PRESIDENT'S REPORT

FROM THE DESK OF JANET NAPOLITANO

I like to think of the University's relationship with its students as a partnership, one that demands we hold ourselves accountable for their success. One segment of our student population where that partnership needs strengthening is among our student veterans.

UC has about 1,300 veterans and 100 active-duty military enrolled systemwide. As more troops return from Afghanistan and Iraq, those numbers will increase. Recently, I invited 10 student veterans, one from each campus, to meet with me in Oakland. I was eager to hear about their experiences at UC and what challenges they face. Their main concerns centered around improving communications about financial aid and student services before they arrive on a campus. They also want staff who provide veteran services to have more training. This was just the first installment of what will be an ongoing dialogue.

After our meeting, I announced the creation of a UC student veteran advisory committee. As an initial first step, the goal is to have the advisory committee organize a systemwide summit. Every UC campus already has a student veteran coordinator. Some campuses have dedicated veteran centers and lounges for networking, socializing and mentoring. With input from the new advisory group, I want to identify the University's best programs and find ways to deploy them on every campus where they are needed to address the unique circumstances of veterans.

A survey the American Council on Education released in December 2013 recorded an average age of 33 for veterans and military members enrolled in four-year universities. The average undergraduate age was 22. The survey also found that student veterans are more likely to be the first in their families to attend college. At UC we take pride in our high rate of first-generation students: 42 percent. Among the student veterans included in the survey, nearly 62 percent were first-generation students. Many have been away from classrooms for a number of years and have families to support.

As a result of those demographic differences, veterans can feel less connected to other students and less likely to participate in student life activities. Transitioning from life in the military can present daunting obstacles, particularly for combat veterans. We can do more to help them overcome these hurdles.

Veterans bring maturity, leadership and a rich diversity to our campuses. They have skills and life experiences that can add a fresh perspective to classroom discussions, and that benefits all our students.

The best way UC can thank veterans for their service to our nation is to provide the resources they need to succeed in higher education.

DID YOU KNOW?

University of California researchers produce an average of nearly five inventions a day.

More than 630 companies have been founded based on UC inventions.

UC startups employ approximately 17,300 people.

Two-thirds of UC startups are in the medical and biotechnology fields.

Since 2005, more than $5 billion in venture capital has been invested in 181 UC startups.

UNIVERSITY OF CALIFORNIA

GEAR GIVEAWAYS PROMOTE SAFETY

UC campuses gave away more than 11,000 lab coats and other protective gear by the end of February to promote safety in research laboratories.

A new universitywide protective equipment policy aimed at preventing workplace injuries will go into effect March 31. The University has ordered more than 93,000 lab coats and eyewear to distribute on all campuses and medical centers.

Recipients use an online laboratory hazard assessment tool to determine what type of equipment is appropriate to their research. Each lab worker is measured, fitted and signed up for free laundry service. The **UC Office of the President** is sponsoring the initial giveaways. **Erike Young**, Enterprise Risk Management deputy and director of Environment, Health and Safety at the UC Office of the President, said UC's purchasing power convinced the manufacturer to design a garment cut for female researchers to ensure a proper fit. Now other universities are ordering the gender-specific coats.

Photo: UC Santa Barbara giveaway/Sonia Fernandez

ALLIANCE AIMS TO DIVERSIFY RANKS OF ACADEMICS

The California Alliance, led by **UC Berkeley**, is launching an effort to attract more underrepresented minority graduate students to postdoctoral and faculty positions among the STEM disciplines.

The new consortium includes **UCLA**, the California Institute of Technology and Stanford University and is funded through a $2.2 million grant from the National Science Foundation. The four universities produce nearly 10 percent of the underrepresented minority Ph.D.s nationwide in science and engineering. While the numbers of minority students in the STEM fields has been slowly inching upward, the percentage in academia hasn't kept pace: 6 percent achieve postdoc positions and 4 percent become faculty. The alliance is training faculty to encourage more minority students to pursue academic careers. While the alliance members often compete for the same students and faculty, they are teaming up to create a supportive community across all four universities. The first annual networking and training retreat will be at Stanford in April.

Photo: UC Berkeley Ph.D.student Sidney Hill/ Michael Barnes

UC REMAINS A TOP PRODUCER OF PEACE CORPS VOLUNTEERS

The Peace Corps ranked six UC campuses among the top 25 colleges and universities that produced the most alumni who volunteered for service in 2013.

UCLA was the top feeder school in California with 67 alumni answering the call to service. UCLA and the Peace Corps share history. The first volunteers for the international service organization were trained at the campus. UCLA placed 6th nationwide in the rankings.

UC Berkeley was 7th with 66 volunteers. Also making the list were **UC San Diego**, 12th with 54 volunteers; **UC Santa Barbara**, 13th with 48; and **UC Davis** and **UC Santa Cruz**, tied at 19th with 41 volunteers each.

UC Berkeley continues to lead the nation with the highest total number of alumni in the Peace Corps. Since the Peace Corps founding in 1961, 3,576 Cal alumni have joined.

Photo: UC San Diego alumnus Dennis Mello in the South Pacific island of Vanuatu/UC San Diego

UC BERKELEY RESEARCH ATTACKS VINEYARD ENEMY

A **UC Berkeley** associate professor of plant and microbial biology has identified genes that govern a plant's response to powdery mildew, a disease that plagues California's grape industry and other commercial crops.

