California Institute of Technology | Stanford University | University of California | University of Southern California

November 10, 2015

The Honorable Barbara Boxer
United States Senate

Dear Senator Boxer:

As California's Research Universities Network (CRUN), we write to reiterate our appropriations priorities for fiscal year (FY) 2016 following the enactment of the *Bipartisan Budget Act of 2015*. Investments in federal education, research, and healthcare programs are essential to promoting economic growth and preparing the next generation workforce for California and the nation. With that in mind, we urge Congress to consider the following funding levels FY 2016. We hope to see Congress continue making important investments in federal research and education in FYs 2016 and 2017, as we have seen over the past two years, despite minimal increases in overall spending. We are grateful to the passage of the *Bipartisan Budget Act of 2015* and are optimistic of our institutions' ability to continue fulfilling their missions to California.

Federal education programs are important tools that allow our institutions to educate students from across California and to provide a world-class education to all students. Scientific research supports transformative discoveries that underpin new industries and keep our economy dynamic. Federal biomedical research and healthcare programs allow our researchers to develop revolutionary treatments for disease and to ensure that all Californians have access to unmatched medical care. Many of these activities would not be possible without support from the federal agencies and programs described below. Therefore, we encourage Congress to provide the highest possible funding for federal education, research, and healthcare programs in FY 2016. Thank you for your continued support of California's research universities.

Sincerely,

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California Research Universities FY 2016 Appropriations Priorities

LABOR, HEALTH, AND HUMAN SERVICES, EDUCATION AND RELATED AGENCIES

National Institutes of Health (NIH)
University Request: $32 billion
President's Request: $31.3 billion
FY 2015 Enacted: $30.3 billion

California university researchers use NIH funding to perform research that produces transformative advances in disease treatments and underpins our state's vibrant life sciences sector. Every day, our scientists use NIH funding to investigate novel approaches to treating cancer, heart disease, and Alzheimer's disease, translating basic science into cures, and training the next generation of biomedical science researchers. California's academic and research institutions receive more NIH funding than any other state, totaling $3.45 billion in 2014 – making robust support paramount to the health of our people and of our economy. California's research universities also remain opposed to efforts to limit or eliminate funding for health economics research at NIH.

Department of Education, Pell Grants
University Request: $4,860 for the discretionary base, allowing for a maximum award of $5,915, including mandatory funds and scheduled inflation adjustment
President's Request: $4,860 for the discretionary base, allowing for a maximum award of $5,915, including mandatory funds and scheduled inflation adjustment
FY 2015 Enacted: $4,860 for the discretionary base, allowing for a maximum award of $5,775, including mandatory funds and scheduled inflation adjustment

The Pell Grant program is the foundation of federal student aid by providing access to college for students from low-income families. The Pell Grant program is a critical component of the network of federal, state, and institutional financial assistance programs that help students finance their education costs. With this in mind, California's research universities support an appropriation sufficient to fund a discretionary Pell Grant of $4,860 for FY 2016. This appropriations level is essential to ensure that—with the mandatory funds available and the scheduled inflationary adjustments—the maximum Pell Grant will be $5,915 in FY 2016, helping to provide critical financial support to those California students most in need.

DEFENSE

Department of Defense (DOD) Basic Research (6.1)
University Request: 2.43 billion
President's Request: $2.08 billion
FY 2015 Enacted: $2.27 billion

Research and development is the lifeblood of the U.S. military's technological supremacy and provides a vital advantage for our nation's security. Sustained investments in DOD Research, Development, Test, and Evaluation (RDTE), and specifically basic research (6.1) accounts, is needed to grow the pipeline of transformative discoveries that will promote new technologies for our armed forces. Further, the President's proposed reduction to 6.1 accounts for FY 2016

would inhibit innovation at a time when our global competitors are making unprecedented investments in defense R&D. Within RDTE, California's research universities support sustained funding for the Defense Advanced Research Projects Agency (DARPA), whose high-risk, high-reward research is essential to developing future military capabilities, at $2.97 billion.

