

Our University

A NEWSLETTER FROM THE UNIVERSITY OF CALIFORNIA PRESIDENT FOR THE UC COMMUNITY



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What can we do to improve math and science in our schools?

By Donna Hemmila

UC students are finding out through a program that's turning them on to the joys of teaching.

Cal Teach inspires future math and science teachers

Kayla Bui knows her math skills could land her a lucrative job in the business world when she graduates from UC Riverside, but that's not where she's heading.

"I came to UC Riverside knowing I wanted to teach," she said. "With math you could go into business or accounting, but I think that would be boring."

Thanks to the Cal Teach initiative, Bui was able to test-drive a teaching career by interning in geometry and algebra classes in a Riverside high school. Those classroom experiences and the special Cal Teach courses solidified her desire to become a teacher. When she graduates, Bui, now a sophomore, plans to enter a UC Riverside master's in education program where she can concurrently earn a math credential. That's exactly the kind of outcome the University of California and California State University had in mind when they launched Cal Teach in 2005.



Shortage of qualified teachers. The initiative has a goal of producing 1,000 new math and science teachers a year to address a critical shortage in credentialed math and science teachers. According to a July report from the Center for the Future of Teaching and Learning, 62 percent of California eighth-graders and 95 percent of 11th graders scored below proficient in Algebra I

standardized testing in 2007. About 32 percent of the teachers assigned to middle school algebra classes do not have a math credential, the institute found.

In California high schools, teachers without an appropriate subject credential taught 12 percent of the math classes in 2005-06. Teachers working outside their credential taught 20 percent of physical science classes and 11 percent of life science classes. The shortage of qualified math and science teachers will get worse as one-third of the state's teachers is expected to retire by 2017. In an economy heavily dependent on science and technology, California faces a real shortage of adequately prepared workers.

UC attacks the problem. The Cal Teach initiative, in its fourth year, is picking up steam. In fall 2008, the nine UC undergraduate campuses had 548 students enrolled in 41 Cal Teach classes. That's the highest number since the classes began in winter 2005 with 84 students.

Some UC Cal Teach students will decide to get their credentials at a CSU, private university or out of state because of cost or personal situation, but UC still does its part in delivering qualified teachers, said Patrick Callahan, executive director of the UC Science and Mathematics Initiative.

Teachers get start at UC. Among the students who earned math credentials in California in 2006-07, he said, 28 percent earned their math degree from a UC. Among those credentialed in science last year, 32 percent earned an undergraduate science degree from UC.

"We need to wait to see if the seduction Cal Teach offers is working to get the students all the way through the pipeline," said UC Riverside biology professor Bradley Hyman, who is the campus Cal Teach faculty director.

Early results. Although the full impact of Cal Teach won't be known until next year when students who joined the program as freshman begin to graduate, some Cal Teach participants are already teaching.

Kristine Arquero took Cal Teach classes her senior year as a chemistry major at UC Berkeley. She interned in an Oakland Technical High School physics class. She has been a high school chemistry teacher in the South Bronx since Sept. 2, working on an emergency credential while earning a master's and teaching credential at Lehman College. And she's firing up her students in more ways than one.

"This high school is 4 years old, and this is the first time they've turned on the Bunsen burners," Arquero said, demonstrating the difference a rigorously prepared science teacher can make.

She teaches in one of the poorest district in the region, and she's the sixth science teacher many of the students have had. Getting them excited about chemistry is a challenge, she said, but she puts what she learned from her Cal Teach classroom experiences to work.

"I got my science from UC Berkeley," said Arquero. "But I got the teaching from Cal Teach, and I got the support from Cal Teach."

Program instills dedication. It's a hard sell convincing talented engineering, math and science majors to consider teaching. Those students can find many high-paying opportunities in industry, Hyman said, and teaching isn't valued as a prestigious profession.

"I think we're trying to appeal to the humanity within," he said. "As a teacher you impact 100 or more students a day. It's a generational legacy you'll influence."

Students receive a stipend for their hours in local schools, and Cal Teach counselors give them individual support in making decisions about graduate school. Even those students who decide not to pursue teaching are making an impact, serving as role models and valuable classroom tutors. Some of them may decide to teach after having careers in industry, Hyman said, and the program is building strong relationships with local school districts throughout the state.

