

Our University

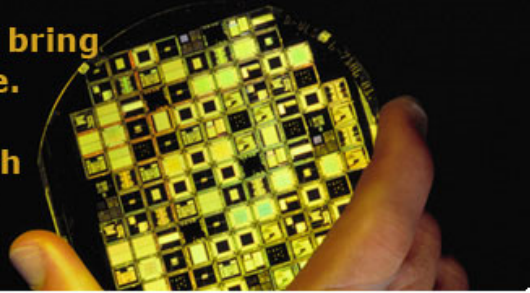
A NEWSLETTER FROM THE UNIVERSITY OF CALIFORNIA PRESIDENT FOR THE UC COMMUNITY



From premise to products

UC's technology transfer efforts bring discoveries into the marketplace.

Where has your campus research been going? [READ MORE.](#)



By Donna Hemmila

When technology entrepreneur Andrew Behar met chemical engineer Yushan Yan it was the start of something big – so big, in fact, that Behar believes he's now on the verge of revolutionizing the clean energy industry.

Yan, a professor of chemical and environmental engineering at UC Riverside, and his student, Zhongwei Chen, have invented a new class of fuel cell catalysts based on platinum nanotubes. Their development reduces the cost of manufacturing fuel cells by two-thirds and makes them 10 times more durable.

In short, they've overcome the two biggest drawbacks to mass marketing hydrogen fuel cells.

"The potential for this could spark a revolution," said Behar. "This is the missing link that could jump-start the hydrogen economy."

The role UC Riverside is playing in the start up of this new company is one that is duplicated over and over through UC technology transfer programs at the campuses and labs. As of June 30, 2008, the University of California had 3,546 active U.S. patents and has the distinction for the last 14 years of having more patents granted than any research university in the country. The systemwide portfolio of inventions, which includes discoveries not yet patented, now totals 8,953, an increase of 8.2 percent over the prior year.

Behar and partner Howdy Kabrins, who introduced him to Yan, have founded a company called Full Cycle Energy Inc. After licensing Yan's technology from the university, the two are raising venture capital to fund the next phase of their startup, which is currently based in Ojai, Calif., where both men live. They plan to open a small plant where they will make the catalysts to sell to fuel cell manufacturers. Those fuel cells could potentially power automobiles, generators and other devices.

"We see this as being a major jump-start to the economy as well and something that could reinvigorate the American automobile industry," said Behar, who is CEO and president of Full Cycle Energy.

One of the main goals of UC's technology transfer programs is to get cutting-edge discoveries into the marketplace. UC researchers look to industry partners to commercialize their inventions, making the benefits available to the public. These industry partnerships enable the researchers to continue their work and to train the students who will become the inventors of the future.

"UC has one of the highest royalty incomes among U.S. research universities. We realize about \$120 million a year in income," said William Tucker, executive director of UC Research Administration and Technology Transfer.

A portion of the royalty income, 35 percent, is divided among the researchers responsible for the discovery, and 15 percent supports further research at the campus or lab. The other 50 percent is divided between UC's general fund and the chancellors to support research and education on their campuses.

"But money is not the reason we do it," said Tucker.

From its earliest beginnings, UC has played a crucial role in bolstering the state's economy, creating jobs and enhancing the health and quality of life of all Californians.

The state's booming agriculture industry thrives on UC innovations in plant genetics, produce processing and packaging and pest control. UC discoveries are credited with helping to launch the computer and biotech industries. In California alone, 1,100 biotech and R&D companies have benefited from UC discoveries.

Today, UC researchers throughout the system are fueling the development of the new green tech industry with innovations in sustainability, alternative energy, solar and wind power and transportation fuels.

At UC Berkeley, for example, eight of the 14 startup companies that the campus licensed technology to in the 2008 fiscal year are considered green tech companies.

At the same time UC is inspiring these new industries, its researchers continue to offer innovations in health care, telecommunications, Internet technology, construction and transportation.

Here are just a few examples of recent technology transfers that are improving the work of existing companies or founding new ones.

Pond power. Algae, the green scummy stuff that grows in water, is considered one of the most promising feedstocks for manufacturing second-generation biodiesel fuels. With a high oil content, algae grows quickly in salt and fresh water and does not compete with food crop production. Alameda-based Aurora BioFuels Inc. is licensing technology that **UC Berkeley** microbial biologist Anastasios Melis and colleagues developed for cost-efficient, production of biofuels from genetically modified microalgae. In the world of biofuel research, experts have recently come to appreciate the significance of the two guiding principles that Melis has been pursuing: biofuel generation directly from the photosynthesis of microorganisms and spontaneous product separation from the biomass. Ecoprene and International Energy Corp. have options to commercialize other biofuel technologies the Melis lab has developed.

Let there be light. The California Lighting Technology Center, directed by Michael Siminovitch at **UC Davis**, has licensed inventions that cut the cost and increase the reliability of so-called daylight harvesting systems. These systems adjust indoor lighting to match available daylight in a home or commercial building. WattStopper/Legrand of Santa Clara and Axis Technologies Inc. of Lincoln, Neb., are commercializing the inventions. The researchers developed a tool that allows the light harvesting system to automatically calibrate itself continuously. Their technology uses two light sensors rather than one to get more reliable light measurements, and the photo sensors can read light from an angle not just head-on.

High-speed infection detection. Infectious disease researcher Philip Felgner, from **UC Irvine's** School of Medicine, has developed a rapid method for analysis of immune response to disease antigens. The technology is used for vaccine and diagnostic test development. Antigen Discovery Inc. in Irvine, which Felgner founded, created a microarray that was recently used to identify a possible alternative smallpox vaccine that is safer than the one currently in use.

