President's report
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The following is a glimpse of some recent achievements by the faculty, staff and students of the University of California and the national laboratories managed by the university.

IN THE NEWS

New chancellor … ***University of California*** regents in May appointed *Michael V. Drake*, M.D., longtime UC faculty member and administrator, chancellor of ***UC Irvine***. Drake, who had served as UC vice president for health affairs for the past five years, succeeds *Ralph J. Cicerone*, chancellor since July 1998 who became president of the National Academy of Sciences in July. From 1998 to 2000, before being appointed vice president, Drake served as both the Stephen P. Shearing Professor and vice chair of the department of ophthalmology, and senior associate dean for admissions and extramural academic programs in the ***UC San Francisco School of Medicine***. Drake, 54, earned his M.D. at UC San Francisco.

Community colleges … The ***University of California*** and California Community Colleges are collaborating on a program that will provide professional development, leadership training and policy research for the community college system. The California Community College Collaborative at the ***University of California, Riverside*** (or "C4 at UCR") will engage faculty and administrators at Riverside Community College, ***UC Berkeley***, ***UC Davis***, ***UCLA***, ***UC Santa Barbara***, ***UC Santa Cruz***, the University of Southern California, and California State University, Sacramento. California's community colleges face major challenges in serving a growing and increasingly diverse student population and preparing it for a knowledge-based economy, in an era of funding challenges and often-changing expectations.

Washington Center … *Bruce E. Cain*, a ***UC Berkeley*** professor with almost 30 years of teaching experience and political expertise, has been named director of the ***UC Washington Center***. Based in the nation's capital, the center provides UC students a learning environment and course work that includes internships. The UC Washington Center also sponsors policy debates and symposia. The five-year appointment begins Sept. 1. Cain, 56, succeeds *Larry Berman*, former chair of the ***UC Davis*** political science program, who opened the center in Sept. 2001.

Los Alamos contact … The UC Board of Regents voted in May to compete for the management contract of ***Los Alamos National Laboratory***. On UC President *Robert C. Dynes*' recommendation, regents authorized Dynes to submit a proposal to the Department of Energy by the July 19, 2005, deadline. The final bid will be submitted by a UC and Bechtel-led team that includes BWX Technologies Inc. and Washington Group International, as well as a consortium of New Mexico higher education institutions. Additionally, regents appointed *Michael R. Anastasio*, director of ***Lawrence Livermore National Laboratory***, the director of Los Alamos, contingent upon the university and Bechtel-led team being awarded the contract. UC has managed and operated Los Alamos since it opened 60 years ago.

HEALTH AND NUTRITION

Treating autism … Autism therapy is bedeviled by unpredictable outcomes. Even with the best behavioral treatments, which are the only ones to have been scientifically demonstrated to work – says *Laura Schreibman*, professor of psychology and director of ***UC San Diego's Autism Research Program*** – some children improve dramatically, some only somewhat and others not at all. Many families try one thing after another, losing precious months before finding the therapeutic method best suited for their autistic child. Given the importance of early intervention, Schreibman says, getting it right the first time is vital. A new study coauthored by Schreibman and recent doctoral graduate *Michelle Sherer* successfully matches autistic children with an appropriate therapy. The study is the first to develop and test a predictive profile of children likely to respond to a particular treatment, in this case pivotal response training.

Controlling diease … ***UC Irvine*** has been selected for a $19.7 million grant offer from the Foundation for the National Institutes of Health to support the development of new methods to control the transmission of dengue fever, a mosquito-borne viral disease affecting tens of millions of people worldwide. Upon acceptance, the grant will be the second-largest ever received by the campus. It has been offered to UCI professor *Anthony James*, a vector biologist who will oversee an effort that includes researchers based in the United States, Great Britain, Brazil and Thailand. The researchers will employ a combination of molecular, field and social science research to advance genetics-based strategies for preventing mosquitoes from transmitting the dengue virus.

