

**Statement of Dr. Marye Anne Fox, Chancellor
University of California, San Diego
before the House Committee on Oversight and Government Reform
Field Hearing on “Regulatory Impediments to Job Creation”
April 21, 2011**

Chairman Issa, Ranking Member Cummings, Members of the Committee:

I am Marye Anne Fox, Chancellor of the University of California, San Diego. It is my pleasure to welcome you to campus, and I thank you for the opportunity to participate in this important dialogue regarding one of the important challenges facing our nation today – how to accelerate innovation and job creation. I know I speak for the researchers and students at UC San Diego – and indeed, the university community as a whole - when I say we appreciate the efforts undertaken by you and your colleagues in the United States Congress to recognize and leverage the importance of America’s intellectual capital in addressing the country’s economic problems. Your presence here is an acknowledgement of this, and we see it as part of our own obligation to public service to assist in your efforts however we might.

America’s research universities play a critical role in generating new knowledge, inventions and processes that can be developed by industry into economically viable products and services. This is a proven pathway to job creation and we are proud to be part of it. Last year, UC San Diego successfully performed more than \$1 billion of the nation’s research agenda. This is an extraordinary accomplishment, and, if history is any guide, the future research results of this investment will surely be profound. In the nearer term however, this \$1 billion figure is useful in helping to illustrate the degree to which UC San Diego – and other research universities across California and the nation – contribute directly to economic growth and job creation.

A 2008 independent economic analysis found that the University of California, San Diego contributes more than \$7.2 billion in direct and indirect spending and personal income each year to the California economy, and generates 39,000 jobs. The study also found that every \$1 in direct spending by the university generates an additional 92 cents in indirect spending across the county.

UC San Diego’s robust economic impact isn’t limited to its spending on research, purchasing and payroll. To date, faculty and alumni of UC San Diego have started roughly 650 companies. Currently, there are 160 of these active in California generating more than 18,000 jobs, and \$15 billion in annual sales. The total economic impact of these companies in San Diego County is in excess of \$20 billion annually. Included as an attachment to my testimony is a chart that appeared earlier this year in the San Diego Business Journal, which breaks down this impressive economic impact on a company by company basis; I would ask that this chart be included in the official hearing record.

While these numbers are specific to UC San Diego and its impact on the broader region as well as the state of California, it is certainly appropriate to extrapolate them out, as a benchmark for the similar positive economic impacts American universities are having all across the nation.

Given the Committee's focus here today on the biotech and pharmaceutical industries, it is fair to say that the La Jolla mesa as currently constituted – including the Scripps Research Institute, Salk Institute, Sanford Burnham, UC San Diego School of Medicine, and other research institutes as well as the expanded medical services sector that has grown from it – exists here largely as a result of proximity to the university. This history of collaboration has resulted in the discovery of new compounds and drugs, and medical devices and procedures. “From Bench to Bedside” aptly describes both how discovery flows from the lab to the general public, and the levels of collaboration and cooperation the university enjoys with partners like CONNECT, BIOCUM and CHI.

You have heard today about specific regulations and rules that impact this industry and its growth, and the related challenges to those sectors. We at UC San Diego are celebrating our 50th anniversary as a public research university, and have served as the seed of tremendous growth and job creation over the past five decades, which we hope to further accelerate in the next five. But as this enterprise has grown, so have the challenges. To start, I would like to outline some of the most important elements for our success, which in turn will lead not only to new products and jobs downstream, but also to new generations of superbly trained minds and a workforce capable of dealing with the dynamic environment of the 21st century economy.

The Elements that Fuel University Success -

The Fuel – convergence of federal research funding plus intellectual capital equals success. This equation has been proven over and over again and with the sophisticated equipment, computing and imaging tools now available, the pace of innovation cycle has accelerated. However, these tools are expensive. We will continue to supply the minds and the stimulating environment and the mentoring, but here the importance of sustained federal research funding becomes critical. This federal/university partnership results in new knowledge, improved healthcare, greater national security capabilities, and individuals trained to compete in the dynamic global marketplace. It is a taxpayer investment that not only increases wealth but also improves their quality of life. We commend the Congress on passage of the America Competes Act and its recognition of the need for maintaining support for basic research even in the face of a huge national debt. As we watched the debate over the 2011 budget, we appreciated the recognition and concern for the future as expressed in continued support for the National Science Foundation, the National Institutes of Health and the other research agencies. We thank

you for that and we hope that you are able to maintain this support as you move ahead with the daunting challenge of managing the national budget.

