over five days.

The magnitude of the effect was especially large for the video scenes. “You can’t learn nonverbal emotional cues from a screen the way you can learn it from face-to-face communication,” Uhls said. “If you’re not practicing face-to-face communication, you could be losing important social skills.”

Greenfield considers the results significant, given that they occurred after only five days.

The implication of the research, said Greenfield, director of CDMCLA, is that people need more face-to-face interaction, “which is decreased by more interactions with screens.

“We’ve shown a model of what more face-to-face interaction can do,” Greenfield said. “Social interaction is needed to develop skills in understanding the emotions of other people.”

Digital screen time, even when used for social interaction, reduces the time spent developing social skills and reading nonverbal cues, Greenfield said. Computer screens themselves may not be doing harm, but are crowding out time spent with other people, she said.

Emoticons like the smile symbol :) are “a poor substitute” for face-to-face communication, Uhls said. “We are social creatures; we need device-free time,” she said.

The researchers did not find differences between boys and girls.

Is technology producing a decline in critical thinking?

The mission of the CDMCLA is to study children, teens and emerging adults’ engagement with the newer forms of interactive digital media to see how these encounters affect and reflect their offline lives and long-term development.

Greenfield has conducted much research in these areas over many years.

As technology has played a bigger role in our lives, our skills in critical thinking and analysis have declined, while our visual skills have improved, she previously reported in the journal Science.

Learners have changed as a result of their exposure to technology, said Greenfield, who analyzed more than 50 studies on learning and technology, including research on multitasking and the use of computers, the Internet and video games.

Reading for pleasure, which has declined among young people in recent decades, enhances thinking and engages the imagination in a way that visual media such as video games and television do not, Greenfield said.

How much should schools use new media, versus older techniques such as reading and classroom discussion?

“No one medium is good for everything,” Greenfield said. “If we want to develop a variety of skills, we need a balanced media diet. Each medium has costs and benefits in terms of what skills each develops.

“By using more visual media, students will process information better,” she said. “However, most visual media are real-time media that do not allow time for reflection, analysis or imagination — those do not get developed by real-time media such as television or video games.

Technology is not a panacea in education, because of the skills that are being lost.

“Studies show that reading develops imagination, induction, reflection and critical thinking, as well as vocabulary. Reading for pleasure is the key to developing these skills. Students today have more visual literacy and less print literacy. Many students do not read for pleasure and have not for decades.”

Parents should encourage their children to read and should read to their young children, she said.

Among the studies Greenfield analyzed was one done in a classroom showing that students who were given access to the Internet during class and were encouraged to use it during lectures did not process what the speaker said as well as students who did not have Internet access. When students were tested after class lectures, those who did not have Internet access performed better than those who did.

“Wiring classrooms for Internet access does not enhance learning,” Greenfield said.

Digital communication vs. face-to-face

In research published in 2013, she and colleagues compared feelings of emotional connectedness as they occurred in person and through digital communication among pairs of close friends. Fifty-eight female university students, ages 18–21, engaged in four conversations each: in-person, video chat, audio chat and instant messaging (IM). Bonding differed significantly across conditions, with the greatest bonding during in-person interaction, followed by video chat, audio chat and IM.

“While it may seem obvious that the weakest bonding would occur in text-based communication, this is nonetheless a socially significant finding, given that most of young people’s digital communication in the United States today is taking place through texting,” Greenfield and her colleagues wrote. “Compared with in-person communication and video chat, text-based communication provided a significantly weaker experience of bonding between friends.”

Learn more:
Access the new study from the Children’s Digital Media Center @ Los Angeles for free at www.cdmc.ucla.edu.
MEMBERS OF THREE UCLA CHEMISTRY, BIOCHEMISTRY AND CHEMICAL ENGINEERING LABORATORIES HAVE UNCOVERED IMPORTANT STRUCTURAL FEATURES HIDDEN WITHIN THE MODIFIED FORM OF AN ENZYME USED TO PRODUCE THE CHOLESTEROL-REDUCING DRUG SIMVASTATIN.

By Kim DeRose

Through a combination of experimental measurements and extensive computer simulations, the team was able to determine why this mutated enzyme can produce the much sought-after pharmaceutical far more efficiently than the natural, non-mutated version. The study is published in Nature Chemical Biology.

Directed evolution
A natural enzyme called LovD, originally harvested from a type of mold found in soil, was discovered to react and produce a drug similar to simvastatin. LovD on its own was not quite good enough for commercial manufacturing, so Tang and his colleagues at Codexis, Inc. used a process called directed evolution to create a better, mutated version of the enzyme.

“Directed evolution is a laboratory technique that mimics the natural evolution process but in a much more rapid fashion,” Tang said. “While the natural LovD can perform the reaction to make simvastatin, its rate of reaction is low. The mutated enzyme is more stable and efficient, making the reaction much faster and therefore fit for use in a commercial process.”

During directed evolution, Tang’s laboratory and the Codexis research team created a collection of randomly mutated versions of LovD. Each mutant version of LovD had a slightly different sequence of amino acids that altered its basic form and function. The team then selected the enzymes most capable of producing simvastatin and repeated the process to further enhance those enzymes’ reactivity.

A thousand times more efficient
After nine rounds of directed evolution, they identified a mutated enzyme Tang called LovD9. LovD9 deviates from the original LovD enzyme through 29 distinct mutations and produces simvastatin 1,000 times more efficiently.

Prior to the development of the LovD9 enzyme, simvastatin was produced through a multistep process involving expensive chemical reagents and solvents that are not required when using the enzyme to produce the drug.

“Simvastatin has several complicated structural features, so trying to synthesize it chemically takes time and money,” said Gonzalo Jiménez-Osés, a UCLA postdoctoral scholar and the paper’s first author. “If you can produce these compounds in a straightforward manner, it is a huge improvement for drug production.”

The mutated enzyme has not only improved upon the efficiency of the simvastatin reaction, it has also provided an environmentally friendly alternative to the traditional manufacturing procedure.

“Because it is an enzymatic process, no toxic chemicals or excess organic solvent are used,” said Tang, who received the EPA Presidential Green Chemistry Challenge Award in 2012 for his work with Codexis.

Campus collaboration
While making simvastatin using LovD9 offers clear advantages, the reasons why the mutated enzyme worked so much better than the natural one remained unclear. Tang turned to colleagues Kendall Houk and Todd Yeates, UCLA professors of chemistry and biochemistry, to see if they could combine their expertise to come up with an explanation.

“There are many different examples of directed evolution being used to produce catalysts that enhance the speed of commercial or synthetic processes, but the fact that you have a good catalyst doesn’t give you any information about how it works,” Houk said.