"I don't think I would be as committed to teaching without the program," said Kristen Simester, who will graduate in December with plans to enter the UC Riverside credential master's program.

The biology major has logged in hundreds of hours in local schools learning from mentor teachers and having a chance to teach lessons.

"I chose biology as a major because I absolutely love everything about it," she said. "I found teaching was an awesome way to get all my knowledge out there. Every student deserves a great education. Hopefully through my knowledge of the content area, they can get one."

Ask it!

Chances are there's something you've always wondered about, meant to look up or wished someone would explain. Now is your chance to satisfy that curiosity. E-mail your questions to donna.hemmila@ucop.edu and we'll find the UC brainiac who can answer it. Science, health, culture, language - whatever your question, don't be shy. Just Ask it!

Q: Where do flies sleep? I've encountered flies that were awake, but not one that was asleep (unless they're extremely light sleepers).

A: Flies become quiescent or "sleep" wherever they happen to be when the sun goes down. Frequently this is close to food sources or to substrates upon which they lay their eggs. Blowflies, for example, can be found very near or on carrion at night. You probably have not seen common flies sleeping because you do not frequent such locations yourself, particularly at night.

Robert Kimsey is a UC Davis assistant adjunct professor in the Department of Entomology.

People

New era for agriculture

By Donna Hemmila



Clare Hasler is executive director of UC Davis' newly opened Robert Mondavi Institute for Wine and Food Science, a legacy for a legendary California winemaker and a testimony to the role UC plays in the state's thriving food and beverage industries. Read more about the institute.

In her student days, Clare Hasler toiled in a drab laboratory with little in the way of sunlight and scenery. As executive director of the new Robert Mondavi Institute for Wine and Food Science at UC Davis, Hasler can appreciate what the new facilities mean for students.

The institute, which celebrated its grand opening on Oct. 10, houses the departments of Viticulture and Enology and Food Science and Technology together in one 129,600-square-foot complex. The institute bears the name of its benefactor, legendary Napa winemaker Robert Mondavi, who donated \$25 million for its construction. (UC Davis, the state of California and other private donors are contributing a total of \$93.5 million to build the institute complex.)

"This is a dream come true for students to have these facilities," Hasler said. "This is going to ensure we maintain our pre-eminent position in wine and food science."

The new shiny labs where students are studying have the latest equipment plus floor-to-ceiling windows with views of the surrounding hillsides and central courtyard. And it's not just any courtyard.

Rather than plant traditional landscaping in the open space between buildings next to a small olive grove, the UC Davis buildings and grounds department created the Good Life Garden, a seasonal, edible planting of vegetables, herbs and flowers. This fall, fragrant rosemary and oregano share tidy beds with broccoli and beets while sage and sedum liven up the cabbage patch. Twelve

varieties of lettuce are thriving. As the seasons change, the crops will be harvested and new ones planted.

The garden's goals are to promote the link between food and health and to encourage people to grow and plant seasonal foods. Seeds of Change, an organic garden supply company, provides the seeds. The harvested produce will be distributed through the campus food services and Whole Foods Market, said Sal Genito, director of campus buildings and grounds. Garden Club Friends will receive a box of produce each month.

For Hasler, who joined UC Davis in 2004 to shepherd the institute through its planning and construction, the garden provides a visible reminder of her life's work in nutrition.

Hasler is an international authority in "functional foods." The term describes foods that provide health benefits beyond their nutritional content. Almonds, olive oil, sweet potatoes, tomatoes, flax seeds and dozens of other foods are recognized for their potential in reducing risk of chronic diseases and promoting health.

Hasler has a master's degree in nutrition from the Pennsylvania State University and a dual doctoral degree in environmental toxicology and human nutrition from Michigan State University.

"I knew I wanted to get a Ph.D. from the first time I stepped into a lab," she said.