Vaccine approach … Researchers at ***UC San Diego's School of Medicine***, working with scientists at Elan Pharmaceuticals, have reported promising results in mice of a vaccine approach to treating Parkinson's and similar diseases. *Eliezer Masliah*, professor of neurosciences and pathology at UCSD, and colleagues vaccinated mice using a a combination of the protein that abnormally accumulates in the brains of Parkinson's (called human alpha-synuclein) and an adjuvant. This approach resulted in the generation of anti-alpha synuclein antibodies in mice that are specially bred by Masliah's team to simulate Parkinson's disease, resulting in reduced build-up of abnormal alpha-synuclein. The accumulation of abnormal alpha-synuclein is associated with degeneration of nerve cells and interference with normal inter-cellular communication, leading to Parkinson's disease and dementia. The work marks the first time a vaccine for this family of diseases has been found effective in animal studies.

Bone disorder … Scientists have tracked down the biological trigger that gives rise to Van Buchem disease, a hereditary, disfiguring bone disorder that can cause blindness and deafness. The findings provide insight into long-range gene regulation and could lead to new treatments for osteoporosis and other crippling bone disorders. A research team from ***Lawrence Livermore*** and ***Lawrence Berkeley*** national laboratories, the Novartis Institutes for BioMedical Research in Switzerland, and the DOE ***Joint Genome Institute*** (which is managed by UC) in Walnut Creek, CA, characterized a human mutation associated with the malfunctioning of the sclerostin gene, and showed that it plays a key role in regulating bone formation.

DEVELOPMENTS AND DISCOVERIES

Cancer discovery … A drug that has been used for 40 years for the treatment of skin fungus has been found to be a possible cancer treatment, according to an international team of scientists. *Leslie Wilson*, professor of biochemistry and pharmacology at ***UC Santa Barbara***, says that the antifungal drug, griseofulvin, has been shown to inhibit the growth of cancer cells in his laboratory. The drug has few side effects and has a lengthy track record, she said. Griseofulvin is administered orally and has been used to treat ringworm and other fungal infections of the skin.

Voice-operated … Astronauts aboard the International Space Station will soon be testing a sophisticated voice-operated computer system designed to guide them through complex procedures. Called Clarissa, this advanced spoken-dialogue system reads the steps of a procedure to an astronaut, answers questions and responds to spoken commands. Instead of scrolling through written procedures on a laptop or handheld computer, an astronaut can wear a headset and have hands and eyes free to focus on the procedure, says project scientist *Beth Ann Hockey* of ***UC Santa Cruz***. The spoken-dialogue system is one of many NASA projects being carried out by a partnership between UCSC and the NASA Ames Research Center.

Narcotic drugs … Narcotic medications can safely and effectively ease severe, chronic pain in older people with little risk that these patients will seek ever-increasing doses, ***UC San Francisco*** medical scientists have found. Younger patients, however, are likely to want to rapidly increase their medication dose, posing serious potential health consequences, the researchers found. The study is the first to systematically compare younger versus older patients' desires/needs to escalate the dose of opioid pain medications they take – a class of drugs including morphine, methadone and oxycodone (sold as OxyContin, Percocet among others). Based on the new findings, the researchers suggest that the drugs may be under-prescribed for older patients, yet pose unique risks for younger patients.

Saving energy, water … California wineries now have an easy-to-use, computer-based tool and a handbook to help them reduce energy and water costs, thanks to researchers at ***Lawrence Berkeley National Laboratory*** and Fetzer Vineyards, with whom the lab worked to develop the tool. "BEST (Benchmarking and Energy and Water Savings Tool) Winery" compares the performance of a target winery to a similar reference winery. The reference winery is very efficient, using state-of-the-art commercially available energy and water control technologies. After evaluating how the target winery compares to the reference winery, the user can view the tool's inventory of available efficient practices and technologies to select those that will save money, energy and water. BEST Winery is available as an Excel spreadsheet that can be run on any PC operating Windows 2000 or higher.

THE CUTTING EDGE

Bright idea … A "smart" vanity lighting system developed at ***UC Davis*** promises to save substantially on energy costs and improve safety for an aging population with diminishing eyesight. The new energy-saving light is the product of a partnership of the UC Davis ***California Lighting Technology Center,*** the Sacramento Municipal Utility District, the California Energy Commission's Public Interest Energy Research Program, and two manufacturers, MetalOptics/SpecLight and WattStopper Inc. Because this particular design is aimed at helping people navigate better in the dark to avoid accidents, *Michael Siminovitch*, the center's director, believes the new vanity lighting system may be one of the most important inventions coming from his research lab in the next decade.