Battery breakthrough. Researchers Nitash Balsara, Hany Eitouni, Enrique Gomez and Mohit Singh from the **Lawrence Berkeley National Laboratory** developed nanostructured polymer electrolyte, a material designed to use in

rechargeable lithium batteries. Berkeley-based Seeo Inc. licensed the technology and is developing batteries that could be used in cell phones, laptops, medical devices and electric and hybrid vehicles. NPE-based batteries are inherently safe because they lack the reactive and flammable organic liquid electrolytes of conventional lithium ion batteries. That characteristic makes them less likely to short out or explode, and they last longer than the traditional lithium battery.

Homeland security. Portable systems developed at **Lawrence Livermore National Laboratory** can detect the presence of nuclear material as small as a grain of sand being transported on highways, ships and through airports. Willmington, Mass.-based Textron Defense Systems Corp. licensed the technology from the lab to develop a fleet of anti-terrorism SUVs for the state of New Jersey. The RadTrucks are part of the New Jersey Office of Homeland Security's highway monitoring system.

Dialysis to go. Kidney disease patients undergoing dialysis face a life imprisoned by their treatment. Several times a week, they must travel to a hospital or clinic where they are hooked up to a machine that extracts their blood, cleanses it of toxins and pumps it back – a process that typically takes four hours. Martin Roberts and David B.N. Lee of **UCLA** and the VA Greater Los Angeles Healthcare System invented a portable dialysis device that promises freedom and independence to kidney disease sufferers. AWAK Technologies of Singapore is licensing the technology to manufacture a unit contained in a 6-pound vest. The device continuously cleanses the blood, mimicking the way a normal kidney works. Instead of drawing blood from the body, the device uses the patient's abdomen as the dialysis membrane. A modified saline solution flows into the cavity through a surgically implanted catheter. The solution removes waste normally excreted in urine from the blood vessels. The solution returns to the wearable unit for cleansing and reuse. The patient can place the vest on a nearby table at night, and it will continue its work. The vest is expected to be available by 2011.

Harnessing the sun. Solar energy pioneer and **UC Merced** physicist Roland Winston has focused on improving the efficiency of solar collectors by using mirrors and nonimaging optics to concentrate more sunlight onto the solar cells. Mountain View-based SolFocus Inc. uses technology Winston developed to produce solar systems for commercial use. The company's solar collectors help power the transmission towers of KGO Radio in San Francisco, and it recently signed a deal with a solar power company in Spain to install its concentrator photovoltaic systems at multiple locations.

How sweet - and savory - it is. Senomyx Inc., a company **UC San Diego** biologist Charles Zuker and Nobel laureate chemist Roger Tsien founded, licenses flavor enhancers the two professors developed. The San Diego-based company develops novel flavor ingredients using proprietary taste receptor technologies. Global food and beverage companies use the flavor enhancers in

their products. The Nestle food company was the first to use the Senomyx savory flavor enhancer to reduce MSG in its products. Other Senomyx customers include Coca-Cola Co. and Campbell Soup Co.

Global health solutions. Napo Pharmaceuticals Inc. develops drugs for markets in both industrialized and developing nations. The South San Francisco-based company is licensing technology related to the cystic fibrosis transmembrane conductance regulator protein inhibitor that Dr. Alan Verkman, professor of medicine and physiology at **UC San Francisco**, developed. Verkman is an authority on CFTR, which is associated with diseases such as cystic fibrosis, polycystic kidney disease and secretory diarrhea. Inhibiting CFTR could provide treatment for these diseases as well as diarrhea associated with HIV/AIDS.

On the battlefield. An award-winning invention from **UC Santa Barbara** chemistry professor Galen Stucky is saving the lives of U.S. combat troops. At the request of the Office of Naval Research, Stucky worked with Connecticut-based Z-Medica Corp. to perfect its QuikClot product. The most common cause of death in a combat injury is the loss of blood. QuikClot, with a zeolite-based substance, promoted instant clotting and sealing of the wound until the injured could be transported to medical facilities. The original product, while effective, could cause second- and third-degree burns around the wound. Stucky discovered an alternative substance that eliminates the heat, enhances the blood-clotting process and fights infections. The latest version of the product is a medical gauze. Z-Medica also markets a civilian version for emergency first-aid uses. The Department of Defense awarded Stucky its Combat Casualty Care Award this year for his discovery.

Personalizing medicine. Biochemists Mark Akeson and David Deamer, co-directors of the Nanopore Laboratory at **UC Santa Cruz**, pioneered the science of using protein nanopores, tiny holes in a cell membrane, to analyze DNA molecules. U.K.-based Oxford Nanopore Technologies Ltd. has licensed technology developed at UC Santa Cruz and Harvard University to further develop applications for this technology in basic scientific research, disease diagnosis and personalized medicine – creating diagnostic and treatment protocols individualized to a patient's genetic makeup. Cheaper and faster genome sequencing will allow physicians to prescribe medications and treatments tailored to an individual, effectively boosting the success of treatment and reducing harmful side effects.

Donna Hemmila is editor of Our University.

Time for budget reality

In a climate of global recession, why is UC asking the state for a 23 percent funding boost? President Mark Yudof explains the reasons and what you can do to fight for our university's future.



You can also read the president's message and watch a video online at <http://www.universityofcalifornia.edu/news/article/19140>

At a time when California faces one of its bleakest economic outlooks, you may wonder why we are presenting state legislators with a 2009-10 budget that asks for a 23 percent funding boost.

Some have called it "pie in the sky." I call it a dose of reality.

And the reality is that while the cost of educating UC students has not gone up dramatically, the state's inflation-adjusted support for those students has declined dramatically – 40 percent since 1990.

We can no longer afford to give the impression that UC can do more and more with less and less public support.

