# Your University

A REPORT FROM THE UNIVERSITY OF CALIFORNIA PRESIDENT FOR FRIENDS AND ADVOCATES OF UC

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**RESEARCH IN ACTION WORKING FOR THE PEOPLE OF CALIFORNIA**

*This special report highlights UC's efforts to support quality K-12 education for all Californians. (Inside)*

**DID YOU KNOW?**

- Nearly one-third of UC undergrads receive aid for low-income students. According to the U.S. Dept. of Education, 31.9 percent of UC students enrolled in 2006-07 received Pell Grants.
- By comparison, 18 percent of University of Southern California undergrads received Pell Grants; 15.1 percent at Stanford and 7.9 percent at the University of Virginia.

**Be an advocate for UC!**

Help tell the story of the University of California's contributions to California.

Find out what you can do and sign up today at www.ucforcalifornia.org

Contact Mark Chekal-Bain, Advocacy Director, at 510.987.9004 or mark.chekal-bain@ucop.edu

# Grants aid UC's K-12 math and science initiatives

Photo: Deborah Stalford.

UC Berkeley Cal Teach students Brian Ikkanda and Dorothy Tang talk about their experiences at event announcing NMSI grants.

The University of California has been awarded more than $6 million to improve teacher education in math and science.

UC Irvine and UC Berkeley each received a $2.4 million National Math and Science Initiative grant to increase the number of California teachers qualified to teach those subjects. More than 50 universities nationwide competed for these grants, and only 12 were awarded.

In addition, the California Postsecondary Education Commission has awarded UC Irvine $999,666 for math and science teaching and $273,127 to UC Davis for math teaching. Both grants target professional development programs for kindergarten through second grade teachers. The grants are part of the federal Improving Teacher Quality Program funded under the No Child Left Behind Act.

"These grants will allow UC to build upon its existing collaborative efforts to fill an important need – training qualified math and science teachers for California classrooms," said UC Provost Wyatt R. (Rory) Hume. "Addressing this teaching shortage is critical to helping keep California's economy and communities strong."

The NMSI grants will complement UC's California Teach program launched in 2005 in consultation with Gov. Arnold Schwarzenegger and California State University Chancellor Charles Reed. Cal Teach is committed to increasing the number of UC students trained annually to be math and science teachers from 250 to 1,000 by 2010-11. Cal Teach features programs at all nine UC undergraduate campuses: Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, Santa Barbara and Santa Cruz. In addition to state funding, Cal Teach has received private support from corporations such as Intel and AT&T.

## UC Berkeley, lab join cities to promote 'green corridor'

The mayors of four San Francisco East Bay cities are joining forces with Lawrence Berkeley National Laboratory and UC Berkeley to turn the region into a hub for "green collar" industry.

The East Bay Green Corridor Partnership, announced in early December, includes the cities of Richmond, Berkeley, Emeryville and Oakland. The collaboration aims to establish the East Bay as a global leader in alternative energy research, environmental innovation and green industry job training for under-served youth.

Berkeley alone is home to more than 87 green businesses, according to Mayor Tom Bates, and the East Bay has more than 200 such businesses.

The four mayors along with Chancellor Robert Birgeneau and lab Director Steve Chu signed a statement of principles asserting their commitment to creating the "Silicon Valley of the green economy" in the East Bay. The agreement will create a variety of incentives for green businesses to locate in the East Bay. The partners will hold an annual green-economic summit; convene quarterly meetings between their economic development, work force development, and technology-transfer offices; and coordinate a regional green-job training and placement effort.

## UC San Diego medical staffs serve fire victims

UC San Diego nurse Joann Gutowski treats fire victim.

When the Southern California wildfires erupted in October, the UC San Diego Medical Center mobilized. Everyone from clinicians, nutritionists, chaplains and social workers to facilities staff pitched in to keep the hospitals fully staffed although many had to evacuate their own families.

Before the blazes were brought under control, more than 50 patients, including five firefighters, had been treated in the UCSD Regional Burn Center. Many are continuing to receive out-patient treatment at the facility. Of the 20 fire victims treated as in-patients, 18 survived. At the end of December, only one patient remained hospitalized.