Distinguished stroke center … Recognizing ***UCSF Medical Center's*** exceptional efforts to foster better stroke care, the Joint Commission on Accreditation for Healthcare Organizations recently certified the hospital as a Primary Stroke Center. UCSF is the first hospital in San Francisco to receive this designation. Staffed with personnel trained to diagnose and treat stroke quickly and effectively, the center provides all aspects of stroke care, including prevention, acute care and follow-up. A neurologist is on site 24 hours a day as part of a response team that works together to determine the best treatment for each patient.

PLANETS AND ENVIRONMENT

Disappearing lakes … Global warming appears to be causing lakes to drain and disappear in Arctic regions, a ***UCLA***-headed team of researchers reported in *Science*. If the pattern persists, it may imperil migratory birds and wreak further havoc on the region's weather, warns *Laurence Smith*, the article's lead author and an associate professor of geography at UCLA. Between 1973 and 1997, the total number of lakes larger than 100 acres decreased from 10,882 to 9,712, a decline of 11 percent. Most lakes did not disappear altogether, but instead shrank to sizes less than 100 acres. The total surface area in the region occupied by lakes shrank by 359 square miles, a decline of 6 percent. In all, 125 lakes vanished completely and became covered with vegetation.

Tahoe research … ***UC Davis*** researchers and colleagues are planning the most exhaustive study to date of the geologic history of the Lake Tahoe Basin. The results should help public agencies keep the lake blue and the groundwater clean, and assess the threat of landslides, earthquakes and tsunamis. The most modern approaches will be used to reconstruct the tectonic and climate forces that shaped the region over the past two million years. Researchers will collect information through direct observations on the ground; by taking cores of sediment from the land and from the bottom of the lake; and by studying how sound waves are transmitted through the ground and the water.

INSIGHTS INTO SOCIETY

Beach troubles … A team that included ***UC Irvine*** and ***UC Riverside*** researchers estimates that swimming in coastal waters at Newport and Huntington beaches costs the public $3.3 million per year in health-related expenses. The calculation is based on lost wages and medical care to treat more than 74,000 incidents of stomach illness, respiratory disease and eye, ear and skin infections caused by exposure to the polluted waters in a typical year. This is the latest in a series of published studies by UCI's *Ryan Dwight* showing that urban runoff is the primary source of coastal water pollution in these areas in Orange and Los Angeles counties.

Regulatory approach … A new study by ***UCSF School of Nursing*** researchers shows that Philip Morris sought to enhance its image by supporting Food and Drug Administration regulation of tobacco. With image-shaping in mind, the company devoted enormous resources to achieving regulation, but on its own terms, says senior study author *Ruth Malone*. While health advocates frame tobacco use as a public health policy issue, Philip Morris' regulatory efforts focused on framing tobacco use as an individual choice by informed adults to take a risk, which allowed the company to portray itself as a reasonable and responsible manufacturer of a risky product, she notes. The plan was to divide public health groups and to set Philip Morris apart from other companies in an effort to achieve favorable regulation from Congress, according to Malone, an associate professor in the School of Nursing.

LOOKING TO THE FUTURE

Lighting solution … The use of highly-efficient, cost-effective white light-emitting diodes as a replacement for inefficient, polluting kerosene lamps common in the developing world, could potentially save tens of billions of dollars per year worldwide, according to *Evan Mills*, a ***Lawrence Berkeley National Laboratory*** scientist. He proposes a lighting option – the solid-state white light-emitting diode – that developing nations might use to reduce the cost of providing effective, cleaner lighting to their citizens. Mills points out that LED systems are well-suited to developing nations – they are rugged, portable, use direct current, have long service lives, and run on widely available "AA" batteries.

Hydrogen fuel ... Nanotechnology may hold the key to developing a viable hydrogen economy, according to *Jin Zhang*, professor of chemistry and biochemistry at ***UC Santa Cruz***. He will receive $535,000 in grants from the U.S. Department of Energy for two research projects aimed at developing new technologies for the production and storage of hydrogen fuel using nanostructured materials. Producing hydrogen from water using solar energy is the focus of one of the projects. Zhang is coinvestigator on a second project to develop a method for highly efficient hydrogen storage. Both of the three-year projects rely on a novel approach to create nanostructured materials with special properties. Nanostructure refers to dimensions on the scale of billionths of a meter.