To determine the enzymes’ molecular structures, Yeates’ laboratory grew protein crystals from each enzyme and scattered X-rays off of them in a process called X-ray crystallography. These measurements allowed Yeates to take an in-depth look at

“The statins have been called wonder drugs because they are perceived as safe, effective and can be used preventatively to maintain low cholesterol levels,” said Yi Tang, a faculty member with dual appointments in the Department of Chemistry and Biochemistry and the Department of Chemical and Biomolecular Engineering. “Simvastatin is an important member of the statins, and at its peak, was the active ingredient of the blockbuster drug Zocor with sales of more than $5 billion per year.”
the molecular architecture of the enzymes, yet they appeared virtually identical with no obvious structural variations to explain why LovD9 is more efficient than LovD.

While the two enzymes might appear similar when in solid crystal form, they behave quite differently when immersed in water, Houk said. The enzymes are composed of long chains of amino acids that can rotate and twist when allowed to move freely, yet this complex motion cannot be easily observed through laboratory experiments.

To quantify these minute molecular fluctuations, Houk and Jiménez-Osés used a computer program that simulates how the mutated and natural enzymes undergo internal motions when dissolved in water, and how this motion will influence the ability of the enzymes to cause the chemical transformation that synthesizes simvastatin.

Determining why the mutated LovD9 enzyme works better than its natural counterpart involved simulating the movement of the complex enzyme in a fluid environment over a period that is microseconds long. A microsecond may seem like a very short amount of time, but computations for the motion of such a large molecule required massive computing resources, Houk said.

**Supercomputer at work**

The team was able to harness the tremendous amount of computing power necessary for these calculations by using the National Science Foundation-sponsored Anton supercomputer designed by the D. E. Shaw Research laboratory and located at the Pittsburgh Supercomputing Center.

“In the machines that we have for our routine calculations, each of the simulations in this timescale takes more than one month,” Jiménez-Osés said. “Using Anton, we can do the same amount of calculations in one day.”

From the results of their computer simulations, Houk and Jiménez-Osés determined that part of what makes the mutated enzyme so effective is that it can function without the involvement of an additional protein that is required by the natural enzyme. Also, the mutated enzyme moves and twists in such a way that it remains in a configuration beneficial for simvastatin production far more often than its natural counterpart.

These calculations enabled the research team to understand how mutations located far from the active part of the enzyme can improve its performance. “The directed evolution changes the nature of the amino acids that are in the protein,” Houk said. “The molecular dynamics simulations allowed us to trace how these changes in amino acids altered the structure of the protein and made it appropriate for use as a catalyst.”

In the case of LovD9, these small differences make the reaction to manufacture simvastatin vastly more efficient. Now that they know which structural features in the mutated enzyme help improve simvastatin production, the team members hope to directly engineer an enzyme with similar properties without resorting to the more random directed evolution process.

“What was special about this study is that we analyzed what happened during directed evolution in order to try to understand how these improvements are made within the protein,” Yeates said. “We hope in the future that it might be possible to make better enzymes in rational ways by understanding how it occurs in random ways.”

This study was funded through a grant from the National Institute of General Medical Sciences, one of the National Institutes of Health. The UCLA researchers are also part of a Chemistry-Biology Interface Training Program sponsored by the NIH.

Additional UCLA co-authors of this paper include former postdoctoral scholar Silvia Osuna, former graduate student Xue Gao and staff scientist Michael Sawaya. This research was performed in collaboration with Codexis, Inc., a manufacturer of custom enzymes, with contributions from Codexis researchers Lynne Gilson, Steven Collier and Gjalt Huisman.
The Impact of the College Across Campus
As the academic heart of UCLA, the College brims with creativity, learning and breakthrough research — all radiating throughout campus.

Biomedical Sciences Research Building
Breakthrough research on cancer, malaria, pandemic influenza, AIDS and neuromuscular diseases.

Boyer Hall
Research on the role of proteins in neurological diseases such as Alzheimer's and Parkinson's; home to the Molecular Biology Institute and the Institute for Qualitative and Quantitative Biosciences.

Bunche Hall
The central hub of Social Sciences at the College, with highly ranked departments including political science, history, economics and geography.

California NanoSystems Institute – CNSI
Development of transparent solar cells that enable windows and buildings to generate electricity.

Campbell Hall
Linguistics faculty teach and conduct research to shed light on the nature of language, its use and its importance in the world; home to the Academic Advancement Program, the nation's largest university-based student diversity program.

Dodd Hall
Students and faculty in time-honored fields of art history, classics and philosophy explore the rich legacy of human creativity and thought.

Fowler Museum
Home to the Cotsen Institute of Archaeology, a leading global research institution; UCLA archaeologists work in more than 20 countries.

Franz Hall
Revolutionary advances in diagnosis and treatment of diseases and disorders such as schizophrenia, bipolar, PTSD, depression, autism, alcoholism, anxiety and Alzheimer’s.

Geology Building
Research on climate change, earthquakes, wildfires and major weather disasters; home to the largest meteorite collection on the West Coast. Open to the public.

Haines Hall
One of the four original campus buildings, home to anthropologists and sociologists who examine social phenomena and issues such as poverty, racial disparities, unstable governments and wars.
Humanities Building
One of the four original campus buildings, home to faculty in cutting edge fields like Environmental Humanities as well as eminent faculty in English and the study of languages and literature around the world.

La Kretz Hall – Institute of the Environment and Sustainability
Research on solutions to environmental challenges related to climate change, air/water quality, clean energy, and coastal/water resources.

Life Sciences Building
Research on crop productivity, improved biofuels and ways to reduce our carbon footprint; home to the Undergraduate Research Center (Sciences).

Mathematical Sciences Research Building
Development of techniques that enable virtual surgery; statistical model for a “thinking machine,” laying the foundation for automated speech recognition and driverless cars.

Mildred E. Mathias Botanical Garden
Home to thousands of rare plant species; educational resource for students of botany, ecology and biogeography. Open to the public.

Molecular Sciences Building
Research on pollution, weather and the fluid dynamics of the atmosphere; development of supercapacitor batteries, a potentially inexhaustible source of green energy.

Murphy Hall
Home to signature undergraduate programs and resources such as the Center for Community Learning, Undergraduate Research and College Academic Counseling.

Physics and Astronomy Building and Knudsen Hall
Discovery of the Kuiper Belt at the far reaches of the galaxy and proof of a supermassive black hole at the center of our galaxy.

