

Research at a Glance 2013



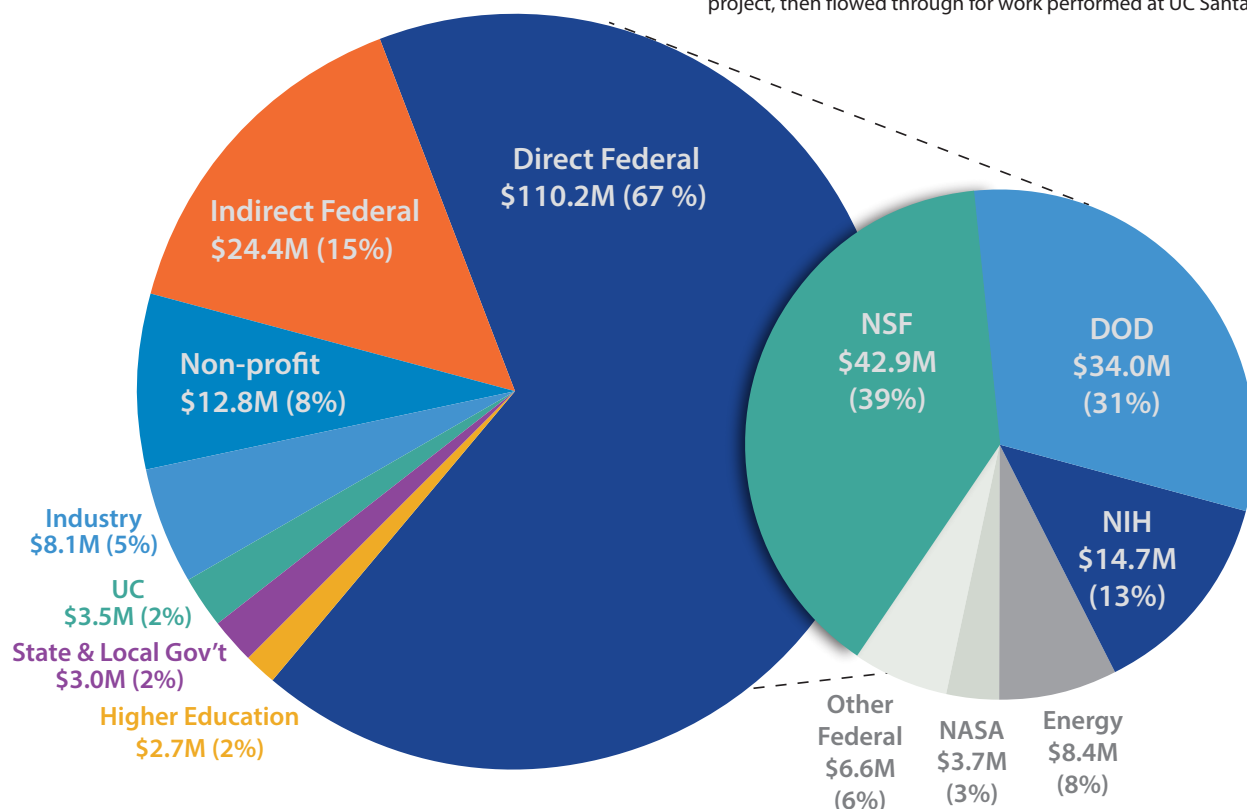
Awards by Sponsor Type (Including Direct Federal Sponsors)

\$165 M

Total Awards

UC Santa Barbara received \$134.6 million in direct and indirect federal funding, which represents 82% of the total sponsored project awards.

* Funds in the Indirect Federal category were awarded initially to another institution by the federal government for a multi-institution project, then flowed through for work performed at UC Santa Barbara.



2nd

in the world
in Leiden ranking of top 500
universities

1st

nationally in percentage
of assistant professors receiving NSF
CAREER awards

5

Nobel
Laureates since
1998

50%

Over
of undergraduate students
participate in research

1,050

Faculty

100

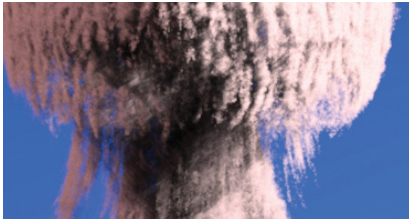
Over
interdisciplinary research
centers and institutes

1 of 62

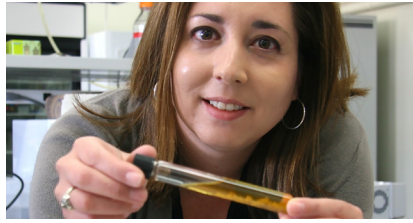
institutions in the
American Association
of Universities