From 1990 to 1992, Hasler served as a postdoctoral fellow at the National Cancer Institute. She also earned a master's degree in business administration from the University of Illinois at Urbana-Champaign, where she was an assistant professor in the Department of Food Science and Human Nutrition and an adjunct assistant professor in the College of Pharmacy at the University of Illinois at Chicago. While at the University of Illinois she founded the Functional Foods for Health Program.

Her job as the institute's executive director provides a perfect melding of her interests in health, food science and teaching. Hasler serves as the university's liaison with the wine and food industries, and she leads the development of programming, organizing events and seminars such as the Dec. 6 educational olive oil tasting. The UC Davis Olive Center, which uses fruits from campus trees to produce its own oils, is housed in the food science building at the institute.

Not only does the public benefit from the food and beverage research that goes on at the institute, Hasler said, but also there will be many opportunities for people to enjoy events and learning experiences at the institute.

Those opportunities will expand as the institute expands. The second phase is expected to open in 2010. The \$16.5 million project will add two more buildings to the institute complex. One will house the teaching and research winery and the other the Anheuser-Busch Brewing and Food Science Laboratory, named for another industry donor. This winter a 12-acre teaching vineyard will be planted next to the new building site.

Robert Mondavi passed away in May at age 94 and won't get to see the final project completed. Hasler said she thinks he was at the grand opening in spirit and would be pleased at the way the university is carrying on his legacy. As it celebrates its 100th anniversary, UC Davis continues to play a significant role in the developing of California's wine industry. Many of the state's winemakers and winery owners are UC Davis alumni. And the university continues to be a leader in food safety, pest control and production and processing methods, all of which make major contributions to California's \$37 billion agriculture industry.

"It's a privilege to be part of this," said Hasler. "It's a great time to be part of UC Davis."

Featured campus: UC Irvine.

HABLA program trains volunteers to work with Spanish-speaking preschoolers and their parents in their own homes to prepare youngsters for kindergarten.

Four-year-old Lupe Velasquez grabs the Legos scattered across his kitchen table, slowly but confidently naming the colors of the individual blocks – green, yellow, red.



"What color is this?" asks recent UC Irvine graduate Noemi Maldonado, pointing to an orange block. "It's the same as a fruit you love to eat."

Lupe and Maldonado meet twice a week to read books and work on colors, shapes, vocabulary and memorization.

Related Links

Lupe takes the Legos and meticulously stacks them, smiling as the blocks take the shape of one of his favorite animals.

“Look, it’s a duck!” Lupe cries to his mom, Maria de los Angeles Gil, who helps Maldonado with the lesson.

“Before this, he didn’t talk that much,” she says. “Now he talks more, especially when people visit.”

Building verbal skills is one of the main goals of the HABLA program – an acronym for Home-based Activities and Building Language Acquisition – founded and directed by cognitive sciences professor Virginia Mann. The program trains home visitors to help Orange County’s Spanish-speaking parents prepare their toddlers for kindergarten. The program coaches parents to read and play with their children outside of the weekly home sessions, incorporating lessons into their daily lives.

The program, created in 2000 in Santa Ana, has grown to serve more than 1,000 families in areas including Anaheim, Garden Grove and Tustin.

According to Mann, children in professional families hear roughly 300 more words per hour than children in poor families. By age 5, this translates into a difference of more than 30 million words.

“We want to optimize the language environment to help children learn,” Mann says. “Success in school depends on children learning a rich language before they enter.”

HABLA – meaning ‘speak’ in Spanish – achieves this by encouraging parents to speak and read to their children in their native language of Spanish. The idea is that children who are proficient in their home language will be better equipped to pick up English in school. The program also teaches math and science fundamentals, such as categorizing and grouping by colors and shapes.

“We use books and toys as a way of encouraging high-quality conversations,” Mann says. “We urge parents to help their children make connections between their surroundings and what they read in books. We give them Spanish-language versions of the same books that many children will encounter in English once they enter school.”

Gil says she applies Mann’s philosophy during visits to the local park with her son, pointing at trees, passing cars and even stop signs, describing their colors and shapes.

Maria Gallegos of Anaheim says she notices a difference in daughter Karol Andrea’s behavior since she started HABLA five months ago.

“She’s very observant now,” Gallegos says of her 4-year-old. “Before, she would just ignore things around her. Now, she pays attention.”