Portola Plaza – Institute for Pure & Applied Mathematics
Development of algorithms to improve MRI scans and medical image analysis.

Powell Library
One of the four original campus buildings, it is the hub of undergraduate research.

Rolfe Hall
Home to the Communication Studies Archive with more than 200,000 news programs from around the world; home to the Department of Spanish and Portuguese.

Royce Hall
One of the four original campus buildings, home to faculty who teach cultural studies and languages, from French to Korean to Hindi-Urdu. Also home to the Center for Jewish Studies and the Center for Medieval and Renaissance Studies, two preeminent research centers in the U.S.

Slichter Hall
Research on planetary systems and geology, atmospheres and oceans, extrasolar planet detection and magnetic fields.

Terasaki Life Sciences Building
Research on molecular and cell biology and genetics; advanced computational technology and methods for interpreting genomic data.

Young Hall
Advancing the science underpinning new drugs that will delay or stop the spread of cancer cells.
ALMOST 20 YEARS AGO, UCLA ARCHAEOLOGIST GIORGIO BUCCELLATI AND HIS TEAM IDENTIFIED THE ANCIENT CITY OF URKESH IN NORTHEASTERN SYRIA AS THE SITE OF AN IMPORTANT 4,000-YEAR-OLD RELIGIOUS AND POLITICAL CENTER.

By Letisia Marquez

The discovery received international media attention and acclaim for Buccellati and his wife, Marilyn Kelly-Buccellati, a visiting professor with UCLA’s Cotsen Institute of Archaeology.

Buccellati, a professor emeritus of Near Eastern Languages and Culture and history as well as the director of the Cotsen’s Mesopotamia Area Lab and International Institute for Mesopotamian Area Studies, had hoped that the next 20 years would lead to even more discoveries at Urkesh as well as the development of an archaeological park to welcome and educate visitors to the site and preserve a national treasure.

But civil war, now 3 years old, has put those plans on hold. Because of the eruption of violence in Syria, the Buccellatis haven’t been able to visit the site since December 2011. They were among the last foreign archaeologists to travel to Syria.

“The reason we cannot go back is tragic,” said Buccellati about the violence between the Assad government and opposition groups that has taken the lives of at least 120,000 and displaced more than 6 million people from their homes. “It is devastating to see what is happening in Syria.”

So far, the violence hasn’t reached the site, which is located in a rural area that just recently received potable water and a sewer system.

“Our particular area is more protected, but there have still been battles within 60 kilometers [37 miles] in either direction so the area is potentially at risk,” Buccellati said.

Protection from the elements

His efforts to win the cooperation of the local people who now serve as guardians of the site are documented in a recent report, In the Eye of the Storm, that details how a plan unfolded to protect Urkesh from crumbling.

Six Syrian villagers, with whom Buccellati is constantly in contact via cell phones, email and Skype, work at the site. One of their main duties is protecting the site’s centuries-old mud brick walls from rain and snow. So far, the damage to the mud brick has been minimal because the workers have covered the site with metal trellises and tarps.

UCLA and Gulfsands, a London-based oil company that operates in Syria, help fund the villagers’ employment.

“What impresses me is the fact that there is no sense of fatigue on their part,” Buccellati said. “After three years of worrying about mud
brick walls and one thing and another, in the midst of what the country is going through, you’d think that they might say, ‘Let’s forget about it.’

"Instead, that’s really not happening at all," he added. "They are becoming more and more aware of the significance and impact of their work."

A mythical location found
In 1995, after more than eight years of excavating the modern city of Tell Mozan located some 400 miles east of Damascus, Buccellati and his colleagues identified the city as the site of Urkesh, a major hub of ancient Near Eastern civilization known in mythology as the home of a primordial god.

"The identification of Urkesh is analogous to knowing that Rome is in central Italy and then finding Rome," Buccellati said at the time. "Urkesh now has a geographical as well as a mythical location."

Urkesh, one of the largest known archaeological sites from the third millennium B.C. in the Near East, housed monumental public buildings, including a large temple. It was the main religious center, as well as a political capital, of the ancient Hurrians. Little was known about Urkesh and ancient Hurrian civilization prior to Buccellati’s excavation. Some scholars even doubted that the Hurrians had appeared in the region prior to the second millennium.

Before 2011, Buccellati and his team had found some artifacts that potentially could reveal that Urkesh was an important city even earlier in time. "We were really eager to go back to explore this very ancient dimension of the city," he said.

Vision for the future
Also put on hold for now are plans to develop The Gates of Urkesh, the archaeological park for visitors.

The villagers have embraced the idea because it would stimulate the city’s economy, Buccellati said, and have never lost hope that it may one day be built.

The park would include a gift shop featuring cloth dolls, knitwear and other items made by local women. Villagers are already making items in a workshop in two buildings that a local man provided rent free. The Buccellatis occasionally receive shipments of the items to support the women who make them.

“They are remarkably well done,” Buccellati said. “It means a great deal to the villagers psychologically.”

A ‘commonsense’ model
Meanwhile, Buccellati is sharing with other archaeologists at conferences what he’s learned about effectively maintaining an archaeological site that is 7,500 miles away and threatened by forces beyond his control.

"The site has been well maintained," he said, "because they have kept the system simple."

“We are the only foreign archaeological project in Syria that has maintained a presence,” he said. "It was a very commonsense type of approach rather than a state-of-the-art approach.”

Buccellati is also proud that the Syrian archaeological team looking after the site includes Kurds, Arabs and Christians.

“A strong sense of identity has emerged in the civil war because the conflict is among different groups in the population,” Buccellati said.

“The ancient history of Syria is one that, in many respects, transcends the ethnic divisions because there are no more people of that ancient ethnic group. The people we are studying preceded all of them so they are a way of linking to a shared past,” he added. “The archaeology and history of a country can help to overcome barriers.”

Learn more:
Find out more about the Cotsen Institute of Archaeology at http://www.ioa.ucla.edu.
Program Provides Underrepresented Students With Pipeline to College

By Rebecca Kendall

These high school seniors, all participants in the Vice Provost Initiative for Pre-College Scholars (VIPS) program, can be found having lively discussions in UCLA classrooms, studying and staying in Sproul Hall, and navigating the Westwood campus with ease. When they return to their homes, they can look forward to returning to school to use the skills they’ve gained during their five weeks on campus. And they are also eager to apply to college.

“The goal of the program is to increase the number of underserved students within schools in the inner city and urban areas that are competitively eligible for places like UCLA and other selective universities,” said Jonli Tunstall, the program’s director. “It’s a great pipeline. They’re plugged in right away and treated as college students. They’re taking college classes, getting units, getting grades, and they have an official UCLA transcript.”