The budget we are putting forth represents the true cost of running the University of California, and maintaining it as an economic engine and a beacon of excellence.

That budget proposal, which Regents approved on Nov. 20, asks the state to provide \$694 million more than the roughly \$3 billion in funding we received this year.

These are the dollars we need to maintain the high quality of education and research that many of you have dedicated your life's work to building and sustaining.

What are the consequences if we don't get it? The Regents have made it clear that curtailed freshman enrollments in fall 2009 and increased student fees are among the things we would need to explore.

And clearly the consequences of continued underfunding would extend well beyond that. Our campuses are already seeing cuts to a range of programs and services, as several chancellors told the Regents last month.

The final 2008-09 state budget contained no money for enrollment growth. We now have about 10,000 more students than the state has given us money to educate. Our budget request asks for funds for both last year's 2.5 percent unfunded student growth and 2.5 percent growth in 2009-10.

We are asking our lawmakers to provide funding equal to a 9.4 percent student fee increase – roughly \$110 million – so we can avoid raising fees.

The proposed budget also asks for money to fund badly needed staff and faculty raises, increased health benefit costs and funding to continue closing the faculty salary gap.

We're not asking for a blank check. Like most California households, we have tightened our belt and are making daily progress in cutting costs, reducing redundant administrative tasks and downsizing the structure of our central administration at the Office of the President.

We have launched a major accountability initiative giving any policy-maker, any student, any parent, any California taxpayer the ability to see for themselves how we measure up to the high standards we have set for this institution. And we will continue to improve in both achieving cost efficiencies and demonstrating the return on the public's investment in UC.

We don't come to the table empty-handed. The University of California and its partners in public higher education are a major driver of economic activity in this state. Every California industry, from agriculture to technology to medicine, relies on UC innovations and partnerships to stay competitive in the global economy. We create jobs, and we are training the work force of the future. An investment in human capital is one of the best economic stimulants California could provide to lift us out of this recession.

I don't deny that our situation is serious. But the gravity of the challenges should galvanize all of us into action.

What's next? In the coming weeks, I will be deploying my best skills to present our case to the governor and state lawmakers. I will be joining my counterparts in the California State University and California Community Colleges systems to alert the public to the drastic cuts public education is facing. And we will be working hard to tell the story of UC's contributions to the quality of life and economic development of California.

I need your support in these efforts. Who better to tell the UC story than our own faculty and staff? You are the ones who see both our struggles and our triumphs up close. You are the ones our students and their families rely on to fulfill their dreams of attaining a quality education. You are the ones who built this university.

In the coming weeks, you can make a difference. Talk to your families, your neighbors, the members of your congregations and community groups and your legislators. Remind them of the important mission UC has before it and the role we can play to get California back on its feet.

Together we can fight for the support our university needs and deserves.

At this time of year I would especially like to thank all of you for your commitment to the university and to wish you and your families a wonderful holiday season.

Sincerely,
Mark G. Yudof

Transcript of video

I think it's very important to convey our message to the people of California and I think they're the ultimate deciders, to use a phrase.

One message, of course, is that we do a heck of a job educating your sons and daughters and I think everyone really understands that. But, the truth is, in a state of 37, 38 million people, a relatively small proportion of the population is directly affected by the University in the sense that they work at the University, they get a paycheck, they have a member of the family there.

So we need to say, if you're interested in climate change and you're worried about it, we do that research. If you have a chronic disease, there are people working on that â€” at UCLA, at San Francisco, at Davis â€” to make your quality of life, your longevity, to improve all of that. If you're interested in the arts, our professors are the people leading the charge in terms of the humanities and the arts.

So we have to get across the message that even if you're not a direct beneficiary, if the University of California suffers, you will suffer. The jobs won't be created, the culture won't be as strong, the problems you're worried about â€” fossil fuel, carbon footprint, all the rest of that â€” the University of California helps Californians solve their pressing problems and if we're to get out of this current downturn, it's not going to occur exclusively because we've built more dams or highways or levees, as important as that may be. We're going to get out of it because we've built the infrastructure on our campuses, we've educated young people, they went out, they created companies, they had great ideas, they've created product lines, they did things that most of us can't even imagine and that's what's going to bring us out.

That's the difference between a developing country that does not have that sort of workforce and is struggling to make ends meet and the whole history of the University of California in the state of California.

So, what I'm trying to do is to say you have a great interest in how robust we are at the University of California, and that you should think twice before putting us on the chopping block and indeed we need more resources if we're to carry forward. And also to say we're going to have to think very hard about the way that we deliver our services and what it costs.

This will be a traumatic year. I apologize to the employees for that. We will fight for our budget, but it looks pretty grim when the state's \$15 billion or more short. It's sort of hard for them to come up with another billion. We will explore other avenues, like federal assistance and so forth. But it's not going to be easy.

And I would have the same message to the students. There are some stark choices. The fees probably will go up; I don't know how much, but it's probable. If the fees don't go up, then their education will suffer – there will be fewer sections of basic courses, we will not be filling faculty vacancies, there will be fewer services. There is no constant stage, there's no freeze frame of higher education that you could subtract through the sources and say, by the way, everything will be just like it was yesterday. I wish it were true, but it's not.

My biggest fear is that there are too many people who think of us as just another hungry mouth to feed. Too many people say you're just one more employer. But what we do really educates the next generation to do the great things that make California what it is today. So I would argue that we need to make that distinction. There really is a difference. We're not a garden variety type of enterprise, we're not a for-profit enterprise, we're an enterprise which is very closely associated with the future trajectory of the state of California. And it's my job to try to push that and push that.

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 donna.hemmila@ucop.edu your question, 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!