Karol's home visitor, Josefina Vallin Amirzadeh, says her goal is to challenge parents and youngsters to go beyond what they are supposed to know. "I never limit them," she says, "and they shouldn't limit themselves."

Researchers at the Brookings Institution, a nonprofit public policy organization based in Washington, D.C., will conduct a five-year evaluation of HABLA, assessing the program's influence on parent behavior, language development, and math and reading skills. Mann says the program can be adapted in other immigrant communities in California and beyond.

— Laura Rico, UCI Communications

Systemwide News

UC weathers economic storms



How is the global economic downturn affecting UC's retirement plan, operating budget and future fiscal health? Katie Lapp, executive vice president for business operations answers questions about how the crisis is impacting UC.

With the nation facing historic stock market declines, and California wrestling with a \$10 billion budget deficit, Our University interviewed Katie Lapp, executive vice president for business operations, to find out what these big economic issues mean for UC.

Q: Let's start with the current stock market situation – just how serious is it and what should employees make of it?

A: It is real, and it is serious. Chief Investment Officer Marie Berggren noted in a recent presentation to the Regents that the fiscal year ending June 2008 was the most turbulent since 2002 for the economy and the financial markets, with global equity markets declining 10-15 percent and emerging markets flattening. Marie will be providing an update to the Regents' Committee on Investments in a couple of weeks, which will reflect activity of the last few months, and that will give us a specific sense of how the recent market turmoil has impacted our investments. Even though we know we're being impacted, it's important to view the current market turmoil with a long-term perspective, because markets are constantly rising and falling. For instance, just 12 months ago, we were reporting more than 19 percent in total investment returns for the 2006-2007 fiscal year. People should also keep in mind that we have a well-diversified investment portfolio, which helps to mitigate the impacts of market volatility, and a strong investment team led by seasoned experts who are in close touch with the president, the Regents and me.

Q: Can you provide some specific examples of how UC is being impacted?

A: We're still sorting through what the financial crisis means for us specifically, but one area we can already see impacts in is the UC Retirement Plan. Like other pension funds, such as CalPERS, which recently reported a more than 20 percent decline in assets in the last three months, the UCRP investment portfolio has experienced declines. Since June 2007, UCRP investments have declined over 24 percent, which includes an estimated decline of 19.6 percent for the current fiscal year. And the decline in assets, combined with the fact that UC pays out \$155 million each month in retirement benefits, means that the plan's funded status has gone down. As of June 30, 2007, UCRP was estimated to be nearly 105 percent funded, compared to 103 percent on June 30, 2008, and as of October 8, 2008, UCRP's funded status was estimated to be around 100 percent, using what's called a "smoothed" valuation. This downward funded status trend is why we need to restart contributions -- to help keep UCRP strong. That said, I want to also remind people that UCRP is a defined benefit plan and pension benefits are paid independent of investment performance or funded status.

Q: Shifting to what's going on here in California, what does the current state deficit and this year's final state budget mean in terms of cuts and impacts for UC?

A: In pure numbers, it means we – the Office of the President and the campuses – will have to find ways to make about \$150 million in cuts in order to cope with the state funding shortfall. Campuses will be doing everything they can to keep cuts away from the instructional program, and we at UCOP are taking reductions to help close the gap as well. The governor has just called a special session to look at potential mid-year budget cuts, in light of the continuing problems with the state budget, so it is possible that we will need to make further cuts this year. The good news is that the state's leaders continue to place a high importance on higher education. There also is a bigger, longer-term issue here: It's clear we need to strengthen our sources of revenue in order to continue to grow and deliver quality research, education and patient care, and to compensate our people adequately. President Yudof, the Regents, and the rest of UC's leaders are going to be looking very closely at these issues in the coming weeks and months. We also will be working very hard to be sure that state leaders, and the general public, understand that UC is not merely an expense – it's an ongoing investment in the state's well-being and its future. So much of what makes California great – economically, technologically, medically, culturally, – is either generated by or can be traced to UC. And if California is going to grow its way out of this financial downturn, public higher education is going to have to play a critical role.

Q: Salaries for many employee groups are below market, and staff are disappointed that there won't be raises this year – what can you say about that?