ENERGY AND WATER DEVELOPMENT AND RELATED AGENCIES

Department of Energy (DOE), Office of Science
University Request: $5.34 billion
President's Request: $5.34 billion
FY 2015 Enacted: $5.07 billion

The DOE Office of Science provides the majority of the nation's funding for research in the physical sciences. Federal spending constraints have hindered the capability of the Office of Science to advance world-class research, and approval of the President's budget request of $5.34 billion for FY 2016 would help reverse this trend. DOE's Office of Science supports 10 national laboratories, including SLAC National Accelerator Laboratory (SLAC) and Lawrence Berkeley National Laboratory (Berkeley), which are housed in our state. Both SLAC and Berkeley Labs are managed by California universities and partner with universities throughout the country to perform groundbreaking basic science research. DOE's Office of Science also supports several Energy Frontier Research Centers (EFRCs) and a DOE Energy Innovation Hub in our state, which work to accelerate energy discoveries in high-priority areas. The research, technology development, and innovation supported by the DOE Office of Science greatly benefits the nation and supports extensive research efforts in California.

COMMERCE, JUSTICE, SCIENCE AND RELATED AGENCIES

National Aeronautics and Space Administration (NASA) Science
University Request: $5.49 billion
President's Request: $5.29 billion
FY 2015 Enacted: $5.24 billion

NASA Science allows us to explore the Earth, our galaxy, and universe, as well as to train undergraduate and graduate students who will become our nation's next generation of leaders in STEM fields. Funding from NASA Science has led to discoveries about the Earth's ecology, the development of new technologies, and even discoveries by the Curiosity rover regarding conditions on Mars. We are heartened to see the support for NASA Science overall in the FY 2016 budget request and hope Congress will support at least the President's proposed level. However, similar to previous budget requests, the FY 2016 request would decrease Planetary Science 5 percent and undermine the priorities of the most recent National Academies decadal survey. California's research universities are appreciative of the support provided by Congress last year for NASA Science and strongly support a balanced Science portfolio in FY 2016 that includes robust funding for all of the Science divisions.

National Science Foundation (NSF)
University Request: $7.72 billion
President's Request: $7.72 billion
FY 2015 Enacted: $7.34 billion

NSF is the government's primary funder of basic research, supporting work that has the potential to foster breakthrough discoveries across all scientific disciplines. The agency also supports efforts that bring together researchers from areas as diverse as engineering and chemistry to pursue solutions at the nexus of multiple scientific disciplines. NSF supports pre-competitive basic research that is not funded anywhere else and remains the cornerstone of the U.S. scientific enterprise. Funding of $7.72 billion in FY 2016 would ensure NSF's ability to fund groundbreaking transformative research. Within NSF, the California universities oppose efforts to limit funding for specific disciplines, including the geosciences and social, behavioral, and economic sciences. NSF grants should be awarded based on academic merit within the highly respected peer-review system to ensure that the highest-quality science is supported by taxpayer dollars.

INTERIOR, ENVIRONMENT AND RELATED AGENCIES

National Endowment for the Humanities (NEH)
University Request: $155 million
President's Request: $155 million
FY 2015 Enacted: $146 million

NEH provides support for humanities and social science research in California. Programs supported by NEH provide students with opportunities to learn about American history, democracy, and culture, and fund important research on these topics. A population well-versed in the humanities is fundamental to a strong democracy.

Additional California Research Universities FY 2016 Appropriations Priorities

COMMERCE, JUSTICE, SCIENCE AND RELATED AGENCIES

National Aeronautics and Space Administration (NASA) Space Technology
University Request: $724.8 million
President's Request: $724.8 million
FY 2015 Enacted: $596 million

The NASA Space Technology Mission Directorate supports training and research into innovative technologies that sustain the United States as a global leader in space and aeronautics research. California benefits disproportionately from this program through our universities, small businesses, and three NASA laboratories. Space Technology undergirds and enables more effective, safe, and affordable next-generation space missions through investments that span the technology-readiness pipeline. Space Technology supports active research grants and graduate fellowships at each of our universities through work in areas including nanotechnology, thermal management systems, and space power and energy storage that will help define the 21st Century NASA. Funding growth proposed in the budget request would mainly keep existing projects on track, so it is critical that Congress ensures growth to support these key technologies and enable the research and training programs supported by the Mission Directorate.

National Aeronautics and Space Administration (NASA) Space Grant College and Fellowship Program
University Request: $40 million
President's Request: $24 million
FY 2015 Enacted: $40 million

The Space Grant program is a vital part of NASA's education portfolio and an important component of our nation's STEM support strategy. It connects NASA science with our nation's elementary and secondary schools. California's research universities play a prominent role in this national network, training aerospace and other STEM-field engineers, providing college-level fellowships and scholarships, and contributing to K-12 curriculum development. The California Space Grant Consortium is the nation's largest, involving 28 institutions that reach over 12,000 college-level students each year, in addition to their K-12 outreach throughout the state. The proposed reduction in the President's FY 2016 budget request would erode capacity to carry out these important activities.