Reaching high school sophomores

The program was founded by Emeritus Vice Provost for Undergraduate Education Judith Smith in response to the declining numbers of underrepresented students enrolled at competitive four-year colleges in the years following Proposition 209’s ban on affirmative action. It is one of many UCLA programs that promote a college-going culture by providing underserved students with academic preparation and other resources to help them succeed at the postsecondary level.

The program identifies high school sophomores who have the potential to excel academically in a postsecondary environment and then helps nurture their scholastic growth through mentorship, workshops and enrichment programs. The program is offered in partnership with school districts in Los Angeles and Pasadena to serve students at 10 schools that have historically had some of the lowest numbers of students applying to college. Students who complete the program become eligible for a $20,000 VIPS Wasserman scholarship.

A program like VIPS is important because it embodies UCLA’s institutional commitment to diversity and access to education, Tunstall said, adding that high school students don’t always realize their potential or know how to navigate the college process.

Tunstall said that many local schools lack basic resources like computers, Advanced Placement courses, books, counselors and properly credentialed teachers. Without the proper tools, these students might simply slip through the cracks, unaware of their potential and their educational options.

Over the past eight years, more than 250 students have been part of the core program, which includes weekly mentoring, a Saturday Academy held three times a year, a two-week residential summer program for students entering 11th grade and a five-week program for incoming 12th graders.

In addition, 160 more students receive mentoring and have had access to the Saturday Academy since it began.

To date, 97 percent of all core participants have not only completed high school at the top of their class, but have gone on to graduate from college. More than half of these students have enrolled at UCLA while others have gone on to other flagship universities, Tunstall said.

From participant to leader

Ashley Williams, who graduated from UCLA in 2012 with a B.A. in African American studies with a minor in education, is among them. In fact, she was part of the program in its inaugural year.

“It made a world of difference in my undergrad career,” Williams said. “When I got in, it was the biggest blessing because it’s what I needed. There was no one else who could guide me.”
Her parents, both born and raised in Belize, didn’t know much about the American school system. Although Williams was a good student, she had never been informed of her options after high school until she was nominated by her school to participate in VIPS.

“I knew nothing about college up until that point,” said Williams, a first-generation college student who was a VIPS mentor for three years while at UCLA, and then served as the VIPS summer program coordinator.

Williams said she developed a true passion for social justice and education because of VIPS and the Advanced Academic Placement Program at UCLA, the nation’s largest university-based student diversity program. She is now pursuing a master’s degree in education at the University of Illinois at Chicago.

Among the more than 30 high school seniors participating in the 2014 summer program was Eryn Jones, whose mother is a proud Bruin alumna. Although summer can be a good time to kick back, Jones said there was no better way to spend her time than at UCLA. Not only did she and her fellow classmates take credited classes focused on education and admissions, as well as a course on media literacy with an emphasis on class, race and gender, they also improved their study habits and time management skills while deepening their friendships with others.

**Building confidence, expanding experiences**

“I loved the relationships I had with all the kids,” said Jones, who attends Westchester High School and dreams of attending UCLA. “Everything we did, we did together. There were no cliques, no drama. It was just a good, safe environment. The program leaders wanted us to feel open to express ourselves, and I feel that’s what made us so close.” Many have become great friends outside of the program, she said.

One of her friends, VIP scholar Cheyenne Lawrence, already plans to apply to Berkeley, Georgetown and UCLA after she graduates from John Muir High School in Pasadena. And she’s excited about earning actual college credit.

“If I get an A here, then I start off my GPA with an A, so that’s a real benefit,” Lawrence said.

“VIPS offers things that you can never learn in high school in general,” she said, noting that she has already noticed an improvement in her writing and critical thinking skills. “It builds you as a person.”

For Juquari Baskin, VIPS represents a transformative opportunity to create a promising future for himself, something he wasn’t always so sure he’d have.

“As a foster child there really aren’t a lot of opportunities for you out there, so I really wanted to jump into every opportunity that I could get into that would help me,” Baskin said. “This was my chance to be somebody and to do something with my life.”

**Learn more:**

For more information on the Vice Provost Initiative for Pre-College Scholars (VIPS) program, please visit: http://www.ugeducation.ucla.edu/aap/programs/vips.
Sherie Morrison started first grade in a one-room schoolhouse in Beaver Falls, Pennsylvania, just a year ahead of football great Joe Namath. She is now a legend in her own right, as one of the nation’s top scientists harnessing the power of the human immune system to treat diseases.

A distinguished professor and former chair of the Department of Microbiology, Immunology and Molecular Genetics, Morrison has devoted her career to studying antibodies and pioneered technology to treat arthritis, Crohn’s disease and multiple sclerosis. A new antibody molecule developed in the Morrison lab is in phase one clinical trials as a therapeutic for lymphoma.

A ‘generous gift’
Sherie and her husband, Don, an emeritus professor at the UCLA Anderson School of Management, recently gave $2 million to establish the Morrison Family Endowed Chair for Microbiology, Immunology and Molecular Genetics.

“Sherie and Don Morrison’s generous gift to establish an endowed chair enhances the university’s ability to attract top scientific faculty who will make breakthroughs that affect us all,” said Victoria Sork, dean of UCLA Life Sciences.

Endowed chairs are a priority of the $4.2 billion Centennial Campaign for UCLA launched in May 2014.

“This is an extraordinary gift by any standard, but the fact it has come from our faculty makes it even more meaningful,” said Jeffery F. Miller, the M. Philip Davis Chair in Microbiology and Immunology and professor and chair of the Department of Microbiology, Immunology and Molecular Genetics.

The seeds of Morrison’s scientific career were sown when, at the age of 14, she got a part-time job washing dishes in a lab and became “hooked” on studying antibodies. “You can say I’m in a rut,” she joked.

As a high school senior, she was selected as a finalist in the Westinghouse Science Competition, one of nine women among 40 competitors nationwide chosen to go to Washington, D.C., for a meeting with President Eisenhower. She earned her bachelor’s degree and doctorate from Stanford, where she met and married Don, who was in the Ph.D. program in Operations Research.

Not even childbirth deterred Morrison from her research. Don recalled she was finalizing her doctoral dissertation while in labor with their first daughter, and defended it just three weeks later.

Blazing trails for female scientists
When Don joined the Columbia Business School faculty, the couple moved to New York, and Sherie worked part time first at Columbia in the laboratory of David Zipser and then at the Albert Einstein College of Medicine in the lab of Matthew Scharff, a pioneer in the study of antibodies. Female scientists were few and far between in the 1960s, and Morrison felt the pressure of being a trailblazer. She remembers thinking that “if I don’t do well, it’ll be held against all the women who follow me.”