In recognition of the heroic efforts of the burn center staff, Las Patronas, a La Jolla-based philanthropic organization, donated $77,450 to purchase a pressure therapy system for the treatment of burns to the face, neck and chest.

The system creates exact scans of the patient's facial contours to aid in the creation of a custom designed, translucent burn mask that might help lessen scarring and reduce the number of additional surgeries patients must endure.

The burn center serves San Diego and Imperial counties as well as portions of Arizona and Mexico. Each year, approximately 450 burn victims are admitted and hundreds more are treated as outpatients. During disasters such as the October wildfires and the 2003 Cedar Fire, the center plays an even more critical role in the region's emergency response.

"It's amazing how people pull together at a time like this," said Tom Banaszak, the nursing supervisor on duty at UCSD's Hillcrest facility on Oct. 21 when the firestorm erupted. "On the other hand, I guess it isn't really amazing; people here always do what they need to do. (When the fire broke out) people just started arriving to help, and that kept up all week. They always come through."

UCSD health providers as well as medical and pharmacy school students also volunteered throughout the community. A team of physicians, nurses, respiratory therapists and students immediately deployed with medical supplies to Qualcomm Stadium, where evacuees were being sheltered. Their first job was to set up and manage a diabetes and blood pressure station. As the week wore on, UCSD volunteers continued to help manage patients and supplies.

Med school students also volunteered at the emergency child care centers the university set up so physicians and staff could continue working while San Diego schools were closed.

## FCC awards UC telehealth grant

The University of California, working with a coalition of government agencies and health care providers, will use a $22 million Federal Communications Commission grant to improve rural health care throughout California.

The grant will allow UC and its partners to establish a statewide broadband telehealth network. The project will connect 300 rural sites with each other and with a network of specialty providers at academic medical centers and other health facilities statewide. Such a network allows patients in remote areas to access the expertise of specialists and other providers without traveling to a distant medical center or clinic.

The UC Office of the President, together with the UC Davis Health System, will manage the project on behalf of the state of California and a coalition that worked together to prepare the California proposal for FCC consideration.

The coalition includes representatives from the Office of Gov. Arnold Schwarzenegger; California Public Utilities Commission; California Business, Transportation and Housing Agency; and the California Health and Human Services Agency. Participants also include the California State Rural Health Association, rural health networks and coalitions, the California Hospital Association, and other health care providers.

The California Emerging Technology Fund and UnitedHealth Group Inc. have committed up to an additional $8.6 million to support the telehealth project.

The network will first focus on rural communities then expand to serve both rural and urban areas. The California Telehealth Network also will be developed for use as a resource for emergency services and disaster preparedness.

UC's first telemedicine program began in 1992 with a fetal monitoring link between the UC Davis Medical Center and a community hospital in Colusa. Since then, UC's telemedicine efforts have grown to include a variety of innovative telemedicine applications, including video-based consultations, emergency department and intensive care unit consultations and home health monitoring. Over the past 14 years, the UC Davis telemedicine program has completed more than 16,000 video-based clinical consultations.

UC's Telemedicine Learning Center at Davis teaches physicians, clinic coordinators, business executives and technicians how to establish effective telemedicine programs to meet the needs of patients in their communities. Since 1999, the center has trained more than 1,200 health care professionals. It also serves as an educational resource to other telemedicine sites.

## Student ethnic data collection expands

UC will become the first public higher education institution in the state to collect and report data on Hmong and other Asian American groups through substantial additions to the ethnic categories on its undergraduate application.

The changes are intended to increase accountability and better capture the complexity of UC's Asian American and Pacific Islander student population.

Undergraduate applications will include 23 Asian American and Pacific Islander categories. Eight are currently recorded.

Several factors contributed to the change, including a "Count Me In" campaign supported by thousands of UC students, calls from UC faculty for richer research data, and legislative interest.