National Oceanographic and Atmospheric Administration (NOAA) Climate Research
University Request: $188.8 million
President's Request: $188.8 million
FY 2015 Enacted: $158 million

California research universities use funding through NOAA's climate research account to help the state and nation prepare for and adapt to the effects of a changing climate. We appreciate the partial restoration of funding in recent years after cuts dramatically decreased NOAA's ability to support extramural climate research at a time when the development of sound seasonal, annual, and long-term management plans for water, agriculture, energy, fisheries, and other businesses is more important than ever. This account also funds global ocean observing programs essential for accurate weather and climate forecasting, as well as sea-surface temperature and surface currents information critical for maritime industries. Each of our institutions has successfully competed for funding through this account.

ENERGY AND WATER DEVELOPMENT AND RELATED AGENCIES

Advanced Research Projects Agency-Energy (ARPA-E)
University Request: $325 million
President's Request: $325 million
FY 2015 Enacted: $280 million

ARPA-E supports pre-competitive, high-risk research into technologies with the potential to revolutionize our energy portfolio. Institutions across California and the nation use ARPA-E funding to develop new clean energy technologies at a stage before industry will finance them. ARPA-E provides initial support for projects before they are viable for the private sector with many eventually receiving significant private investments. Work supported by ARPA-E not only promotes our energy security, but has the potential to stimulate the nation's economic competitiveness.

INTERIOR, ENVIRONMENT AND RELATED AGENCIES

USGS, Earthquake Hazard Program and Global Seismographic Network
University Request: $70.55 million Earthquake Hazards Program, (EHP); and $9.8 million Global Seismographic Network, (GSN)
President's Request: $57.95 million (EHP); and $9.8 million (GSN)
FY 2015 Enacted: $59.5 million (EHP) and $4.85 million (GSN)

Of all natural hazards, earthquakes pose the greatest risk for inflicting a catastrophe, as over 75 million people live in metropolitan areas with significant earthquake risk. These areas are not limited to just California, but also include the Mississippi River area, Pacific Northwest, Alaska, Hawaii, Mountain West, and the Mid-Atlantic. The need for earthquake preparedness, monitoring tools, and early warning technologies has never been greater. California universities benefit from having the closest partnerships with USGS's Earthquake Hazards Program and Global Seismographic Network, which allow for the research and monitoring tools needed to protect lives and property. California universities collaborate with USGS and the state of California on the Advanced National Seismic System (ANSS), which provides accurate and timely earthquake information.

In FY 2016, California universities request an increase to EHP of $12.6 million above the FY 2016 President's budget request in order to build, operate, and maintain an earthquake early warning system along the entire West Coast. Core research is already underway at California universities to propel the science of safety forward. The system will leverage investments already made in geophysical infrastructure across the West Coast. It is important to make the investment in monitoring and the early-warning system, for which the cost is low compared to that of a single earthquake as evidenced during the 2014 South Napa earthquake with damage estimates into the hundreds of millions of dollars.

LABOR, HEALTH, AND HUMAN SERVICES, EDUCATION AND RELATED AGENCIES

Department of Education, Institute of Education Sciences (IES)
University Request: $676 million
President's Request: $676 million
FY 2015 Enacted: $573.9 million

Through IES funding, California universities are able to research how students learn, how best to train new teachers, and how to enhance our education system. Competitively awarded grants lead to research findings that enable us to provide parents and teachers with the best information on how to engage students, from early childhood to adult education. IES-supported research is essential to utilizing evidence-based practices to improve the quality of education in the United States.

Department of Education, Graduate Assistance in Areas of National Need (GAANN)
University Request: $31 million
President's Request: $29.3 million
FY 2015 Enacted: $29.3 million

The Department of Education's graduate education program allows California universities to support the next generation of highly-skilled scientists and leaders in government and business. Because of this support, California universities can maintain top-level talent who will become vital members of the workforce with the skills California's top employers are seeking.

Department of Education, International Education and Foreign Language Studies (Title VI)
University Request: $76.2 million
President's Request: $76.2 million
FY 2015 Enacted: $72.2 million

Federal support for international experience and foreign language training are important in today's global age. To date, our nation has developed globally aware citizens through federally funded international education, foreign language, and area studies programs, along with the Fulbright-Hays program. Participants in the Department of Education's international programs, including students at California universities, are better prepared to thrive in the modern workforce and to compete in the global marketplace.