The Morrisons joined the UCLA faculty in 1988. In addition to their scholarly contributions, they have mentored “huge numbers” of students, Sherie in her lab and Don while serving as Faculty Athletics Representative, a role he held for 20 years. Both of their daughters earned M.B.A. degrees from Anderson.

The Morrisons have supported many areas on campus, including Anderson and the athletics program, where they established scholarships in men’s track and women’s basketball named for their grandsons.

“We are fortunate to be able to give back,” Don said. “It feels really good to know we are making a difference.”
Entrepreneurial Education on Campus Gets Boost
Grant from the Blackstone Charitable Foundation Helps Student Entrepreneurs Launch New Businesses

By Margaret MacDonald

THE BLACKSTONE CHARITABLE FOUNDATION HAS EXPANDED ITS SIGNATURE CAMPUS ENTREPRENEURSHIP PROGRAM, BLACKSTONE LAUNCHPAD, INTO SOUTHERN CALIFORNIA BY AWARDING A $3.5 MILLION GRANT COLLECTIVELY TO UCLA, UC IRVINE, USC AND THE LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION. THANKS TO UCLA’S SHARE OF THE GRANT, THE BLACKSTONE LAUNCHPAD OPENED FOR BUSINESS DURING FALL QUARTER IN COVEL COMMONS, THE HUB OF STUDENT RESIDENTIAL LIFE.

Available to all UCLA undergraduates regardless of major, the Blackstone LaunchPad pairs students with specially trained “venture consultants” who help them develop their business ideas and connect them with experienced entrepreneurs, lawyers, accountants, venture capitalists and other experts to assist them in bringing their businesses to market. The program is helping students gain invaluable new skills and potentially embark on start-up careers while still in college.

“We are thrilled to be part of this new regional partnership,” said Patricia Turner, dean and vice provost for undergraduate education. "The Blackstone Charitable Foundation grant provides an amazing opportunity for UCLA undergraduates to test their entrepreneurial ideas within the context of an academic environment.”

Programs held in Covel
The Blackstone LaunchPad is modeled on a successful program developed at the University of Miami in 2008. Now on 15 campuses in six regions, the network gives student entrepreneurs access to a national community of over 350,000 of their peers and expert advisers.

The Blackstone LaunchPad hosted a full roster of events at Covel in its inaugural quarter, and as word spreads, demand for its services is expected to rise — and quickly.

“Our students have tremendous potential with their innovative ideas and just need guidance on how to develop them into sustainable businesses,” said Deanna Evans, executive director of Entrepreneurial Programs. “The one-on-one coaching, mentoring and networking opportunities are what make this program so valuable.”

A range of programs across campus
The Blackstone LaunchPad complements an increasingly vibrant entrepreneurial ecosystem at UCLA that includes the Startup UCLA Summer Accelerator, an advanced 10-week program that helps launch early-stage tech companies. Not only are these initiatives helping to spur entrepreneurial education on campus, they are giving students a marked competitive edge after graduation.

“When you nurture talent and support aspiring entrepreneurs, you foster innovations that can shift paradigms,” said Blackstone Chairman, CEO and Co-Founder Stephen A. Schwarzman. “Through Blackstone LaunchPad, students have access to the right tools to take their ideas to market, and to truly become successful entrepreneurs with their ventures rooted in California, ultimately strengthening the local economy.”

The Blackstone Charitable Foundation was founded at the time of Blackstone’s initial public offering in 2007 with substantial commitments from the firm’s employees. Influenced by the enterprising heritage of the firm and its founders, the Blackstone Charitable Foundation is directing its resources and applying the intellectual capital of the firm to foster entrepreneurship in areas hardest hit by the global economic crisis.
Continuing to Give Back to Her ‘Second Home’
Former Dean and Vice Provost for Undergraduate Education Establishes Endowed Term Chair for Undergraduate Education

By Margaret MacDonald

**JUDITH SMITH CALLS UCLA HER “SECOND HOME,” BUT THAT MIGHT BE AN UNDERSTATEMENT. SHE HAS SO FAR DEVOTED 45 YEARS TO THE UNIVERSITY AS A PROFESSOR, NEUROSCIENTIST, ACADEMIC LEADER AND TIRELESS ADVOCATE FOR UNDERGRADUATE EDUCATION.**

As if this weren’t enough, she has just made two remarkable gifts: $1 million to establish the Judith L. Smith Term Chair to recognize exceptional teaching, and $500,000 to augment the Christopher S. Foote Term Chair in the Department of Chemistry and Biochemistry, named in memory of Smith’s late husband, a noted UCLA organic chemistry professor. Previously, she funded a graduate fellowship in her husband’s name and an undergraduate research scholarship in her own name.

The undergraduate term chair is the second in UCLA’s history. It will be awarded to faculty in biological sciences who teach in programs such as College Honors and the Freshman Clusters.

In addition to the chairholder’s research and teaching, funds from the endowment will directly support these signature undergraduate programs, which were spearheaded by Smith during her 16 years as dean and vice provost for undergraduate education.

“It’s one thing to support research,” said Smith, who retired at the end of 2012, “but to ensure a first-rate undergraduate education, UCLA needs more faculty chairs that recognize and reward excellent teaching.”

Smith noted that UCLA is one of the few universities with undergraduate term chairs, and said she hopes that her gift will inspire the creation of many more.

“Judi Smith has already given her heart and soul to this university,” said Patricia Turner, dean and vice provost for undergraduate education. “This gift has truly cemented her legacy on this campus and will have a profound impact on undergraduate education for decades to come.”

Smith was the first dean and vice provost for undergraduate education, a position created in 1996. Included among her achievements are introducing a single general education structure across campus; spearheading innovative courses for first-year students, such as Fiat Lux and the Freshman Clusters program; and raising a $60-million scholarship endowment for undergraduate students in research, civic engagement, honors and the Academic Advancement Program.

Two of the initiatives championed by Smith — scholarships and the undergraduate research program — might be traced back to her undergraduate experience at the University of California, Santa Barbara (UCSB) and her desire to establish her own undergraduate research scholarship.

“I was fortunate to be granted a full scholarship. Otherwise I would not have been able to go to college,” she recalled. “And my interest in science came about as a result of doing research as an undergraduate in the lab of a renowned exercise physiologist.”

