

UNIVERSITY OF CALIFORNIA

AMERICAN  
RECOVERY &  
REINVESTMENT ACT

.....  
*federal funding at work*

At a time when California, like states across the nation, faces real fiscal challenges, the American Recovery and Reinvestment Act has provided an investment that is showing a clear return.

The American Recovery and Reinvestment Act will provide nearly \$2 billion in federal stimulus funds to the University of California. UC is using this critical support to retain or create thousands of jobs, boost financial aid for students, invest in and sustain groundbreaking research, build and upgrade facilities and train a new generation of workers, scientists and educators.

This federal investment is having real results. The state and nation are gaining from the knowledge our university graduates are bringing to industry and their communities. New businesses and jobs are being started through the research and innovation in our labs, and researchers continue to make life-saving discoveries across California.

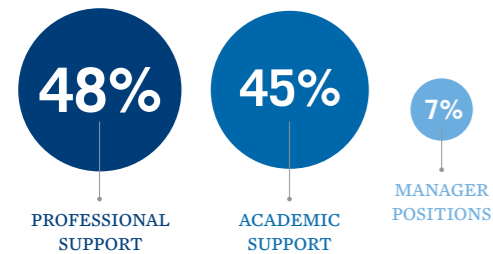


## JOBS >>>

ARRA monies via one-time State Fiscal Stabilization Funds (SFSF) totaling \$716.5 million allowed UC to maintain support for core operations and offset state budget cuts during 2008-09 and 2009-10. Those monies have provided support for UC's workforce paid from state general funds and, along with ARRA grants for research, helped retain or create jobs for thousands of UC employees. They are teachers, researchers, lab technicians, janitors, counselors, computer programmers, administrators, engineers and more, who are critical to the university's mission of education, research and public service. UC expects to receive an additional \$106 million during 2010-11.

\$822.5 Million in SFSF Saved

# 11,040 JOBS

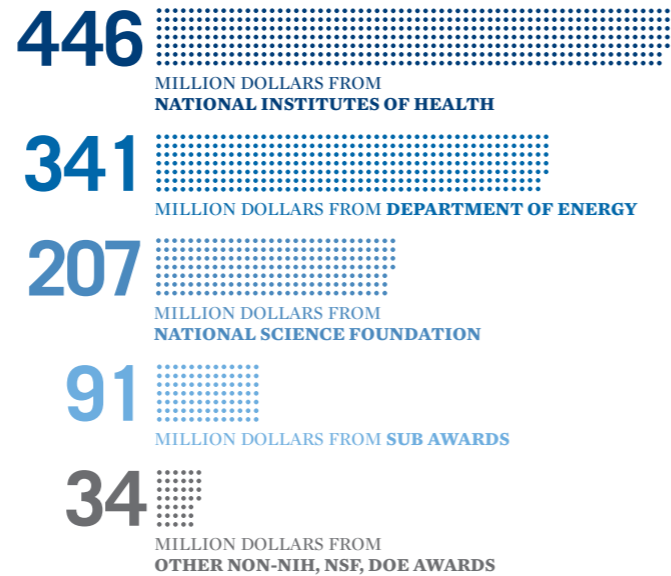


More than **5,400 UC JOBS** have been retained or created by ARRA research funding.

## RESEARCH >>>

UC researchers received a timely boost from ARRA to study and seek answers to problems ranging from climate change and clean energy to childhood diseases and cancer. And this funding from key science agencies will reap benefits in years and decades to come. UC research generates discoveries, new technologies and cures, as well as inventions, patents and licensing agreements that can help fuel the economy and create additional jobs. UC is the training ground for the next generation of innovators, who will turn ideas into solutions to some of the greatest scientific and technological challenges facing our state and nation.

\$1.1 Billion = 1,920 Research Awards



## EDUCATION >>>

ARRA is helping UC students and families pay for their education. For low-income students, it provided a \$500 per year increase to the maximum Pell Grant in 2009 and 2010 and boosted funding for the Federal Work-Study program. In addition, the American Opportunity Tax Credit, which was created in ARRA, is benefiting eligible students and parents who pay for required tuition, fees, books and course materials out-of-pocket in 2009 and 2010.

Financial Aid to UC Students

# THIRTEEN THOUSAND

STUDENTS RECEIVE \$3 MILLION TO \$6 MILLION FROM WORK-STUDY FUNDING.

# FIFTY-TWO THOUSAND

STUDENTS RECEIVE \$25 MILLION IN ADDITIONAL PELL GRANT FUNDING.

# EIGHTY THOUSAND

STUDENTS AND FAMILIES ELIGIBLE FOR FEDERAL TAX CREDIT. FEDERAL TAX CREDITS COULD SAVE \$88 MILLION.

## INFRASTRUCTURE >>>

Throughout UC, ARRA funds are helping campuses build and modernize research and education facilities. These include laboratories, where researchers and graduate students require the best and newest technology to study biological systems, physics, engineering and more.

*Examples of funded projects:*

**University of California | San Diego:** \$12 million from the National Institute of Standards and Technology (NIST) for a Marine Ecosystem Sensing, Observation and Modeling Laboratory at the Scripps Institution of Oceanography, to monitor ocean ecology.

**University of California | Santa Barbara:** \$19 million from the Department of Energy (DOE) for its Energy Research Center, which will create new technologies for energy efficiency and train a new generation of energy scientists and engineers.

**University of California | Merced:** \$501,000 from the National Science Foundation (NSF) to renovate the Sierra Nevada Research Institute Wawona Field Station in Yosemite National Park and create an informatics and data visualization center for faculty and student researchers.

**UCLA:** \$1.9 million from National Institutes of Health (NIH) for the Laboratory of Neuroimaging, which conducts critical brain research that may speed treatments for diseases such as Alzheimer's.