Ask it! – Big Bang and a little mold

Q. *"I don't know much about the Big Bang Theory, but it's my understanding that the universe started by some large explosion. What kind of chemicals would have been involved, and how did these chemicals originate in the first place?"*

A. Nobody knows the source of the energy for the explosion, but it was far too large to be chemical or nuclear. Best guess: The origin was in gravitational energy – energy of motion stolen from the energy of gravitational attraction. But it may have been something else – a great repulsion of space itself, with the expansion caused by an early form of dark energy.

So the real answer is: We don't know the source of the energy. In fact, most physicists even think that it is misleading to think of the Big Bang as an explosion of matter. According to the current relativity theory, it was (and still is) space itself that expands – and as space gets large, the distance between galaxies naturally

gets larger. The size of galaxies, stars, and atoms does not expand, or we wouldn't notice the change in size of space.

Physicists speculate that the real meaning of the Big Bang was that it was the creation of space itself. Prior to the Bang, no space existed – and no matter within space either. But then again, maybe time also started with the Big Bang – so there was no "prior." These ideas are fun to think about; physicists love to do that; and – if you are worried that you don't understand them – I assure you that neither does anyone else, not really.

Richard Muller is a UC Berkeley professor of physics and the author of *Physics for Future Presidents* (Norton 2008). The book is based on the lectures for his popular class of the same name, which can be seen on YouTube.

http://www.youtube.com/view_play_list?p=095393D5B42B2266

Q. If I found mold on a piece of food, is it safe to break, or cut off the moldy piece and eat the rest?

A. The answer to this question depends upon the food. For bread the short answer is: Throw it away. The mold that you see on the surface of the bread is only a small part of what is there, much of the growth will be invisible. The bread is unlikely to taste very good, and molds can cause allergic reactions and sometimes respiratory problems. Moldy bread is avoidable. Bread freezes very well and thaws rapidly. Store your bread in the freezer, keep out what you can use in a couple of days, and you will never have a problem with molds.

For more information on handling molds you find on other foods, the USDA has an excellent online reference: www.fsis.usda.gov/pdf/molds_on_food.pdf

Linda Harris is associate director of the Western Institute for Food Safety and Security at UC Davis and a cooperative extension specialist in microbial food safety.

People

Clean and green

Custodians at UC Santa Barbara recently won an award for their efforts to keep their campus sparkling clean and environmentally friendly. The recognition means a lot, says their boss Byron Sandoval, who started his university career 21 years ago as a custodian.



By Donna Hemmila

Custodians at UC Santa Barbara have found a way to keep their campus gleaming clean and green.

Their efforts to use environmentally friendly cleaning methods were recognized with the Grand Award in a contest American School & University magazine sponsored with the Green Cleaning Network and the Healthy Schools Campaign. The campus will be recognized in the magazine's December edition.

The custodians began exploring environmentally safer cleaning products in 2002 when they went to their product supplier and asked for green-certified alternatives to the harsh chemicals they had been using, said Byron Sandoval, superintendent of custodial services.

"We put the pressure to them to come up with Green Seal certified products," he said.

By 2004, the campus was able to implement its green cleaning program. Not only are green products better for the environment, but they also improve indoor air quality and are better for the workers' health. The products cost roughly the same as the old products, Sandoval said, and are worth the extra effort.

"The green chemicals aren't as strong, so you do have to work a little harder," he said.

When custodians tried the new floor-polishing compound, he said, they were concerned because it didn't leave the floors shiny like the old stuff. They went back to their supplier and asked for shine.

Three months later the supplier came up with a green product with shine. "They said, 'We don't even have a name for it.' And we said, 'How about Verde, that's green in Spanish.'"

Sandoval, a native of Guatemala, started working on campus 21 years ago as a custodian. He worked his way up to various managing jobs and is now superintendent of the custodians. So he appreciates what this award means to his staff.

"Most of our people work at night," he said. "The building occupants don't get a chance to see them. I'm sure they appreciate what they do. Having something like this - being on the news and having the chancellor congratulate us - I pass that on to the custodians. I tell them, 'Look, all your hard work pays off.' That really pulls them up. They're great workers."

Featured Campus: UC San Francisco

The Center for AIDS Prevention Studies has researchers working in 41 countries. Read more about UCSF's Aids Research Institute.

When UCSF's Center for AIDS Prevention Studies (CAPS) was established in 1986, the landscape of HIV/AIDS prevention work was very different. The first cases had only been identified five years earlier; the number of researchers working on prevention was scant.

Today, CAPS – a program of UCSF's AIDS Research Institute (ARI) – comprises the largest group of HIV prevention researchers in the world. The program's 60 investigators have pioneered studies on the epidemiological and behavioral aspects of HIV/AIDS in at-risk communities in more than 41 countries, representing a majority of the 75 countries in which the ARI as a whole has projects.

CAPS is known throughout the world for the innovative and fruitful collaborations it creates and supports among universities and government, community-based and private agencies.

TAPS Taps Promising Researchers

With the establishment of its Trainees in AIDS Prevention Studies (TAPS) fellowship program in 1988, CAPS also became a global leader in training HIV prevention researchers. Over the last 20 years, TAPS has graduated more than 81 scientists who now work in leadership positions in a wide variety of institutions, including the CDC, international public health organizations, local health departments and universities.

"It's thrilling to see CAPS at the forefront of HIV prevention work," says Dr. Susan Kegeles, a CAPS co-director. "We remain a strong group despite the AIDS funding difficulties of recent years. We continue to train and develop researchers who are conducting research that has an impact on the AIDS pandemic. Many of our trainees have stayed with us and have developed CAPS into the outstanding research group that it is today."