After graduating from UCSB, Smith received her Ph.D. from the University of Wisconsin and taught at New York University, but warm weather and a great job offer lured her back to California. She arrived at UCLA in 1969 as an assistant professor in physiological science. In 1973, she received the Distinguished Teaching Award, the second woman to be accorded this UCLA honor. Her research on spinal cord physiology and limb dynamics was continuously funded by the National Institutes of Health for 27 years, and in 1990 she received the prestigious Javits Neuroscience Investigator Award.

Since her retirement, she has had more time to indulge her love of adventure (expeditions to Africa and Antarctica) and opera (next stop: Vienna for Wagner’s Ring Cycle).

Fortunately for UCLA, Smith remains closely connected to campus. She teaches a popular undergraduate course, Philanthropy as Civic Engagement, and is working (on recall) with campus units to facilitate the creation of a school of music at UCLA.

**A LEGACY OF SERVICE**

<table>
<thead>
<tr>
<th>Year</th>
<th>Position/Role</th>
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<tbody>
<tr>
<td>1980–85</td>
<td>Department Chair (Physiological Science)</td>
</tr>
<tr>
<td>1991</td>
<td>Co-founder, undergraduate interdisciplinary neuroscience program</td>
</tr>
<tr>
<td>1994–95</td>
<td>Chair of UCLA Academic Senate</td>
</tr>
<tr>
<td>1996–2012</td>
<td>Dean and Vice Provost for Undergraduate Education</td>
</tr>
<tr>
<td>2003–04</td>
<td>Interim Executive Dean, College of Letters and Science</td>
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<tr>
<td>2009–12</td>
<td>Convener (Chair) of the College Cabinet of Deans</td>
</tr>
<tr>
<td>2006</td>
<td>Christopher Foote Graduate Fellowship in Chemistry</td>
</tr>
<tr>
<td>2012</td>
<td>Judith L. Smith Undergraduate Research Scholarship</td>
</tr>
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Judith Smith in 1973, just days before receiving the Distinguished Teaching Award.
Lifelong History Hobby Leads Alumnus to Establish Endowed Chair in World History

By Margaret MacDonald

HISTORY ALUMNUS HOLLIS LENDERKING ’71 CALLS HIMSELF A “HISTORY NUT WITH A LIFELONG HISTORY HOBBY.” WHILE MOST HISTORY BUFFS MIGHT CONTENT THEMSELVES WITH VISITING HISTORICAL MONUMENTS AND WATCHING DOCUMENTARIES, LENDERKING HAS TAKEN IT A STEP FURTHER BY PLEDGING $2 MILLION TO ESTABLISH AN ENDOWED CHAIR IN WORLD HISTORY AT UCLA.

This gift comes three years after he established the John Muir Memorial Endowed Chair in Geography, named for the iconic naturalist and conservationist who founded the Sierra Club.

“Hollis Lenderking is a wonderful friend of UCLA and has once again demonstrated his keen understanding of the importance of endowed chairs to our ability to attract and retain great faculty, a top priority of the Centennial Campaign,” said Alessandro Duranti, dean of social sciences in the UCLA College. “We are very grateful for his generosity.”

A former long-distance runner, Lenderking competed in 1991 for Team USA in the 100-kilometer World Cup, and for 20 years coordinated the annual Grand Prix of ultra-distance races for the Pacific Association of USA Track & Field. Professionally, he is a mediator in Northern California, where he resides.

In Westwood during a turbulent time in U.S. history
He arrived at UCLA as a freshman in 1967, around the time when many students were searching for “relevance and meaning” and railing against the Establishment with a capital “E.” He recalled the spring of 1970 when professors canceled classes in the wake of the Kent State shootings and the U.S. invasion of Cambodia.

“I had finally landed a slot in a highly coveted American history course,” he said, “but to my chagrin, we were set adrift for ‘independent study’ and a more urgent consideration of our turbulent present in lieu of our settled past.”

Nonetheless, Lenderking’s intellectual curiosity was well and truly sparked at UCLA. He singled out memorable classes taught by distinguished history scholar Robert Dallek, describing them as “a stimulating introduction to themes that have invigorated my experiences ever since, inducing me to detect linkages between discrete trends and episodes that would otherwise stand alone.”

The critical importance of history in a globalized world
And although he hasn’t been a student since completing his J.D. at the University of Virginia in 1975, he continues to read widely and has never stopped thinking like a scholar.

“I am innately drawn to interdisciplinary approaches to any subject, thus transgressing barriers between schools of thought,” he said. “That’s what a ‘world historical’ perspective enables, exposing patterns, cycles, evolutions, influences and relationships that might otherwise escape investigation, as one might miss the forest for the trees.”

David Myers, professor and the Robert N. Burr Department Chair of the history department, said that Lenderking’s gift underscores the increasing significance of the study of world history in an age of globalization, and would further cement UCLA’s position as a major center for the study of history.

“Hollis Lenderking has made a remarkable investment in the study of world history, an especially important subfield that crosses boundaries and encompasses multiple global perspectives,” Myers said.

When asked what advice he would offer UCLA students today, Lenderking insists he has none, saying they “must find their own inspiration and validation,” but he has no doubt that a historical perspective is vital to a civilized society.

“Forces of reaction and oppression count upon their ability to purge and fabricate our collective memory,” he said. “If your intellect is passionately engaged with the world, you will play your part in illuminating that memory for the next generation.”
Man on a Mission
Physicist-Astronaut Taylor Wang ’67, M.S. ’68, Ph.D. ’71

By Margaret MacDonald

TAYLOR WANG TOOK HIS THREE UCLA PHYSICS DEGREES INTO SPACE WHEN HE MADE HISTORY AS THE FIRST CHINESE-AMERICAN ASTRONAUT. IN MAY 1985, HE WAS THE PAYLOAD SPECIALIST ON THE SPACE SHUTTLE STS-51B CHALLENGER. IN A FEW YEARS, HE HOPES TO MAKE HISTORY AGAIN, THIS TIME FOR DEVELOPING A FUNCTIONAL CURE FOR TYPE 1 DIABETES.

Wang was in charge of all Spacelab 3 science experiments on the shuttle, logging more than 2.9 million miles in 110 Earth orbits and more than 168 hours in space. His own research involved compound droplet experiments, and was the first time one of Sir Isaac Newton’s original theories had ever been tested in zero gravity.

Observations from these experiments are still contributing to his biomedical research 29 years later. He developed a revolutionary system that protects cellular transplants without the need for harsh transplant rejection drugs. This year, Wang was granted the world’s first patent for a living-cell, bio-artificial organ (for pancreatic and other disorders), which is the most promising technology yet for biologically reversing diabetes.