A: We are disappointed too – this is a critical issue for us, and to keeping UC competitive. UC's faculty and staff are among the most dedicated and talented, and they are the heart of the institution – they deserve to be compensated appropriately for their contributions. We had begun to make some progress over

the last few years, but now the state budget situation has slowed our momentum. I think one thing people don't realize is just how much money goes into compensation and benefits. UC's annual payroll is approximately \$9 billion, which is roughly half of the university's total operating budget. And this does not include the more than \$2 billion UC spends each year for employee medical and retirement benefits. So while we recognize the critical importance of market-level wages and benefits for all employees, getting there requires significant resources. Just to give people some sense of magnitude, raising employee salaries systemwide by 5 percent would cost \$400 million. Fortunately, due to a lot of hard work, we've been able to maintain good medical benefits and control health insurance cost increases without cutting benefits – something many other employers have been unable to do. Employees can be assured that President Yudof and the rest of university leadership are very sensitive to the need for adequate compensation for faculty and staff, and we will continue to work hard to try to identify resources to continue to make progress toward that goal.

Q: Any final words?

A: Just to remind people that even though times are difficult financially right now, we will get through them. UC is a strong, resilient institution with a lot of very smart and very talented people. I know that people across the university are continuing to do excellent work in the face of a lot of challenges. That good work is recognized and appreciated – it's inspiring to me, and I feel very lucky to be working with such dedicated and gifted people.

For more information

EVP Lapp/Business Operations:

<http://www.ucop.edu/busops/lappbio.html>

UC's budget, and what's at stake:

<http://www.universityofcalifornia.edu/news/budget>

UC investments:

<http://www.ucop.edu/treasurer/>

UCRP contributions:

http://atyourservice.ucop.edu/news/general/0809-judyboyette_message.html

Senate chair committed to compensation boost

By Donna Hemmila

UC San Francisco professor Mary Croughan, chair of the systemwide Academic Senate, served on the committee to improve faculty compensation. Even in tough budget times, she says, staff and faculty compensation remains a priority for the Academic Senate.

Mary Croughan took over as chair of the universitywide



Academic Senate this fall in the midst of one of the worst budget climates UC has ever faced. The campuses and Office of the President are currently coping with a \$148 million shortfall in state funding. Yet the poor financial outlook hasn't deterred Croughan from pursuing the priorities important to the Academic Senate in maintaining the University of California's high standards of teaching and research.

"One major goal I had for this year was to bring forth an understanding of shared governance with Mark Yudof," said Croughan. "I'm happy to report we have already accomplished that."

One of the most important Senate priorities, she said, is improving faculty and staff compensation. That goal is not so easily attained.

"It's a very difficult financial situation for the University of California and for the state of California," she said. "I think we're going to have serious financial issues for the next two years. Having said that, there still has to be a commitment to raising compensation."

In October 2007, UC Regents approved a four-year plan to adjust faculty salary scales to bring them in line with those at comparable institutions. The increases went into effect last year, but the budget deficit means there are no staff salary increases this year. Croughan, who served on the President's Work Group on Faculty Salary Scales, would like to see the increases that should have been paid in 2008 be made up when the budget situation improves. UC loses quality faculty to universities that can pay higher salaries, she said, and the same thing happens with promising graduate students.

Another top Senate goal is to increase the ratio of graduate students in the UC system and to increase support for them. Loan forgiveness programs and housing allowances, she said, would help to keep outstanding students from leaving the UC system for universities that offer more financial support.

Changing the UC freshman admissions requirements is another major Senate initiative, one faculty members have been working on for four years and that the Regents have been considering. The goal of the admissions reforms is to give more qualified students a chance to enroll at UC, she said.

"These are difficult times," Croughan said. "I look forward to working with the president, faculty and others in continuing to sustain the high quality of UC."

Croughan served as the Senate vice chair in 2007-08 and succeeded Michael Brown as chair. She joined the UC San Francisco faculty in 1987 and is professor in residence in the Department of Obstetrics, Gynecology and Reproductive Sciences and in the Department of Epidemiology and Biostatistics.