TAPS fellows all focus on AIDS prevention, and their areas of expertise and interest vary greatly. But some of the most innovative work at CAPS and TAPS has focused on men who have sex with men (MSM).

CAPS was founded at the "AIDS epicenter," with its first focus on the group at greatest HIV risk: gay and bisexual men. It was logical to center the early research on MSM domestically, where CAPS continues to conduct a great deal of its work. Dr. Kegeles's HIV prevention program for young gay/bisexual men known as Mpowerment, for instance, has been implemented by at least 125 organizations so far in the U.S., and independent researchers identified it as the most cost-efficient approach to HIV prevention in the U.S.

MSM throughout the world continue to be at very high risk for HIV – a fact that was emphasized at the most recent International AIDS Conference in Mexico last August. Yet, there continues to be little research focused on them. Both CAPS and TAPS meet the challenge to conduct such work, as illustrated by the three individuals profiled here.

Kyung-Hee Choi, PhD, MPH

An early TAPS fellow (she graduated in 1993), Dr. Choi is now a professor with CAPS. Over the last 18 years, she has focused on three areas of research in her work: MSM in China, use of the female condom among ethnically diverse populations in the United States, and Asian and Pacific Islander gay men in the U.S.

As part of that latter work, she developed the only evidence-based HIV prevention intervention yet in existence for U.S. Asian–Pacific Islander gay men.

In 2000, Dr. Choi started her work with MSM in China, where homosexuality is not illegal but is highly stigmatized. "Homosexuality has long been considered a psychiatric disorder," Dr. Choi explains, "and has been a source of great shame among Chinese gay men. These men are expected to marry and have families. And if there's only one son – as can happen with the one-child policy – that expectation is even higher."

Even eight years ago, Dr. Choi says, MSM in China were nervous about her working with the Chinese government. Today, she notes, "the Chinese government is doing a lot of good work on HIV prevention," but there is potential for the rapid expansion of the epidemic among MSM, in part because many MSM engage in high-risk sexual behaviors.

Her most recent research has been on the relationship between homophobia, financial hardship, sexual partner concurrency and unprotected sex among MSM in Shanghai. In 2006-2007, she recruited MSM volunteers to work as peer educators to disseminate HIV prevention information to MSM in that city.

"We followed up three months later and found that the number of MSM engaging in risky sex had dropped, while their knowledge about HIV had increased, and their attitude had improved," she says. "I have benefited from TAPS in a number of ways," she adds, including having the opportunity to get her Master's in Public Health (all TAPS fellows are required to complete an MPH if they don't already have one) and working under mentors who helped her write grants and network with international scholars.

Tim Lane, PhD, MPH

Tim Lane came to TAPS by an unusual route. His doctorate in history had focused on the role of traditional healers in resolving conflict in African villages. But while he was studying and working in South Africa in the 1990s, he was struck by the silence around HIV in many rural communities – as well as the challenges this posed to HIV prevention programs.

On a trip to South Africa that he took after completing his first year of TAPS in 2003, he became interested in working with one of the most hidden of African populations: men who have sex with men.

"At the time, no one was doing any work with MSM in Africa," Lane says. "In fact, many people thought homosexuality didn't exist in Africa or that it wasn't relevant to a generalized, heterosexual epidemic. But, as it turns out, there are many MSM in South Africa, although stigma against homosexuality requires many of them to keep their identities and behaviors hidden, especially in the townships. It is an epidemiological problem, and it creates a huge challenge to HIV research and prevention efforts."

Lane's current research focuses on the HIV prevention needs of lower-income township MSM in Soweto. This is a population that is very vulnerable to HIV, but whose culture and the challenges they face have barely been studied. Specifically, Lane's research has used both ethnography and behavioral surveys to better understand township MSM's beliefs about their sexual identities and behaviors and the role of alcohol and drugs in their communities, as well as their current HIV risk reduction knowledge and practices and their access to health services.

During 2008, he completed the first-ever study to assess HIV prevalence in Soweto's MSM population. Lane notes that as a white American, establishing rapport with this population could be difficult. But his years studying and working in South Africa made it easier for him to communicate with township MSM. Being gay himself also helped.

"Just as I have questions about their lives, they have questions about my life as a gay man in the United States," he says. "And I think researchers should share that kind of information. We can't keep people under a microscope."

For Lane, the TAPS experience has been "really quite amazing," because it "brings people from diverse disciplines together to think about HIV," he says. "In my cohort of fellows alone we had an MD, a social psychologist, a clinical psychologist, and me – a historian with training in epidemiology. This provides an incredible opportunity for learning how other people think about HIV and health, as well as insights during the grant and article review process. It's a good intellectual community."

Erin Wilson, DrPH

A second-year fellow currently in TAPS, Dr. Wilson is assessing HIV risk in Nepal among MSM, which includes gay- and non-gay-identified men; and among transgender women.

Her doctoral research focused on HIV risk behavior of male-to-female transgender youth, which resulted in the funding of three intervention projects (two in Los Angeles and one in Chicago).

She'd long known about CAPS, Wilson says, "because it's the preeminent organization for HIV research. And I've always loved the idea of being there. So as soon as I finished my public health doctorate, I applied for TAPS because I wanted training to conduct effective research with marginalized communities."

Now, she notes, she's thriving in the "collaborative environment" of the TAPS/CAPS programs. "As soon as we started our fellowships, my group had other CAPS researchers reaching out to us," she says. "I've never seen anything like that."

The young researcher's interest turned to Nepal because her husband's parents lived and worked there for a number of years. After applying for a small, innovative pilot grant, Dr. Wilson went to Nepal – with her husband and three-month-old baby in tow – to study MSM, one of the groups at risk for HIV in that country.