Wang is Centennial Professor Emeritus of Applied Physics, Mechanical Engineering and Materials Science at Vanderbilt University and founder, chairman and chief technical officer of Encapsulife, a biomedical technology company. He is the author of 200 articles and holds 30 U.S. patents.

From China to UCLA to outer space
Wang was born on mainland China amid the turbulence of World War II. His family moved often, fleeing first the Japanese invasions and then the repressive regime of Communist China, eventually settling in Taiwan.

After high school, Wang’s father insisted that he spend a year as a merchant marine for the family’s shipping company. After 12 months traveling the world, Wang had been expected to join the company permanently, but told his father he planned to study physics at UCLA. He enrolled in 1963, graduated in three years and one quarter, then went on to earn his master’s degree and doctorate in physics in 1968 and 1971, respectively.

“I am a person of average intelligence and skill, but I am very stubborn,” Wang said. “I’ve never accepted failure as a conclusion.”

Transformative mentoring
Wang was greatly influenced by Isadore Rudnick, a professor of physics he met during his freshman year and in whose lab he worked for most of his eight years at UCLA.

“Professor Rudnick changed his research interests every 10 years, so as his student I had to learn three distinct subjects: acoustics, solid state and low temperature fluid physics,” Wang said. “It was tough, but it made me a more flexible thinker.”

Rudnick also advised Wang not to specialize too soon, telling him to “let your interests guide you.” After leaving UCLA, he continued to visit Rudnick monthly for what they called “blue sky sessions,” long conversations on wide-ranging, random subjects.

Wang joined NASA’s Jet Propulsion Laboratory in 1972 and became a U.S. citizen in 1975. A year later, he published a research paper that caught the attention of NASA, and in 1983 he was selected for the shuttle mission.

Astronaut training was a challenge, both physically and intellectually.

“We had to learn how to deal with motion sickness to function in space,” Wang said. “We sat in a swivel chair inside an elevator and as it went up and down, we had to sway our heads from side to side — guaranteed to make you sick.”

Prior to the flight, he crammed the diverse scientific knowledge required to conduct all six experiments. “I became intimately familiar with subjects I didn’t know anything about,” he said.

Although Wang claims not to have been “that excited” about being an astronaut, he is gratified that his history-making space flight made his mother and father proud.

“My parents gave me the gift of education, the privilege of attending UCLA,” Wang said. “And I feel I’ve been a good son.”
The Art of the Possible
Jae Goodman ’93

By Margaret MacDonald

FROM STARTING OUT AS A “SCRAPPY” KID IN QUEENS, NEW YORK, AND THEN AS A WIDE-EYED TEEN IN SILICON VALLEY, TO BECOMING KNOWN AS ONE OF SOUTHERN CALIFORNIA’S MOST CREATIVE MINDS (AND EARNING A UCLA POLITICAL SCIENCE DEGREE CUM LAUDE IN BETWEEN), JAE GOODMAN IS A GREAT BELIEVER IN WHAT HE CALLS “THE ART OF THE POSSIBLE.”

As chief creative officer and co-head of CAA Marketing (a division of Creative Artists Agency), Goodman has turned the traditional advertising industry on its head. He’s leveraging the power of entertainment to build brands and drive business results for blue-chip clients such as General Motors, Coca-Cola, Chipotle, Neiman Marcus, Mattel and Diageo.

Goodman said that as an entertainment company with a wide range of executive talent under one roof, he and his team can nimbly create compelling content that’s different from that of traditional advertising agencies. For example, Goodman’s team was behind Coca-Cola’s long-standing partnership with American Idol and Hasbro’s Transformers film franchise. Recent successes include two Emmys and four Cannes Grand Prix awards in the past three years for Chipotle’s “Cultivate Campaign,” and nine Webbys including Gap’s first-ever Webby Award-winning work.

“I’m not sure this could happen anywhere but CAA — creating content in media from live events to TV, film and music that draws an audience on behalf of some of the greatest brands in the world,” he said.

Goodman has held creative and executive positions at top ad agencies, including Wieden + Kennedy, received many accolades including “Best in Show” at every major advertising award event, and had CAA Marketing’s work selected as one of TED’s “10 Ads Worth Spreading.”

Anticipating shifts in the business
His move toward entertainment started in the early 2000s, when he began to notice a shift in the advertising business.

“Traditional advertising was becoming less effective,” Goodman recalled. “So I started using the hours between midnight and 6 a.m. to create pure entertainment like TV shows and music video treatments.”

In this “side gig,” he sold a TV show to Fox Sports and earned multiple MTV Music Video Award nominations for videos he wrote for Fatboy Slim, Mariah Carey, Linkin Park and Miley Cyrus. His achievements and unique combination of skills caught the attention of CAA, which hired him in 2006.

As a student, Goodman particularly enjoyed courses on campaign messaging, political communication, polling and campaign advertising. One of his professors was Andrzej Korbonski, a distinguished scholar specializing in Eastern European studies who inspired Goodman with lectures on the transformative power of ideas and change in the period between the Cold War and glasnost.

“I know it sounds cliché,” he said, “but UCLA gave me the ability to think critically. From the basic curriculum of Rousseau, Plato, Aristotle and Machiavelli to the finer points of political campaign messaging — they all stuck with me. I learned about the power of ideas, how to reason, how to articulate a point of view and, most importantly, how to write.”

As a student, Goodman spent a lot of time on the Drake Stadium track and in the pool at Sunset Recreation Center. Although he loved every minute, he said he wishes he had taken more time to explore Los Angeles.

“Here I was in such a culturally rich city, surrounded by some of the most creative professionals in the world, and I hardly ever ventured off campus to a movie studio, a writer’s room, concert, gallery or museum because there was so much happening at UCLA.”

Goodman still puts his time in at Drake and Sunset Rec., and in recent years has served as a member of the selection committee for the prestigious UCLA College Fellows internship program, which brings together alumni and friends to mentor undergraduates and help them practice interview skills. He is also a member of the Social Sciences Centennial Campaign Board.

Goodman recalled his nervousness when he interviewed for jobs fresh out of college, “sweating through the first suit I’d worn since my bar mitzvah,” and said he enjoys helping students in the program.

“UCLA students are really smart and capable but their college experience tends toward the academic. The College Fellows program is a great way to give them practical advice that took me years to learn.”

Jae Goodman
Twins Find Peace After Leaving Religious Persecution Behind in Egypt

For twin sisters Youstina and Marina Salama, this road is their reality. This fall, the sisters joined the newest class of incoming UCLA students.