Visit the Senate Web site for updates on faculty issues.
<http://www.universityofcalifornia.edu/senate/welcome.html>

UC researchers probe for answers



Does it pay to be a maverick? Can hours searching the Internet be good for you? Could there be another reason for eating your veggies? UC researchers are working on the issues you care about.

UC researchers are engaged in studies that promote public health and scientific discovery, further our understanding of the natural world and address important social and public policy issues. Here is just a sample of the current research going on around the UC system.

Do voters like mavericks?

Yes and no. A UC Irvine study found voters view a politician labeled as a maverick for challenging the party line as someone who is trustworthy and honorable. Mavericks often gain respect from those who hold opposing views, but at the same time, mavericks can experience significant backlash from their own party because people basically like those who agree with them. The researchers interviewed UC Irvine students, shoppers at a mall and visitors to the YourMorals.org Web site, created by social psychology professors and graduate students who study morals and politics.

Read more about the maverick study at

http://www.communications.uci.edu/news/release_detail.asp?key=1846.

Can Web surfing be good for you?

Searching the Internet can actually improve brain function in middle-aged and older adults, according to a UCLA study. All those Google searches, it seems, activate the areas of the brain responsible for decision-making and complex reasoning.

Read more about Web searching and brains at

<http://newsroom.ucla.edu/portal/ucla/ucla-study-finds-that-searching-64348.aspx>.

Is treatment more effective than incarceration for nonviolent drug offenders?

A UCLA study of Proposition 36, the 2000 ballot measure that sentences drug offenders to treatment, found that taxpayers saved \$2 in prison costs for every \$1 invested in treatment programs. But participants were more likely to get rearrested. At the same time property crimes rose, violent crime declined in California at a greater rate than the rest of the country.

Read more about the Prop 36 study at

<http://www.universityofcalifornia.edu/news/article/18758>.

Can fruits and veggies cure cancer?

No, but UC Riverside biochemists found that ingesting apigenin, a naturally occurring agent found in vegetables and fruit, improves cancer cells' response to chemotherapy. Apigenin is found in many foods including apples, cherries, grapes, artichokes, basil, nuts and in tea and wine.

Read more about apigenin at <http://newsroom.ucr.edu/cgi-bin/display.cgi?id=1953>.

Why are Yosemite critters moving up?

Shrews, mice, squirrels and other small mammal populations in Yosemite National Park have been moving to cooler, higher ground in response to rising temperatures, according to a UC Berkeley study. Some small mammals in the park have moved to higher elevations while others have reduced their ranges. The rapid population shifts are another global warming danger signal.

Read more about Yosemite mammals at http://berkeley.edu/news/media/releases/2008/10/09_grinnell.shtml.

To keep up on the latest discoveries, visit UC Newsroom.

More News

UC's adds another Nobel laureate

<http://www.universityofcalifornia.edu/nobel>

Read and comment on draft UC Accountability Report

<http://www.universityofcalifornia.edu/accountability>

Review proposed amendments to UC conflict of interest code

<http://www.ucop.edu/ogc/coi/econinterest.html>

UC part of Google Book Search

<http://www.universityofcalifornia.edu/news/article/18850>

Conscientious people live longer

<http://newsroom.ucr.edu/cgi-bin/display.cgi?id=1958>

Delta crisis: UC researchers float peripheral canal

http://www.universityofcalifornia.edu/youruniversity/delta_crisis.html

Read more UC news

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Working at UCOP: Stories for and about Office of the President staff

Lizard inspires UCOP climb

A film crew for a new Discovery Channel show used the Franklin Street building to demonstrate new gecko-inspired climbing technology a UC Santa Barbara alumnus developed from UC Berkeley research.

A film crew for a new Discovery Channel show used the Franklin Street building to demonstrate new gecko-inspired climbing technology a UC Santa Barbara alumnus developed from UC Berkeley research.

When the Discovery Channel's new show "Prototype This!" needed a climactic backdrop for an upcoming episode, it turned to the UC Office of the President. Lizard inspires UCOP climb



After all, what better place to test Gecko Claws – gecko-inspired climbing paddles based on UC Berkeley research and created by a UC Santa Barbara alumnus-led team – than UC's administrative headquarters in Oakland?