**University of California | Berkeley:** \$10.9 million from NIST to help construct the Center for Integrated Precision and Quantum Measurement, where individual atoms and molecules can be probed exactly.

### UNIVERSITY OF CALIFORNIA

*Award Examples*

#### BERKELEY

**The Impact of bisphenol A on Children**  
(\$1.5 million, NIH)  
Kim Harley, Principal Investigator

This project is one of the first to look at the impact on children of the chemical bisphenol A (BPA), which is found in can liners and plastic water bottles and is causing growing concern around the world. Researchers will look for links between BPA and physical and mental abnormalities.

#### DAVIS

**Autism Research**  
(\$5.1 million, NIH)  
MIND Institute

New funding will enhance a wide array of studies at one of the nation's leading autism research centers, including evaluating families and children, uncovering the interplay of genetics and the environment, defining subtypes of autism, uncovering early signs of the disorder and developing effective targeted treatments.

#### IRVINE

**New Laser Diagnostics**  
(\$1 million, NIH)  
Bruce Tromberg, Principal Investigator

Researchers will develop cost-effective, portable technologies to diagnose medical conditions and monitor patient treatment, including aneurism repair, guiding prostate surgery, measuring burn damage, checking patients during hemodialysis and spotting brain or gut damage in children who suffer from reduced blood flow to organs.

#### LOS ANGELES

**Training Green Energy Leaders**  
(\$3 million, NSF)  
Diana Huffaker, Principal Investigator

This award will provide fellowships for Ph.D. students studying the interface of science, business and public policies of green technology. It is the only fellowship program of its kind in the Los Angeles area, and its goal is to boost the clean-tech economy and create green collar jobs.

#### MERCED

**Monitoring and Predicting Water Quality**  
(\$395,000, NSF)  
Thomas Harmon, Principal Investigator

Scientists will test a remote sensing tool (hyperspectral imaging) to observe water quality in aquatic systems. The work will begin in the lab and extend to reservoirs and streams in the San Joaquin Valley and southern Sierra, where the powerful sensor also will help researchers understand environmental problems.

#### RIVERSIDE

**STEM Teaching Scholarships**  
(\$887,000, NSF)  
Pamela Clute, Principal Investigator

To tackle the shortage of math and science teachers in California, the UC Riverside Noyce Scholarship STEM program prepares undergraduates to be outstanding secondary school teachers, especially in urban schools. In addition to normal coursework, students conduct summer research and work toward their K-12 teaching credentials.

#### SAN DIEGO

**Cyberinfrastructure for Cancer Research**  
(\$2.6 million, NIH)  
Kevin Patrick, Principal Investigator

The CYCORE project for cancer research will allow scientists to collect and interpret a variety of data to compare the effectiveness of preventative measures, drugs and interventions. It will aggregate data from clinical trials, patient records and more so that researchers may better evaluate benefits, risks and costs of treatments.

#### SAN FRANCISCO

**Preventing Lung Disease in Babies**  
(\$1.7 million, NIH)  
Roberta Anderson, Principal Investigator

Researchers will conduct clinical trials of a new therapy for bronchopulmonary dysplasia, a lung disease that strikes some 30,000 infants in the U.S. every year. The research has the potential to decrease chronic infant lung disease and asthma and reduce health care costs for premature infants.

#### SANTA BARBARA

**Oceans and Climate Change**  
(\$705,000, NSF)  
Uta Passow, Principal Investigator

In a study that helps prepare for and manage future climate changes, researchers will investigate the impact of ocean acidification on the biological processes that transport carbon from the water surface into the deeper layers of the ocean. The project also builds collaborations between U.S. and European scientists.

#### SANTA CRUZ

**Integrative Genomics**  
(\$1.2 million, NSF)  
Joshua Stuart, Principal Investigator

This CAREER award, the NSF's most prestigious for young faculty, will fund studies of gene interactions in cells that lead to diseases like cancer. It also supports the UC Santa Cruz Interaction Browser, which provides researchers around the world with free access to a wide database of genetic interactions.

#### LAWRENCE BERKELEY LAB

**Building World's Fastest Computer Network**  
(\$62 million, DOE)  
Advanced Networking Initiative

To help scientists who rely on supercomputers to manage and share mountains of data with collaborators around the world, EsNet—the DOE's high-performance networking facility—plans to develop the world's fastest computer network. It will connect supercomputer centers at speeds 10 times faster than current technology.

“American Recovery and Reinvestment Act funding is having a positive effect across the University of California system. With more than \$1.1 billion in ARRA research funding, UC researchers are working to solve some of the great scientific and technological challenges facing our country. ARRA funds are also supporting our efforts to ensure a quality and affordable education and to create and retain jobs.”

**Mark G. Yudof**

President, University of California

## ARRA RESEARCH FUNDING AT UC

LOCATION	AWARDS	DOLLARS AWARDED IN MILLIONS
Berkeley	185	\$71.7
Davis	259	\$116.7
Irvine	154	\$66.4
Los Angeles	387	\$166.4
Merced	10	\$3.7
Riverside	51	\$15.1
San Diego	356	\$188.1
San Francisco	316	\$106.4
Santa Barbara	64	\$39.4
Santa Cruz	70	\$34
Agric & Nat Res	2	\$0.2
LBNL	68	\$312
<b>All</b>	<b>1,920</b>	<b>\$1.1 Billion</b>

The data in this brochure reflects totals for the quarter ending July 31, 2010, and are calculated and reported in accordance with federal guidance as of May, 2010.

LBNL figures include significant funding for research infrastructure upgrades of buildings and major laboratory equipment, in addition to supporting a broad array of science research programs.