Only one organization, the Blue Diamond Society, works on HIV issues in Nepal, where homosexual behavior is highly stigmatized and often results in violence against MSM. Despite her commitment to the issue, when Dr. Wilson first met with Blue Diamond staff, "I felt very much like an outsider," she says. "But when I went back with my husband and baby, they warmed up to us. They ended up inviting us to many of their community events. I think bringing a child into the field is very disarming and actually helps establish relationships."

While the violence and stigma surrounding homosexuality still exist in Nepal, Dr. Wilson sees hopes for the lesbian, gay, bisexual, transgender and intersex communities in that country. The Nepalese government altered its constitution in December 2007 to include protections for a "third gender," inclusive of all gender and sexual minorities. And the Blue Diamond Society continues to advocate for furthering the rights of the LGBT community.

"They are very brave and very committed to human rights," Dr. Wilson says. "It's very inspiring."

The young researcher aspires to follow Dr. Choi's and Dr. Lane's path and become a faculty member at CAPS, as well as develop an HIV prevention approach for Nepalese MSM.

Systemwide News

Freshman eligibility changes proposed

UC Regents will consider in early 2009 a proposal to reform the admissions process. Faculty proposed changes to give more students a chance to compete for a spot at a UC campus. Changes would take effect in 2012.



By Ricardo Vazquez

A proposal to reform UC's freshman admission process would increase the pool of high-achieving students who can compete for a spot through a full and comprehensive review of their applications.

UC faculty first brought forth the need for changing admissions criteria more than four years ago.

"In the public's mind when they think about the University of California, they think of it as an engine of hope and opportunity," former Academic Senate Chair Michael Brown said in an October presentation to the Regents. "That's how I think of UC, and I firmly believe that this proposal opens the door for more California young people to have that opportunity."

Under the version of the proposal UC President Mark Yudof is expected to recommend to the Regents in February, all students would still be expected to complete a minimum of 15 college preparatory courses and earn at least a 3.0 GPA to be eligible for admission, as UC currently requires. Also, all applicants would still be required to take either the SAT Reasoning Test or the ACT with Writing, but they would no longer be required to take two SAT Subject Tests.

California high school seniors who meet these requirements would be entitled to a full and comprehensive review of their applications at each UC campus to which they apply.

Among this group, students who fall in the top 9 percent of all high school graduates statewide, based on their ACT or SAT test scores and GPA in UC-approved courses, would be guaranteed admission to at least one campus in the system, as would those who rank in the top 9 percent of their own high school graduating class.

The proposal, which would take effect for the fall 2012 entering class, aligns UC's test requirements more closely with those of other public universities. UC is the only public higher education system in the nation that currently requires SAT Subject Tests. Still, Subject Tests could be recommended for some majors at some campuses.

UC's faculty proposed the elimination of the SAT Subject-Tests requirement after extensive studies found that the requirement that they be taken – as distinct from performance on the tests themselves – constitutes a barrier that has made otherwise high-performing students invisible to UC.

It is currently impossible for a student to become eligible without taking two SAT Subject Tests in two different subject areas. As a result, UC now grants admission eligibility to some students with lower GPAs and ACT/SAT scores at the expense of students with higher grades and test scores, simply for the technical reason that these higher-scoring students did not take the SAT Subject Tests.

The proposed changes send a clear message to California high school students that if they work hard, take challenging courses and do well, they will get to make their case that they have what it takes to succeed at UC. And the changes will continue to emphasize academic achievement as the primary criterion for UC admission.

Ricardo Vazquez is a member of the UCOP Strategic Communications staff.

UC partners with Armenian university

The American University of Armenia hopes its new academic center will further strengthen its ties to UC, whose academic leaders helped launch the graduate school after a 1988 earthquake.



By Donna Hemmila

The American University of Armenia doubled its enrollment capacity with the November dedication of a new academic building. Now supporters are hoping to strengthen connections with University of California faculty and students. Those connections run deep. Without UC's two decades of assistance, the university might not exist.

"At the founding of the AUA, the affiliation with UC gave the assurance for a few supporting organizations and individuals that our university was being provided with advice and oversight from a major university system in the U.S.," said Haroutune Armenian, president of the American University in Armenia.

His university still depends on UC expertise to develop academic and administrative procedures, he said.

That working relationship began in the aftermath of Armenia's devastating 1988 earthquake. Striking on a frigid Dec. 7, the quake wrought massive destruction as high-rise buildings, schools, hospitals and factories crumbled in heaps, killing 25,000 people and displacing more than 500,000. UC Berkeley engineering professor Armen Der Kiureghian traveled to Armenia as a member of a U.S. recovery team.

Still a Soviet Republic, Armenia welcomed international humanitarian aid and the expertise of engineers like Der Kiureghian as the tiny country struggled to recover.

"One idea that came up was setting up an American system of higher education," said Der Kiureghian. "I wrote a proposal. At the time there was a thaw in Soviet relations, and people's interest in Armenia was heightened."

Mihran Agbabian, a UC Berkeley engineering alumnus and University of Southern California professor, and Stepan Karamardian, formerly dean of the Graduate School of Management at UC Riverside, joined Der Kiureghian in approaching the Armenian government about founding an American-style graduate-level university. The Armenian General Benevolent Union, an international fraternal organization, agreed to fund it. In 1990, then-UC Provost William Frazer led a fact-finding mission of UC academics and administrators to Armenia. The following year UC Regents approved an affiliation with the American University of Armenia in the capital city of Yerevan.

The university opened its doors on Sept. 21, 1991, the same day Armenia declared its independence. Agbabian became its first president and Der Kiureghian the first dean of the College of Engineering, fulfilling those duties via fax, e-mail and three visits per year. UC administrators and faculty have continued to serve on the advisory board, and Armenian, the university's president, is a professor in residence at UCLA's School of Public Health.