With the Broadway entrance of the 1111 Franklin St. office closed Oct. 24, crews filmed climber Lyn Verinsky's attempt to scale the building's five-story concrete wall using "Gecko Claws."

"I'm really nervous," said "Prototype This!" co-host Mike North. "This project has been very near and dear to my heart. I've been putting in 100-hour weeks on it." North received a doctorate in materials science and engineering from UC Santa Barbara, which he said fostered creativity and collaboration.

Nowadays, North collaborates with co-hosts Andrew "Zoz" Brooks (robotics), Joe Grand (electronics) and Terry Sandin (special effects) to use emerging technologies to invent prototypes such as mind-controlled cars, boxing robots or, in this case, Gecko Claws.

For this episode, the team turned to UC Berkeley integrative biology professor Robert Full, who has studied geckos and their amazing mobility. While gecko lizards use claws to scale rough surfaces, they use microscopic toe hairs to climb smooth surfaces, Full discovered.

Applying Full's research – and aided by Stanford University researchers and San Francisco mechanical engineer Arturo Meuniot – the "Prototype This!" team assembled two types of paddles: for smooth surfaces, silicon rubber paddles; for rough surfaces, fish hooks.

Armed with two handheld paddles each containing 1,500 fish hooks – and with a safety rope – Verinsky ascended the UC administrative building’s wall.

Would the paddles, also inspired by the cockroach, work?

Verinsky did slip a couple of times, but she made it to the top. Call her Gecko Woman.

“To make something that works like this is amazing,” North said. “This is looking like a new piece of climbing gear right here.”

The technology could have many applications, including search-and-rescue operations, robots that explore Mars or even uses closer to home.

“Think about the coffee cup that doesn’t slip,” North said. “We could change coffee drinking forever.”

“Prototype This!” airs at 10 p.m. Wednesdays on the Discovery Channel. The Gecko Claws episode date has not yet been set. Visit the show’s Web site for schedule. <http://dsc.discovery.com/tv/prototype-this/prototype-this.htm>

Holiday bake sale benefits charities

The Office of the General Counsel’s annual giving campaign is in its 23rd season. The pre-Thanksgiving bake sale is Nov.26.

The annual UCOP pre-Thanksgiving bake sale will take place Nov. 26 in room 8112, beginning at 9:30 a.m. and continuing until sold out.

Whole cakes, pies, tarts, cookies and other items will be available. There will be drawings for prizes. All proceeds are for the benefit of local charities as part of the UCOP Office of the General Counsel's annual holiday fundraising.

Pre-ordering. Orders will be taken ahead of time for Thanksgiving pies and dinner rolls for pick up at the bake sale. Pies from Nation’s are \$13 each for apple, cherry, pumpkin, berry, custard and no-sugar-added apple; \$14 for banana crème, coconut crème, lemon meringue, chocolate crème, lemon crème, pecan; and \$18 for plain, cherry or pumpkin cheesecakes. Freshly baked dinner rolls from Neldham’s are also for sale: \$6 a dozen for parker house, poppy seed and sesame seed and \$7 a dozen for butter and Swedish rolls.

To pre-order, contact Ann Del Simone at 510 987-9780 or ann.delsimone@ucop.edu no later than noon, Nov. 20.

If you would like to contribute goodies to be on sale, contact Trisha Buresh by phone at 510 987-9934 or trisha.buresh@ucop.edu.

Lawrence Berkeley Lab is hiring

The lab is recruiting for several positions and holding a job fair Saturday, Nov. 8, from noon to 4 p.m. <http://www.lbl.gov/Workplace/jobfair>

Best thing about my job?

Dena Bullard is administrator of the Academic Geriatric Resource Program. "The work that we do here on behalf of the system has a really positive impact on the health and well-being of the citizens of California," she says. "I also like working for the nation's premier university."



Did you know?

UC currently holds 3,546 active U.S. patents

One in six public biotechnology companies nationally – and one in three in California – were founded by a UC scientist.

Among the top-earning commercialized UC inventions are the nicotine patch and the Hepatitis-B vaccine.

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