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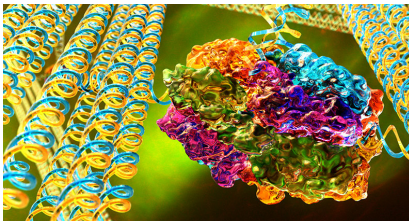
Smoke Effects: Theodore Kim, assistant professor in media arts and technology, led the team that pioneered wavelet turbulence, a visual effects technique used in dozens of major motion pictures. Kim and his colleagues received The Academy of Motion Picture Arts and Sciences Technical Achievement Award for their contributions.



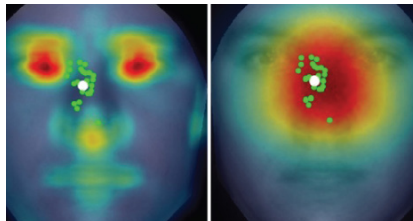
Gut Fungi Yield Biofuels: Michelle O'Malley, assistant professor of chemical engineering, studied fungus from the digestive tract of horses to identify the genetic material involved in manufacturing enzymes and other proteins—a process that could be key in unlocking the production of biofuels from non-food plants.



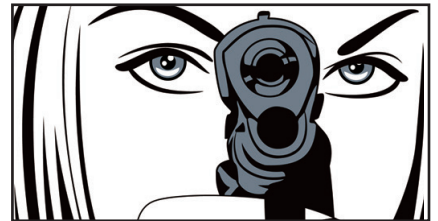
Manufactured Nanoparticles and Agriculture: A team led by UC Santa Barbara scientists studied the effects of manufactured nanoparticles on soybean crops in an effort to evaluate the possible environmental impact. The study demonstrated the potential for nanomaterial to affect agriculture.



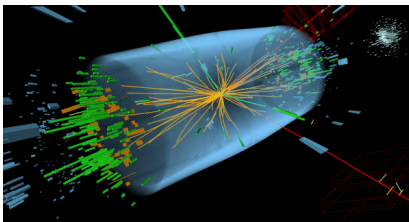
Mechanically Active Gel: Omar Saleh, associate professor of materials, and Deborah Fygenon, associate professor of physics, created a responsive gel made of DNA that reacts with movement to stimulation, similar to that of a living cell. The project has potential applications for a variety of fields, from smart materials to DNA nanotechnology.



A Single Glance: A new study by psychology professor Miguel Eckstein and graduate student Matt Peterson suggests most people look right below the eyes for the best look at someone's face. The initial involuntary glance lasts a mere 250 milliseconds, enough time for our brain to perform incredibly complex computations.



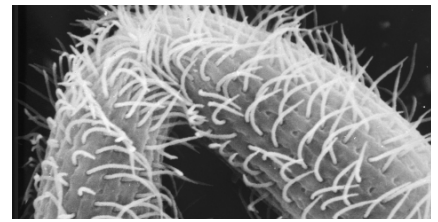
Girls with Guns: firearms, feminism and militarism: France Winddance Twine, professor of sociology, analyzes the dilemmas that racial, class and gender inequalities generate for US women of diverse backgrounds and female soldiers. The issue of military sexual assault is also examined from the perspective of female veterans of the US Armed Services.



Search for the Higgs Boson: Joe Incandela, UC Santa Barbara professor of physics and spokesperson for the Compact Muon Solenoid (CMS) experiment, presented observations of a new particle thought to be the Higgs boson, crucial to our understanding of why particles have mass.



Manifestations of Identity: Stephanie L. Batiste, associate professor of english and black studies, demonstrates how a reinforcement of American imperialism in Depression-era black theater and film helped strengthen claims of national inclusion and, ironically, transnational connection in her award-winning book *Darkening Mirrors*.



Gender Roulette: UCSB scientists discovered the sex-selection process of *Tetrahymena thermophila*, a single-celled organism with seven sexes. The team was able to determine that the sex type is randomly selected by programmed genetic recombination events during a developmental stage following fertilization.

Extending Innovation

The Office of Technology and Industry Alliances helps establish research and license agreements that support collaboration between university researchers and our industry partners and facilitates the use of university technology in commercial products that benefit the public.

Averages over
invention disclosures per year

100

Over
of inventions are under a licensing arrangement

50%

30% of industry
research partners are also licensees

Over
active inventions

600

46 new start-up
companies in the past ten
years

46



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