The wind-borne mildew spores can result in crop losses of 30 percent. Growers typically treat vineyards and other susceptible crops with expensive sulfur and fungicides.

Mary Wildermuth, with support from the Bakar Fellows Program, has identified genes in a plant from the mustard family that affect a plant's response to mildew attacks. She is studying whether similar genes in grapes, tomatoes and other crops susceptible to powdery mildew can be targeted to limit mildew growth.

The goal is to breed varieties to limit the genetic mildew-promoting effects and do away with extensive chemical treatments.

Photo: Mary Wildersmith in lab/Peg Skorpinski.

UC MERCED WARMS MONGOLIA WITH SOLAR-THERMAL HEAT

A solar-thermal unit developed at **UC Merced** is being installed on a building at the Mongolia National University.The unit will generate about 3 kilowatts of steam heat for the campus.

Mongolia has one of the coldest winter climates and the world's most polluted air. In the capital city of Ulaanbaatar, home of the university, burning coal and chopped up tires are primary sources of heat, producing unhealthy air quality.

Professor **Roland Winston**, head of the UC Solar Institute based at UC Merced, developed a thermal-solar unit that works without tracking equipment, which can be disrupted by extreme temperatures.

UC Merced Foundation Trustee Bob Angle, a frequent visitor to Mongolia, is funding the project. If it is successful, funding will be pursued for additional units. The Mongolian government is interested in the technology.

Photo: UC Solar researcher Bennett Widyolar in Mongolia/UC Merced

UC IRVINE STUDIES KAVA FOR CANCER CURE

At **UC Irvine**, an associate professor of urology is studying kava as a possible treatment for bladder cancer.

Grown in the South Pacific, the plant's root is prized for its ability to calm nerves, aid sleep and reduce anxiety. **Dr. Xiaolin Zi** is studying whether the flavokawain A compound found in kava can prevent bladder cancer in smokers.

South Pacific Islanders have low incidences of bladder cancer but high rates of heavy smoking, which is linked to the cancer.

Zi's research has shown that kava extracts stop bladder tumor growth in cells and mice.

More than 70,000 cases of bladder cancer are reported annually in the United States with most cases occurring after age 65. Many of the chemotherapy treatments carry significant side effects.

Zi hopes to find a natural remedy. So far, he has seen no evidence of toxicity from the flavokawain A compound.

Photo: Dr. Xiaolin Zi/Steve Zylius

CAMPUS BRIEFS

UC BERKELEY researchers have shown that chronic stress predisposes the brain to mental problems such as anxiety and mood disorders.

UC DAVIS is leading an international research project to improve the crop yield, climate resilience and nutritional value of chickpeas, an important source of income and nutrition in developing countries.

UC IRVINE's Smart Labs program to reduce energy use in campus laboratories helped win a Climate Leadership Award from the Environmental Protection Agency.

UCLA scientists have discovered that Vitamin A may help boost the immune system to fight tuberculosis by teaming up with a specific gene to reduce the level of cholesterol in TB-infected cells, thereby, depriving them of nutrition.

UC MERCED is one of 12 universities chosen to take part in the National Science Foundation's Pathways to Innovation program to integrate entrepreneurship into the education of engineering students.

UC RIVERSIDE has established an endowed chair in Jewish Studies to foster the study of Judaism and support for Jewish students. The appointment of a scholar to the chair is expected by spring.

UC SAN DIEGO climate scientists from the Scripps Institution of Oceanography have discovered that the melting of sea ice in the Artic is diminishing the Earth's reflectivity to a greater degree than previously estimated.

UCSF and Gladstone Institutes scientists have discovered how to transform skin cells into mature, fully functioning liver cells, offering hope for new treatments for liver failure.

UC SANTA BARBARA researchers concluded that cities harbor more biodiversity than previously thought. Their study, encompassing 147 cities around the globe, found that a high number of native plants and animal species persist in urban environments.

UC SANTA CRUZ psychology professor Craig Haney testified before a joint state legislative hearing on public safety about the negative effects of prolonged solitary confinement on California prisoners. No other state isolates so many prisoners for such long periods as California, he told legislators.

NATIONAL LABS

BERKELEY LAB and Harvard University scientists are joining forces to lead more than 100 researchers from the United States, Brazil and Germany in a study of the Amazon Basin. The two-year rainforest field study will examine the influences of pollution, deforestation and other human activities on the region's atmosphere and land systems. Monitoring instruments will continuously measure clouds, aerosols, solar and thermal energy and moisture above and below the surface. In addition, research aircraft will supplement the land measurements. The research began in January and will continue until December 2015.

LIVERMORE LAB researchers have determined that volcanic eruptions in the early part of the 21st century cooled the Earth, partially offsetting the warming trends greenhouse gases produce. If the eruptions are large enough to inject sulfur dioxide into the stratosphere, tiny droplets of sulfuric acid are formed. These reflect incoming sunlight back into space, cooling the Earth's surface and its lower atmosphere.

LOS ALAMOS LAB developed, and maintains, a database of all genetic sequences of the HIV virus. The Lab's capacity to process massive amounts of data with supercomputers is furthering understanding of HIV's origins and biology.

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