Life in Egypt for the twins was anything but peaceful. As Coptic Christians living in a predominantly Muslim nation, their family, like other Christian families, was subjected to harassment, threats and violence by those who despised Christianity.

“Christians were always considered second class in all fields of society,” said the girls’ mother, Susan Nawar, adding that it is difficult for Christians to enjoy high levels of educational and professional success because of religious persecution in their homeland. “Many incidents, including the burning of churches and the kidnapping and rape of young girls, are common,” Nawar said.

The family left Egypt just four months before the Alexandria riots, an anti-Christian melee that left 100 injured and three dead.

When Youstina and Marina first started school in Bellflower, they were bullied because they didn’t speak English. Together, they found inner peace by studying and working hard to gain the respect of their teachers and classmates.

By ninth grade they were taking Calculus II AP, something their teachers had never witnessed before. The sisters went on to complete roughly a dozen AP classes each.

At UCLA, Marina is majoring in biology, while Youstina has chosen to major in molecular, cell and developmental biology, adding that, without the grants and scholarship funding, she and Marina would not be able to attend college. Both plan to become doctors. “We’ve seen how doctors really change lives,” Marina said.

“You rarely see doctors in Egypt that are women, let alone Christians,” Youstina said. “We just think it’s a great way to help people.”

From a Crime-Ridden Neighborhood to a Path to a Good Education

For UCLA freshman Elijah Ozuna, gang culture, criminal activity and drug abuse are normal parts of where he grew up in Los Angeles. Ozuna knew that he didn’t want to end up like his father, brother and others in his neighborhood — working low-paying jobs, ending up incarcerated or dead. But he also didn’t know how to avoid it.

His mindset changed when he learned of his high school’s partnership with UCLA’s Vice Provost Initiative for Pre-College Scholars (VIPS) program (see page 16), which prepares students from low-performing high schools to become competitively eligible for admission to the nation’s top postsecondary institutions.

“I didn’t even know that I wanted to go to college. I was just getting through high school and ready to become an adult,” said Ozuna, who graduated from Crenshaw High School this year. “VIPS showed me I could do anything I want and that university can help you determine what you want to do in life. Other people are motivated by making fast cash on the streets. I am motivated by making good money through a good job, and you need a good education to do that.”

Ozuna has also been motivated by his mother. “My mom was a very influential figure in my life, as far as showing me that you can do it for yourself,” he said. “She raised four children on her own, working three jobs while our father was incarcerated.”

Ozuna has already found his path. He enters UCLA as a mathematics/econ major interested in a career in finance.

“Young Latino males from South Los Angeles typically do not end up at UCLA, and that is unfortunate,” said education professor Tyrone Howard, director and founder of UCLA’s Black Male Institute and Ozuna’s teacher and mentor through VIPS. “It just goes to show that with the appropriate supports, there can be more young men like Elijah.”
PHYSICAL SCIENCES

Finding a Better Way to Deal with Her Diagnosis

It seems that everything in Megan Cory’s life has pointed her toward a career in medicine. It’s what she has wanted to do all her life. “I knew that doctors make people feel better,” said Cory, a biochemistry major with a minor in theater.

Her decision to pursue medicine was reaffirmed when she was diagnosed with type 1 diabetes two days after her 14th birthday. Cory cried — but only because she didn’t understand what it all meant. “After a few minutes, I stopped crying and I asked myself, ‘Why are you crying? You don’t even know what it is,’” she recalled. “I stood up and asked the doctor, ‘What’s next? What do I need to do? This diabetes thing is not going to stop me from doing the things that I love.’”

Impressed with her positive attitude, her doctors later asked her to talk to other teens with diabetes. So many of them think of diabetes as a form of punishment, making it difficult for them to deal with it, she said. “I think of it another way: Diabetes is manageable; it’s just a little inconvenience, a little extra something you have to do,” she said. “Be thankful that we have something we can control.”

Now at UCLA, her focus is on preparing for medical school and helping her peers with diabetes and others who are dedicated to educating people about both types of diabetes. She started DiaBeaters, a campus group that promotes a healthy lifestyle to help prevent the disease.

Cory, who’s interested in becoming an endocrinologist, has been conducting research at the Larry L. Hillblom Islet Research Center at UCLA on alpha mass in non-diabetic people over their adult lifespans. “The cool thing is that … everything that’s happened to me since [my diagnosis] has strengthened my wanting to be a doctor. It’s my calling. I didn’t have an epiphany. I felt like this my whole life, and I know I’m headed in the right direction.”

HUMANITIES

Student Culinarian Seasons His Dishes with Lessons on Food Issues


When it comes to food, these are Joseph Martinus’ three favorite words. Martinus believes that people should be more aware of where their food is coming from and take time to educate themselves about food-related issues. “What’s mind-boggling is that food is necessary for our survival, and yet it’s taken for granted,” he said. “We should be celebrating real food — simple food — every day. It’s our fuel. It matters.”

In 2006, Martinus studied at the California Culinary Academy in San Francisco. Since then, he has cooked in restaurants in San Francisco, Miami and Los Angeles. Eager to advance his education, Martinus studied at Santa Monica College and graduated with an associate’s degree in English. He transferred to UCLA in 2013, where he is majoring in English and minoring in environmental systems and society.

Building on his interest in local food and policy, Martinus is UCLA’s student ambassador to the University of California Global Food Initiative’s food procurement committee, which is working to find sustainable ways to increase the amount of locally grown food served throughout the UC system and sharing best practices among the 10 campuses.

The seeds of his professional interest in food were sown early in childhood as he watched his mother open and manage two restaurants located in a popular tourist section of Tijuana, Mexico. “At first, I was on the sidewalks rallying in tourists. A cute 9-year-old — who’s going to say no to that?” Martinus said. “I wasn’t allowed in the kitchen to cook, but I’d sneak in there to observe what my mom did — how to use a griddle, handle plates and run an expedition line.”

After he graduates next June, Martinus hopes to study law with an emphasis in food law and policy here at UCLA. He also hopes to open his own restaurant one day. “Joseph’s enthusiasm for healthful food is contagious,” said Associate Vice Provost Dr. Wendy Slusser. “His background in culinary arts gives all of us, me included, a chance to learn how we can prepare food that is delicious and at the same time preserve its nutritional value.”
“WE HAVE MANY REASONS TO CELEBRATE, FROM BOUNDARY-BREAKING RESEARCH TO GAME-CHANGING PHILANTHROPY TO STUDENTS DEFying ALL ODDS ON THEIR PATHS TO FULFILLING THEIR ASPIRATIONS.”

— Deans of the UCLA College