The university has 275 students enrolled in master's programs in engineering, English, public health, law, political science and international affairs and business and management. In addition, the university offers extension courses. All classes are taught in English. The Western Association of Schools and Colleges accredits the university, which now has about 1,500 alumni.

"The graduates are really agents of change," said Der Kiureghian. "They are intermediaries between the country and global companies. The university has been a real model for the region."

Although the university is not part of the UC Education Abroad Program, students can attend the university on their own. In summer 2009, the university is offering a special four-week summer session with courses in human rights, global security, health care and other topics. The Armenian General Benevolent Union is offering scholarships for students of Armenian descent, an opportunity Der Kiureghian is hoping UC students will take advantage of.

Der Kiureghian, an ethnic Armenian from Iran, said visiting the country provided a valuable experience to learn about his culture and heritage.

There are also opportunities for visiting research scholars and faculty. For more information contact, Bruce Janigian, vice president development and government relations, at bruce@janigian.com.

More News

Gates Foundation gives grant for School of Global Health
<http://www.universityofcalifornia.edu/news/article/19077>

UC to reopen education abroad program in Israel
<http://www.universityofcalifornia.edu/news/article/19046>

President Yudof statement on UCOP Voluntary Separation Plan
<http://www.universityofcalifornia.edu/news/article/19081>

UC builds new online high school courses
<http://www.universityofcalifornia.edu/news/article/18989>

UC San Francisco chancellor search advisory committee named
<http://www.universityofcalifornia.edu/news/article/19117>

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

UCOP program lets employees stretch their skills

Twenty staff members from the Office of the President just completed a yearlong training program to develop job skills and



to gain experience outside their own departments.
By Donna Hemmila

The first participants in the UC Office of the President's Career Development Program had an opportunity to both enhance their career skills and contribute to important university projects.

The 20 participants, who graduated in a Nov. 13 ceremony, completed a yearlong training program that gave each a chance to work for a UC client on a project outside the comfort zones of their regular jobs.

That's how Gregory Sykes, a coordinator of compensation and benefits in Academic Advancement, found himself developing a wiki for UC's participation in the Year of Science 2009. Several science departments across the UC system are participating in this national initiative from the Coalition on the Public Understanding of Science. The wiki gives those UC participants a way to collaborate electronically.

"I've always had to know various aspects of technology for my job," said Sykes. "But experimenting with putting together an interactive tool was something new. "

In addition to working on their projects, the participants attended workshops in interviewing skills, positive politics in the workplace, verbal and written presentation skills, project management and other career-building techniques.

Sykes said the chance to work with other OP and systemwide employees outside his department was an inspiring experience that helped him build good contacts.

"Many skeptics believed that during the current climate of uncertainty and change at UCOP, it was not the best time to cultivate and train employees since UCOP could not give assurances of continued future employment," said Human Resource and Benefits career counselor Mojdeh Rezaee, who directed the training program. "The program became their anchor by providing them with information from experts, an open forum to discuss current issues facing UCOP and skills to promote creativity and build a professional image."

Senior management selected the participants from a pool of applicants in October 2007. Rezaee said there are plans to hold another training program in 2010.

"It's kind of strange it happened during this whole restructuring when we're all applying for jobs," said Sandra Wulff, a program coordinator in the Office of Research. "I think this was perfect timing. I feel more prepared. All the skills, personality, and values assessments that we did really helped me to get to know myself and have been invaluable to me in focusing my current job search on what I really love to do and what I'm good at."

Wulff and three teammates worked on planning for the proposed School of Global Health, which would be UC's first systemwide, multicampus school. Wulff worked on a global health workforce analysis to assess the interest among students and the need for global health training.

"I really think this is one of the things I will look back on as a watershed moment in my career, Wulff said.

Here is a summary of the Career Development Program projects, sponsors and team members.

Year of Science 2009

Sponsors: Kamlesh Asotra, biomedical sciences research administrator, Tobacco-Related Disease Research Program; Judith Fitzpatrick, social behavioral research and dissemination, California HIV/AIDS Research Program

Participants: Kimberly Adkinson, Jayne Dickson, Gregory Sykes, Lena Zentall

Project: Developed Web site, wiki, event planning and statewide communication strategies to promote UC's scientific research.

School of Global Health

Sponsors: Ellen Switkes, planning coordinator, School of Global Health; Sheila Moore Andrus, interim academic programs administrator, UCSF Global Health Sciences; Selma Omer, postdoctoral fellow, UCSF Global Health Sciences; Michael Wilkes, professor of medicine and director of Global Health, UC Davis

Participants: Charlene Hughes, Dragana Nikolajevic, Joan Tellinghuisen, Sandra Wulff

Project: Development of several sections of the school proposal for presentation to The Regents and global health workforce analysis of the California-based academic, nonprofit and private sector organizations working in global health.

MICRO Project

Sponsor: Cathie Magowan, director of Science and Technology Research

Participants: Charles Barragan, Terri Campbell, Todd Giedt, Mark Cruz

Project: Survey participants in the UCOP Microelectronics Innovation and Computer Research Opportunities program who received grants over last 20 years. Information will be used as part of the program's review.

MESA Alumni Project

Sponsor: Oscar Porter, executive director, MESA

Participants: Nina Costales, Susanne Kauer, Jane Lee

Project: The Mathematics, Engineering, Science Achievement program encourages disadvantaged high school students to study math and science. The team developed a survey instrument, interviewed alumni and created 12 alumni profiles to demonstrate the program's impact in human terms for a publication targeted to corporate sponsors and other constituents.