Limited Regulatory Environment –

Clearly, with such a diverse array of activities, from outer space to beneath the ocean exploration, from probing the inner brain to building the expansive machinations of supercomputers, from astronomy to zoology, research universities engage in every dimension of human endeavor and behavior. We expect some regulation and standards of behavior and we take pride in imposing high standards on ourselves. To this end, UC San Diego has an office dedicated solely to this critical function. It is true, unfortunately, that we are sometimes excessively burdened by regulations imposed by the federal government. As an example, I'd like to cite a passage from an August 17, 2010 letter to the National Institutes for Health, signed by five leading academic associations, in response to a request for comment on proposed NIH rulemaking (a copy of the full letter is attached for the record) on the subject of Conflicts of Interest:

“Increased economic engagement inevitably raises the likelihood of more financial relationships between institutions and their researchers and the companies with which they engage. In fact, one gauge of the effectiveness of commercialization is the growth of such relationships. Current perceptions that such relationships are inherently suspicious or invariably lead to unmanageable conflicts of interest must be changed. Both policymakers and public must understand that these relationships are positive and necessary for universities to achieve greater success in commercializing their research. At the same time, it is critical that as federal agencies move to regulate potential conflicts of interest, they do not put in place regulations which inadvertently discourage appropriate interactions among research faculty, universities, and industry. We understand that conflicts of interest must be closely monitored and kept in check. However, an overly strong focus on elimination, rather than management, of conflict of interest by federal agencies would produce a chilling effect on universities’ willingness and ability to engage in economic development and be directly counter to the Administration’s interest in increasing commercialization by universities. As purveyors of objective knowledge, universities have their own built-in interest in managing conflicts of interest, or perceptions of such conflicts, to ensure that the integrity of research findings are not compromised.”

The principal concern in these proposed new regulations is the requirement which defines conflict overbroadly and requires public disclosure on the web of these relationships, implying that any association between the academy and industry has some stigma associated with it. This is likely to inhibit if not outright discourage the interactions.

As a general concern, we would seek to have government wide harmonization of regulations and information systems between agencies and states where reasonable and eliminate unnecessary duplication and redundancy. University research is funded by 25 different Federal agencies, each with a unique approach to regulatory implementation. While regulations concerning areas like human subject protections, animal welfare,

export controls, select agents, responsible conduct of research and financial conflicts of interest all serve important public policy goals, unique interpretations and implementations across agencies are difficult to manage, create inefficiencies, and increase costs. Additional challenges occur when rules applicable to grants established by OMB are inconsistent with rules applicable to contracts established under the Federal Acquisition Regulations Councils.

I would like to turn to some efforts at UC San Diego that are working extremely well to accelerate innovation, integration of the academy and the workplace and job creation. We are proud of our new NIH Clinical Translational Science Award which forms the foundation of the Altman Clinical Translational Science Institute. By more closely aligning biotech and pharmaceutical research with clinical research and patient care, this entity will help to accelerate the ideas and innovation from our laboratories into the marketplace and to the patient.

I would also direct your attention to UC San Diego's von Liebig Center, which has become the national model for how to nurture a nascent idea into a proven concept ready for company formation and venture capital. This Proof of Concept Center has the best track record in the nation for turning out successful companies and in 2010 partnered with the U.S. Army Telemedicine and Advanced Technology Research Center to develop a regional Model of Technology Acceleration focused on transferring the products of military research for use by military patients. The von Liebig Center also partners with our Rady School of Business and the Jacobs School of Engineering to provide entrepreneurial training for our students, and some 500 students have been involved in projects. Ten companies have been started by these students. Von Liebig has assisted in the formation of 27 companies resulting in more than 180 jobs and raising more than \$87 million in private capital. It is truly a model for entrepreneurial education.

Finally, no educator can leave a podium without addressing the importance of STEM education. For the long term health of our economy, and well being of our nation, we need to engage more elementary and secondary level students in the study of science, technology, engineering and mathematics. I wanted you to know that we have a strong outreach endeavor underway at UC San Diego to help ensure future generations of scholars, inventors, and entrepreneurs arrive at our doors and continue to energize the American innovation ecosystem. Brilliant minds exist in all parts of the population and we need to keep the doors open for qualified students regardless of their ability to pay. It is the nation's loss if we do not tap into its entire talent pool. Now more than ever, as California's population continues to become increasingly diverse, we need to find ways to educate those who may not have the resources to attend college without assistance.

These are challenging times and all of us with the mission to serve the public must work together. At UC San Diego we are up to the challenges and look forward to working with you.