Ethnic data are not considered in UC's admissions process but can be used in evaluating graduation and retention rates. Next year's application will include categories for Chinese (except Taiwanese), Taiwanese, Asian Indian, Pakistani, Japanese, Korean, Filipino, Vietnamese, Hmong, Thai, Cambodian, Laotian, Bangladeshi, Indonesian, Malaysian, Sri Lankan, Other Asian, Native Hawaiian, Guamanian/Chamorro, Samoan, Tongan, Fijian and Other Pacific Islander.

## UC continues private support efforts

Alumni support for the University of California's 10 campuses increased 13.5 percent compared to 2005-2006 donations, providing an important supplement to UC's public funding.

While the state of California provides the core support for the university's instructional mission and its enrollments of students, private support provides additional critical funding for research, endowed academic chairs, campus improvements and UC's many academic preparation programs.

Private support for the 10-campus system reached nearly $1.3 billion over the past fiscal year, marking the seventh straight year that contributions from alumni, charitable foundations, corporations and other friends of the university have topped the billion-dollar threshold.

Charitable foundations donated the largest portion, $526 million, up 12 percent from a year earlier. Alumni giving reached a record $193 million – up 13.5 percent. Corporate support totaled $211 million.

The UC system's overall 2006-07 budget was approximately $18 billion. The state provides about 20 percent of UC revenue, including critical support for the core instructional program.

The UC Regents reiterated the importance of this core state funding in their November budget request for 2008-09. Just over 3 percent of the state general fund budget now goes toward supporting UC compared to 7 percent in 1970.

## Interim state government relations chief appointed

Sacramento veteran Karen French to head UC's Office of State Governmental Relations.

Karen French has been appointed interim assistant vice president and director of State Governmental Relations, effective Jan. 1. She replaces Steve Arditti who retired on Dec. 31.

French has served the Office of State Governmental Relations as acting associate director and as legislative director for research, agriculture, and capital facilities, as well as health and clinical affairs. She joined the office in 2007 after serving as a senior aide in the state Senate for 27 years, including seven years as assistant director to the Senate Finance Committee and 18 years as staff director to the Senate Appropriations Committee.

She is a member of the California Bar Association who received a bachelor's degree in biology with emphasis in ecology and systematics from San Francisco State University and a law degree from UC Davis.

French may be reached at 916 445-9924 or at karen.french@ucop.edu.

## Stem cell grants to support medical advances

The California Institute for Regenerative Medicine has awarded eight UC campuses more than $24.7 million for stem cell research and support for young scientists in its latest round of grant disbursements.

The awards provide salary and research support for up to five years to new faculty members at stem cell research programs across California.

In addition, the funding helps scientists at the time between the end of their formal training and the beginning of their independently supported research activities, when funding is typically hard to secure.

UC Berkeley received $2.2 million, UC Davis $2.4 million, UC Irvine $2.1 million, UCLA $7.6 million, UC Merced $1.6 million, UC Riverside $2.1 million, UC San Diego $2.2 million and UC Santa Cruz $4.5 million.

The 29-member Independent Citizens Oversight Committee, the governing board of the California Institute for Regenerative Medicine, approved statewide New Faculty Awards totaling $54 million to scientists and medical doctors to support a broad range of research.

California voters approved Proposition 71 in 2004 to authorize a 10-year $3 billion bond program to fund stem cell research aimed at treatments for multiple sclerosis, Alzheimer's, cancer and other diseases.

## UC Santa Cruz society supports former foster kids

Matilda Stubbs doesn't remember her parents. She lived in foster care – sometimes with other relatives - from the time she was an infant until she graduated from high school.

Statistically, Stubbs' chances of earning a university degree were slim: Fewer than 50 percent of foster kids graduate from high school and only 20 percent of those make it to college. Those who will actually earn a degree range from fewer than 1 percent to 5.4 percent.

"It was a very rocky road," Stubbs said of her years in foster care. "I was living with family who were getting paid by the state to supposedly take care of me and with strangers. I went to three different high schools in three different states."

Matilda Stubbs (right) celebrates 2006 UC Santa Cruz graduation with Smith Society member Colleen McCarthy.

