UC Pulse

UNIVERSITY OF CALIFORNIA

Innovation's in the air, from Washington, D.C. to California. Across the University of California system, students and faculty alike are tackling some of society's biggest problems. As the world's top university for undergraduate alumni launching venture-backed businesses, UC entrepreneurs are bringing the innovation pipeline to life from idea to execution, whether conducting new research in a lab or bringing a new idea to market. Nowhere was this spirit more clear than at the inaugural UC Regents Innovation Awards last month, where 23 awardees were honored from all ten campuses and three national labs for their ability to translate discovery into real-world impact that generates jobs, grows the economy and makes life better for all Americans. The honorees are cutting the costs by 90% for personalized gene-editing treatments for children with rare diseases, inventing new FDA-approved cancer drugs and founding companies using AI and robotics to assist with complex eye surgeries.

But that's not all. Three UC-affiliated national laboratory scientists won this year's prestigious Ernest Orlando Lawrence Award for their contributions to research and development supporting the Department of Energy's science, energy and national security mission.

When things get busy, as they often do in the fall, turning my attention to what UC makes possible always keeps me feeling both grounded and hopeful.

-- Chris Harrington, UC Associate Vice President, Federal Governmental Relations

What We're Watching

1.

Protecting California's coastal economy
UC Santa Cruz marine scientists invented a new technique to detect and warn of toxic algal blooms in the ocean, which could prevent costly closures of California's coastal fisheries. Funded by the **National Oceanic and Atmospheric Administration (NOAA**), the earlier warnings will help mitigate unforeseen fishery closures, which cost coastal communities millions of dollars in lost revenue and harm local tourism economies dependent on coastal recreation.

2.

Accelerating discovery
At **Lawrence Berkeley National Laboratory**, scientists are developing an AI tool that could revolutionize particle accelerators. Supported by the **Department of Energy (DOE)**, the technology helps optimize experiments, troubleshoot equipment and analyze data more efficiently, which could accelerate breakthroughs in medicine, quantum computing, energy storage and microelectronics -- all while strengthening America's leadership in scientific innovation.

3.

Searching for life beyond Earth
UC Riverside researchers uncovered new clues in the search for extraterrestrial life on Enceladus, one of Saturn's moons. Using data from NASA's Cassini spacecraft, scientists discovered salts and other molecules from the moon's underground ocean, then recreated the icy conditions in a lab to better understand how the organic compounds could support life. With funding from **NASA**, the findings could help future space missions detect life in outer space.

4.

Advancing geothermal energy
Eight UC campuses and national labs -- **Irvine, Santa Cruz, Berkeley, Riverside and San Diego**, as well as **Los Alamos, Lawrence Livermore and Lawrence Berkeley National Laboratories** -- will lead a three-year AI project to advance geothermal energy. The project, funded by **DOE**, will determine how AI can be leveraged to advance American energy independence.

5.

AI tool for Alzheimer's
UCLA will lead a national effort to evaluate the efficacy of AI tools and technologies to detect Alzheimer's and dementia. Supported by the **National Institute of Aging** at the **National Institutes of Health**, the effort will determine how to use the AI tools effectively for faster, more accurate diagnoses that lead to more timely treatment.

Did You Know?

UC is ranked **#1 in U.S. utility patents**, with **4 new inventions** every day.

UC is also ranked **#1 worldwide for highly cited researchers**, with **288 UC scientists** on the list.

5 new UC innovators are MacArthur Foundation fellows, meaning ¼ of this year's cohort is UC faculty, former postdocs or alumni.

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