

The Facts: UC Federal Research

University of California research stimulates the economy through the development of new technologies, leads to the creation of new jobs, companies and industries, and advances scientific breakthroughs that benefit the entire world. This is possible because of the partnership with the federal government. Robust and sustained investments in our research agencies are critical to ensuring that our nation’s research enterprise can continue to lead the way for the next generation.

BREADTH OF UC RESEARCH

UC tackles some of the most urgent problems facing California and the world, and creates knowledge that improves lives.

- More than 800 research centers, institutes, laboratories and programs across ten campuses
- 6 academic health centers and 20 health professional schools
- 41-site Natural Reserve System
- A Division of Agricultural and Natural Resources serving all of California’s 58 counties
- 3 affiliate national laboratories – Lawrence Berkeley, Lawrence Livermore and Los Alamos

FEDERAL INVESTMENT IN UC RESEARCH

Federal funds are the university’s single most important source of support for research, accounting for more than half of UC’s total research awards.

- \$6.48 billion: Total amount of research awards in FY 2020
- \$3.81 billion: Total amount of federal research awards in FY 2020
- 9,963: Number of distinct federal research awards
- 9 percent of all U.S. academic research and development is conducted by UC researchers
- UC is awarded more National Institutes of Health and National Science Foundation funding than any other institution in the country

UC FEDERAL AGENCY RESEARCH FUNDING

Federal FY 2020 in million of dollars

Agency	Amount
NIH	\$2,374.27
NSF	\$553.16
Defense	\$342.24
Energy	\$129.79
NASA	\$119.55
USDA	\$84.55
Education	\$60.72
Other HHS	\$45.32
Commerce	\$39.25
State	\$13.88
Transportation	\$12.56
Other Agencies	\$33.49

TRAINING THE NEXT GENERATION

Much of UC's breakthrough research depends upon an unsung legion: graduate students. They crunch the data, conduct research, challenge the accepted and probe the possible.

- Graduate education and research at UC have long fueled California's innovation and development, helping establish California as the fifth-largest economy in the world.
- Approximately 59,000 UC graduate students teach and mentor more than 226,000 undergrads.
- UC graduate student work has led to inventions such as a smarter stethoscope to an app that provides early warning on earthquakes.
- 23 percent of Berkeley Lab employees who are student assistants, graduate research assistant or postdoctoral scholars.

IMPROVING HEALTH

UC delivers hope that tumors can be treated, diseases can be defeated and conditions can be cured.

- Highly competitive federal research funds enable UC scientists to advance understanding of the basic biological causes of cancer, cardiovascular disease, diabetes and HIV, among many other conditions, and to find improved therapies for patients, from treating pain to developing an artificial kidney.
- UC is awarded more National Institutes of Health (NIH) funding than any other institution—\$2.37 billion in NIH research awards in FY 2020—helping to find tomorrow's cures and fuel California's biomedical industry.

ADVANCING SCIENCE

UC research generates knowledge and innovations that are beneficial on a global scale.

- CRISPR gene-editing technology, which holds potential for medical, agricultural and other applications, emerged from work funded by the National Science Foundation and NIH.
- Agricultural research helps farmers compete globally and meet food demand; one major issue in California is fighting citrus greening disease, which threatens the state's multi-billion-dollar citrus industry as well as millions of residential citrus trees. UC is integrally involved in conducting research on citrus greening and other agricultural diseases and challenges.
- Social and behavioral science research is critical to responding effectively to disasters, improving international relations and educating the STEM workforce.

UC's Research Impact

Inventions per day (avg.) ----- 5

Inventions (UC FY 2019)----- 1,825

Startups founded on UC
patents (to date) ----- 1,321

Active inventions (UC FY 2019)-----12,658

Many of California's leading industries grew from UC research, including biotechnology, computing, semiconductors, telecommunications and agriculture.

Research Funding FY 2020

Research awards ----- \$6.48B

Federal research awards----- \$3.81B

Federal research
distinct awards----- 9,963

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