Yet Stubbs beat the odds and graduated from UC Santa Cruz in 2005. Since then she has worked as a community development director for the Girl Scouts of America and is now applying to graduate schools. She owes her success, she said, to the Page and Eloise Smith Scholastic Society, a UC Santa Cruz program that works with former foster kids, emancipated youth, orphans, homeless students and others who must survive without family support. At age 18, foster kids "age out" of the system and are on their own.

Since its founding in 1999, the Smith Society has aided 124 students like Stubbs, including the 55 currently enrolled. The society awards scholarships, helps with financial aid, on-campus housing, career guidance, mentorships and internships as well as social activities and camaraderie.

"The thing about being in foster care is you don't belong to a tribe," said Stubbs. "I never felt like I belonged anywhere. The Smith Society provided me with a surrogate family. I was able to meet other students who were viewing the world through my lens."

Stubbs remains active with the society by serving on its advisory board. In addition to helping UC Santa Cruz students, the society also does outreach to Santa Cruz-area foster kids.

### Founder left foster care at 16

The Smith Society, named in honor of the first provost of UC Santa Cruz's Cowell College and his wife, came to life through the efforts of Bill Dickinson, a former foster kid who was one of the first students to enroll at UC Santa Cruz when it opened in 1965 and to graduate from Cowell College in 1968.

At an alumni gathering, Dickinson, who pursued a career in communications, decided to set up a scholarship fund. A fellow alum told him it wasn't enough to just give money.

"I had to show up and be part of it," Dickinson said.

He's especially proud of the mentorship program that connects Smith Society students to faculty, staff and community members who can help them get ahead in their careers.

"If you teach someone something important, they can make something of themselves," Dickinson said.

The Smith Society connected Mashawna Miller, a marine biology major, with an oceanographer as a mentor. Miller has dinner with her mentor regularly and talks about what classes to take, something other students can do with their parents.

"All the people involved with the Smith Society are just goodhearted people," said Miller. "It's really a homey feeling."

Since the Smith Society launched, UC Davis, UC Berkeley and UC Irvine have started similar support programs.

"I think what sets our program apart, is it's not just a society, it's a community of friends," Dickinson said.

That friendship came to the rescue of Clearblue Jackson when he failed his New Testament Greek final last year. The moral support he received from fellow Smith Society friends and volunteers helped him pull through and eventually pass the course.

Jackson, who has cerebral palsy, lives on campus year-round, thanks to the Smith Society, which negotiated a discount rate for members to stay in their residence hall during breaks.

The majority of students who join the society are transfer students, said Cheryl Perazzo, a financial aid advisor who works with the Smith Society students. In recent years, she said, more freshmen are coming into the program. That's a sign the outreach to schools and county foster youth advocates is working. Beginning with the fall 2008 UC application period, prospective students are asked on their application form if they have ever been in foster care. That will help identify these students, so they can get the support they need.

"Having a personal cheerleader goes a long way," said Stubbs, who would like to put the doctoral degree in cultural anthropology she intends to earn to work as an advocate for foster youth. "I tell foster kids, that education is something no one can take from you, period," Stubbs said. "They can't ever takeaway the intelligence, self-respect and perspective you learn from college."

Bill Dickinson founded the Page and Eloise Smith Scholastic Society.