KUDOS

Library honor … *Eleanor Mitchell*, head of the ***UCLA College Library*** since 1995, has been named Librarian of the Year by the Librarians Association of UCLA. The College Library is the campus's main undergraduate library. The award recognized in particular Mitchell's role in information literacy. Under her leadership, a library program conducted studies to assess the information-seeking abilities of UCLA undergraduates and held focus groups with faculty to learn their views about students' needs in this area. The program also launched two popular, librarian-developed tutorials, "Bruin Success With Less Stress" and "Road to Research," and integrated information literacy instruction into the content of general education cluster courses and of department majors. In addition, the program worked closely with faculty to develop for-credit adjunct courses in research methods tailored to the specific needs of various disciplines.

Computer science award … *Gordon Paynter*, a long-time member of the Infomine/iVia Project team at the ***Libraries of UC Riverside***, received the Vannevar Bush Best Paper Award at the recent Joint Conference on Digital Libraries 2005. Selected from over 270 submissions, the paper describes the work of the UCR Libraries toward the research and development of iVia open-source software. The software represents new advances in how computers learn, known as machine learning. It has also advanced Web crawling, automatic indexing and free data in portal management.

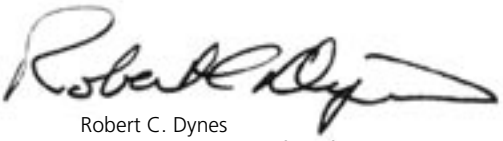
INVESTING IN EDUCATION

Major international gift … ***UC Berkeley*** has received a $40 million gift from the Li Ka Shing Foundation to establish a research center focused on new scientific fields – including stem cell biology and brain imaging – that could provide solutions to today's major health problems. In recognition of Li's generosity, the campus will name the new facility the ***Li Ka Shing Center for Biomedical and Health Sciences***. The donation is the largest international gift in the history of UC Berkeley and will allow the campus to start planning for the Li Ka Shing Center for Biomedical and Health Sciences, which will replace Warren Hall, current home of the School of Public Health. Groundbreaking for the $160 million research building, one of the cornerstones of the campus's Health Sciences Initiative, is set for 2007, with construction to be completed in 2009.

Teacher training … Gov. Arnold Schwarzenegger joined ***UC***, the California State University and business leaders in May to announce the creation of a effort to enhance the supply and preparation of science and mathematics teachers for California's public schools. Under the "California Teach" program, the UC system over the next several years will quadruple its annual production of credentialed science and mathematics teachers, from 250 per year to 1,000 per year by 2010. This initiative is the largest of its kind in the nation. Undergraduate students at UC will be able to achieve, in four years, both a bachelor's degree in science, mathematics or engineering and the preparation to enable them to become a secondary-school science or mathematics teacher. The CSU system will join in the effort by expanding its own teacher preparation programs for science and mathematics teachers as well as its recruitment of students to the profession.

UC's 10th campus … After 17 years of planning and development, ***UC Merced*** is preparing to welcome freshman, transfer and graduate students to UC's newest campus, which opens for classes Sept. 6. As of May, 974 students – 867 freshmen, 73 transfer students and 34 graduate students – had stated their intention to register at the Central Valley campus. Of the freshmen, about 30 percent will come from the Central Valley and 47 percent identify themselves as first-generation college students.

New stadium … ***UC Davis*** *Chancellor Larry Vanderhoef*, student-athletes, coaches and other campus representatives broke ground in June on a new $29.75 million multi-use stadium that will be the crown jewel of the Aggies' recently completed sports facilities when it opens in fall 2006. The stadium complex will serve as the home field for both the UC Davis football and women's lacrosse programs. It will also provide a venue for community events, such as high school athletic events, concerts and commencement ceremonies. The initial concept design calls for permanent seating for 10,000 to 12,000 spectators and space for an additional 4,000 to 6,000 spectators, along with basic amenities such as locker rooms, a club room and an enclosed press box. UC Davis became a National Collegiate Athletic Association Division I school two years ago.



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