

UC San Diego's 'Campus-to-Community' Innovations Boost California Businesses

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In economy-boosting "campus-to-community" research, the University of California, San Diego continues to excel at technology transfer and discoveries that spark entrepreneurship.

The university's award-winning scholars have an impressive record of achieving scientific, medical, and technological breakthroughs. For the year ending in June 2008, UC San Diego reported 364 new innovations -- averaging one a day for every day of the year -- adding to the campus's substantial portfolio of more than 2,600 active technologies, including inventions, research materials and copyrighted materials from across the university's research disciplines.

UC San Diego holds more than 560 U.S. patents on those inventions, and has close to 400 licensing agreements with commercial partners to develop and commercialize the products of university research.

"University-industry partnerships have been critical to UC San Diego's success as a generator of innovation and new technologies," said Chancellor Marye Anne Fox. "The Technology Transfer Office has played a significant role in this success, which has resulted in major economic, commercial and healthcare benefits to the San Diego region."

Licensing income - money that UC San Diego receives for its technology agreements with entrepreneurs and industries - was about \$30 million for 2008, and three UC San Diego inventions, all medical and life-science related, were among the University of California system's top-earning inventions.

Those are gratifying numbers for UC San Diego's Vice Chancellor for Research Arthur B. Ellis, whose office oversees the university's Technology Transfer Office (TTO). "We have a well-deserved reputation as an engine of discovery," he said. "Especially in these economically challenging times, UC San Diego's researchers understand the need to contribute the products of our ingenuity to the prosperity and well-being of local, national and international communities."

The TTO manages and markets all intellectual property developed by researchers and owned by the university. The office also acts as a catalyst for transforming early-stage academic research into marketable products and processes.

UC San Diego "imports" funds through grants and contracts from outside the county, said Ellis, and spends more than \$800 million a year on research, providing considerable economic value to the region.

Assistant Vice Chancellor and TTO Director Jane Moores is determined to keep the university's inventions and discoveries moving out into the community. "We're serious about improving the quality of people's lives, as well as creating businesses and jobs," Moores said, citing a recent CBRE Consulting study that said that about 200 companies have been spun off from the university, generating more than \$10 billion in annual sales in California alone.

Several UC San Diego innovations are among the top inventions within the University of California system, including an interstitial cystitis therapy, developed in 1980 at UC San Diego's School of Medicine; Egf receptor antibodies, developed in 1983 by collaborators at the School of Medicine and the Division of Biological Sciences; and firefly luciferase, developed in 1984 by the university's Division of Biological and Physical Sciences. These inventions provide needed medical therapies and valuable research tools that benefit society and the public. The licensing income to UC San Diego is distributed to inventors, authors, academic units, the campus and the UC system, where it is used to support further research and education. This reinvestment in the university is an important component of the technology transfer program.

"The San Diego region is home to more than 400 biotech and medical-device companies as well as over 500 high-tech businesses. As a recent economic-impact report has shown, the life-science sector alone employs over 35,000 people with an annual payroll of more than \$2 billion," said Ellis. "The success of these clusters depends on the availability of basic research from institutions like UC San Diego and the ability to transfer discoveries to our partners in the private sector."

"We consider our successful campus-to-community efforts a kind of return-on-investment for the citizens of California," said Moores.

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