Information Security Training

Sponsor: Jon Good, information security officer, Information Resources and Communication

Participant: Connie Geraghty

Project: Developed an online electronic-safety training program that will be incorporated into new employee orientations and other staff trainings aimed at creating a more secure electronic environment for UCOP business operations.

Academic Personnel Description of Services Codes

Sponsor: Janet Lockwood, associate director, Academic Personnel

Participant: Bea Deering

Project: Designed a systemwide Web-based DOS code database to increase consistency in payroll data for all campus payroll users.

For more information about the program, the projects and participants visit the Career Development Program Web site.

http://hrop.ucop.edu/career_dev/welcome.html

UCOP cuts budget more than \$60 million

The revised Office of the President budget includes an additional \$8.7 million in savings during the first four months of the fiscal year.

Cost efficiencies and staff downsizing at the UC Office of the President reduced its current operating budget \$60.4 million, a 21 percent savings over the prior year, along with an FTE reduction of 500, or 27 percent.

Those reductions include an additional \$8.7 million savings and 97 FTE reductions during the first four months of the fiscal year.

The revised UCOP 2008-09 budget, presented to Regents in November, now totals \$230.1 million.

"This is a significant achievement made possible by the dedication and hard work of the staff at the Office of the President," Executive Vice President of Business Operations Katie Lapp told Regents. "Many participated in helping to design new consolidated units, and many more have shouldered additional responsibilities as the work force has been reduced. It has been a painful and difficult time, yet the staff has continued to fulfill the mission of the university. This must be acknowledged."

The restructuring of the Office of the President aims to streamline UC's central administration operations for both cost-savings and work efficiencies. Half of the total savings are due to transfers of programs and functions to campuses.

A portion of the budget cuts came from a voluntary separation program, which is expected to save \$5 million annually. A total of 155 UCOP employees took the buyout.

Additional savings came from not filling vacant nonessential positions, curbing travel and consulting expenditures and consolidating and reorganizing departments in the central administrative offices.

Those efforts will continue along with ongoing reviews of programs and services that could be better delivered through third-party vendors or campuses.

The Office of the President has a goal of reducing its work force by at least another 275 positions and \$25 million by the end of the 2009-10 fiscal year. This would result in a work force reduction of 43 percent, down from a high of 1,874 FTEs in 2007-08 to fewer than 1,100.

What's your favorite holiday movie?

Read what OP staff had to say.

Our University asked a few Office of the President staff to tell us what their favorite holiday movies are and why. Here's what they had to say.

Tricia Buresh, Office of the General Counsel



It's a Wonderful Life

"Because I love Jimmy Stewart, and Donna Reed is one of my favorites. And in the end, it's an uplifting movie."

Jay Valancy, Office of Loan Programs

It's a Wonderful Life

"It's life-affirming. It's not really just a Christmas movie. It's for all religions and all times of the year."

Piet Bereal, Office of the General Counsel

All About Eve

"It's set in winter. It has one of my favorite actresses, Bette Davis. It shows a lot of strong women and strong men. I like it because it's not only funny, but it's a little sad, and it definitely has a message about what friendship means."

Shawn Aguilar, IR&C

The Santa Clause

"It's family-oriented, a nice, wholesome pic."

Steve Pomerantz, IR&C

Scrooged

"Classic Dickens tale with a twist. And I like Carol Kane's part."

Sherry Perocier, Educational Relations

A Christmas Story

"It's one of those movies that you can watch over and over again, and it still makes you smile. I also like Miracle on 34th Street – that one is sentimental. I used to watch that with my mother. It reminds me of her."

Carolyn Carolina, Office of the General Counsel

Miracle on 34th Street

"It gives hope. It's inspirational, and it has a spirituality to it. We can all dream and believe."

Spirit of sharing marks holiday season

UCOP employees spread holiday cheer with gifts for those in need.

The spirit of holiday giving is a long-standing tradition at the UC Office of the President.

For 25 years, the Office of the General Counsel has been celebrating the season by adopting families who otherwise wouldn't have holiday gifts.

This year the group has adopted five families with members ranging from infants to grandparents. Alameda County's Project Helping Hands selects the families and provides lists of items each member needs along with their ages and sizes.

The families the counsel's office adopted this year are asking for items such as shoes, baby clothes and children's toys.

"It's a very heartwarming thing," said Trisha Buresh, a senior legal secretary. "People seem to like it, and they come from other departments to participate. It's not just our office."

OP employees wishing to participate can sign up to provide a gift at the counsel's office on the eighth floor of the Franklin Street building. Gifts must be wrapped and delivered to the office by Dec. 18.

The counsel's office also sponsors the OP pre-Thanksgiving bake sale and raffle, which took in \$2,545 this year. The proceeds were donated to First Place for Youth, an organization that provides housing, jobs and independent living services to foster youth who are aging out of the social services system.

This year, Health Sciences and Services staff collected food items for the Blue Star Moms, a group that sends care packages to troops in Iraq and Afghanistan. OP employees gave enough items to fill 25 boxes to ship overseas, said Andrea Gerstenberger, one of the organizers of the OP collection.

"People were really generous, and the moms are grateful," she said.

Blue Star Moms are part of the national Blue Star Mothers of America, a group founded in World War II to support the troops and returning veterans.

OP employees are also collecting food for the Alameda County Food Bank and toys for the Salvation Army. Look for collection barrels in your building.

Did you know?

In 1927, H.B. Frost developed the Pixie mandarin orange, one of the 40 varieties of fruit to originate at the UC Riverside Citrus Research Center.

In the 1930s, UC Berkeley food scientist William Cruess invented the canned fruit cocktail.

In 1948, now-legendary UC Davis viticulturalist Harold P. Olmo created the perlette green table grape, one of 30 varieties he developed.