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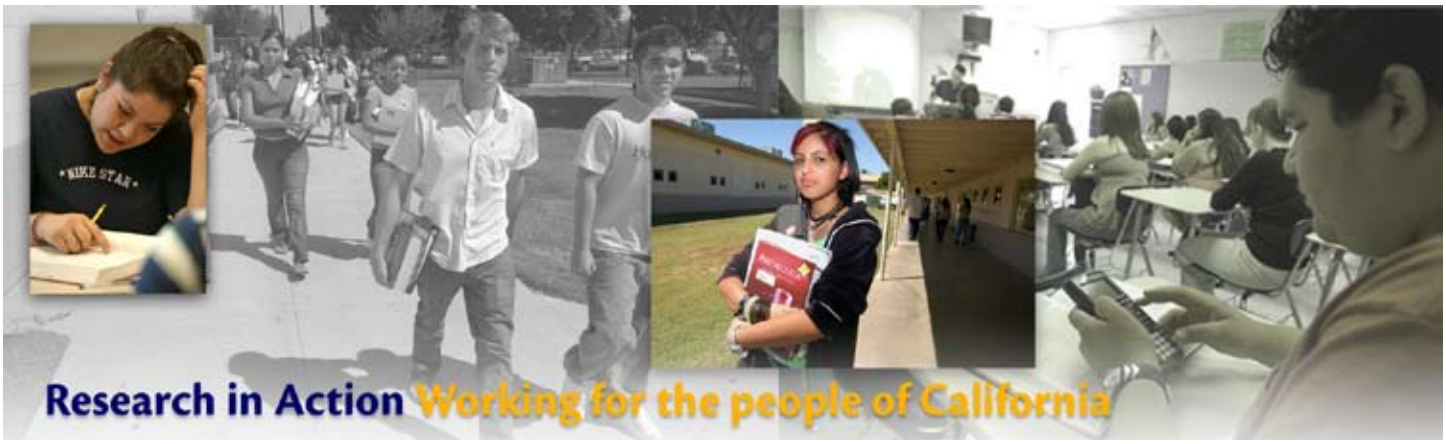


## K-12: UC's commitment to quality education for California

*The University of California is strengthening its dedication to raising the quality of the state's education system. California's economic vitality relies on the skills and creativity of a well-educated work force. As the state takes an innovative role in building new industries in technology, biomedicine and sustainability, the need for young people educated in those fields becomes even more critical.*

*UC recognizes its responsibility to apply its education, research and public service efforts to help strengthen California's K-12 school system. In 2008, the university is launching the Educational Imperative – an initiative that will work with the public and private sector to support the statewide K-12 improvement effort.*

*Through collaboration with California schools, community colleges, other universities, community organizations and families, UC will examine issues such as how technology can be used to support students and teachers and how to eliminate racial and ethnic gaps in educational attainment.*

*At the same time, UC will continue its tradition of aiding K-12 education through its academic preparation programs, math and science teaching initiatives, teacher and administrator preparation and professional development for teachers.*

*The Educational Imperative also will enhance UC's already robust research program in K-12 issues. Here is a look at some of the ways UC researchers are taking a leadership role in educating the children of California with research focusing on high school dropouts, English language assessment and after-school programs.*

## Dropout project aims to boost graduation rates

*Russell Rumberger, professor, UC Santa Barbara's Gervitz Graduate School of Education, director of the California Dropout Project and the Linguistic Minority Research Institute*
*http://www.lmri.ucsb.edu/dropouts/index.htm*

California has a challenge keeping kids in high school. State graduation rate estimates range from 65 percent to 87 percent.

The California Dropout Project, housed at UC Santa Barbara, is studying the causes of dropping out and the strategies that can best keep students in school. The stakes are high for both the students and California's economy.

Dropouts cost state taxpayers $46.4 billion a year, according to one of the project's studies. That includes lost tax revenue, unemployment, medical costs and the increased likelihood of dropouts being on welfare or committing crimes.

More than 80 percent of inmates in California prisons in 2005 didn't have a high school diploma.

"The future does not portend well for us if we can't solve this problem," says project Director Russell Rumberger. "Besides, there is the moral imperative to help our students."

The dropout project began in 2006 with funding from the Bill and Melinda Gates, William and Flora Hewlett, James Irvine, and Walter S. Johnson foundations. The project has a seven-member advisory board that includes state Sen. Darrell Steinberg and Assemblywoman Jean Fuller.

Rumberger says he's optimistic about improving graduation rates. He has been studying both the characteristics of students, such as test scores and aspirations, and school characteristics, such as size and teacher quality.

So far studies have found schools with personalized learning environments in which teachers and counselors have meaningful interactions with the students have better student retention rates.

"We need to personalize high school by creating smaller schools or schools within schools," Rumberger says.

Other project research studies are looking at motivation factors of students at risk for dropping out. Another of Rumberger's studies is examining what happens to students who didn't pass the California High School Exit Exam.

The outcome of all these studies will be a draft of a state policy agenda to improve graduation rates.

## Quality after-school programs boost test scores

*Deborah Lowe Vandell, professor and chair, UC Irvine Department of Education*
*http://www.gse.uci.edu*

Learning doesn't stop at the end of the school day. Researchers have found that high-quality after-school programs can boost academic achievement, but not necessarily from hitting the books.

Deborah Lowe Vandell, chair of UC Irvine's education department, studied 35 after-school programs serving 4,000 low-income elementary and middle school children. The programs, located in 14 states, were selected from among 200 that were identified as successful. In looking at the test scores of students who regularly attended the programs, Vandell found some surprises.

"These programs that were not specifically academic were having academic results," says Vandell.

Third- and fourth-graders who regularly attended programs and engaged in other extracurricular activities scored 20 points higher on standardized math tests than kids who infrequently attended the after-school centers.

A lot of emphasis has been put on increasing access to after-school care, she says, but not just any after-school program delivers this boost in academic achievement.

A high-quality program, as Vandell defines it, offers activities young people care about such as music, sports, computers and art. The students form positive relationships with the staff and each other. Through activities they're interested in, they develop skills that help them with academics: concentration, memory development, good work habits - and "the ability to take a task and go with it."

When children are tired after a full day of regular school, they can still learn but in a different way, says Vandell.

"Prop 49 (approved by California voters in 2002) channels $550 million a year into after school programs," says Vandell. "What we need to be doing is making sure these programs are high quality. Can you believe we have money going to these programs, and there's not a system in place to educate the people who work in them?"

UC Irvine is changing that by developing an after-school education training program connected to the undergraduate minor in education. A graduate-level program geared to managers and directors of after school programs will follow. Vandell believes these will be the first such programs in the country.

## Academic English key to school success

*Alison Bailey, associate professor, Psychological Studies in Education Division, UCLA Graduate School of Education & Information Studies, and faculty associate researcher at UCLA's National Center for Research on Evaluation, Standards and Student Testing*
*http://www.cse.ucla.edu/index.asp*

UCLA researcher Alison Bailey studies ways to best test the academic success of young English language learners. Since the launch of the federal No Child Left Behind Act, this research has provided information for states struggling to comply with the act's requirements for assessing the English proficiency of language learners.

Most of the assessment tests states had in place, Bailey says, weren't testing for the right kind of English.

"Those tests were developed in the '70s and '80s when the focus was on children's social language," says Bailey.

What both English learners and native speaking students need to succeed in today's classrooms is what Bailey and others call academic English – the vocabulary and grammatical structures to understand and articulate concepts in math, science and other core subject matter. For example, when elementary school children are in science class, they need a command of technical vocabulary words such as photosynthesis and respiration as well as more general words such as process and experiment.

Bailey believes the concept of academic English needs to be incorporated into teacher education programs and professional development courses for teachers. Bailey consults with various states to develop effective testing and has been involved with the federal government's reauthorization of the No Child Left Behind Act.

With 1.5 million English language learners in California's schools, the ability to adequately test their skills can have a huge impact on their academic success. If a child's language proficiency level is misdiagnosed, that child can be either pushed into mainstream content classes too early or held back from learning. Either way the outcome will be harmful to the child.

While the work done at UCLA's National Center for Research on Evaluation, Standards & Student Testing doesn't create actual tests, researchers have tested assessment tasks of academic English connected with the language demandsof the various content subjects, such as word problems used in math classes, to determine which work best for English learners. The Corinne A. Seeds University Elementary School, on the UCLA campus, provides a testing ground as do several Southern California public grade schools.

Bailey's research has resulted in a book, *The Language Demands of School: Putting Academic English to the Test*, published by Yale University Press in 2007. Educators and test developers use the book to evaluate their testing instruments and create curricula to support both English language learners and native speakers.

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