

UC SANTA BARBARA

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Gail Gallessich

## **UCSB Receives \$100,000 Grand Challenges Explorations Grant for Innovative Global Health Research**

UC Santa Barbara has received a \$100,000 Grand Challenges Explorations grant from the Bill and Melinda Gates Foundation. The grant will support an innovative global health research project conducted by Kevin Plaxco, professor in the Department of Chemistry and Biochemistry.

Plaxco's project is one of 78 grants announced by the Gates Foundation in the fourth funding round of Grand Challenges Explorations, an initiative to help scientists around the world explore bold and largely unproven ways to improve health in developing countries. The grants were provided to scientists in 18 countries on six continents.

To receive funding, Plaxco showed in a two-page application how his idea falls outside current scientific paradigms and might lead to significant advances in global health. The initiative is highly competitive, receiving almost 2,700 proposals in this round.

Plaxco's project pertains to vaccines; specifically, to monitoring the effectiveness of a new class of vaccines that try to boost the immune system's ability to fight infections at the mucus membranes where they initially take hold. Plaxco's research team is building an inexpensive, pocket-sized device that could tell whether these

"mucosal vaccines" have done their job and produced antibodies against the infectious virus or bacteria. Doctors could use it to check their patients, and give them a booster if the first dose failed. This ability would be of particular value in the developing world, where the cost of vaccination often represents a significant hardship.

"We have developed an electronic antibody detection method that does not require processing -- filtering or washing -- or the addition of chemicals," said Plaxco. "We will develop and test such sensors for the detection of anti-HIV antibodies, which could significantly augment disease detection and vaccine validation efforts."

Dr. Tachi Yamada, president of the Gates Foundation's Global Health Program commented on the awards. "The winners of these grants show the bold thinking we need to tackle some of the world's greatest health challenges," he said. "I'm excited about their ideas and look forward to seeing some of these exploratory projects turn into life-saving breakthroughs."

Grand Challenges Explorations is a five-year, \$100 million initiative of the Gates Foundation to promote innovation in global health. The program uses an agile, streamlined grant process -- applications are limited to two pages, and preliminary data are not required. Proposals are reviewed and selected by a committee of foundation staff and external experts, and grant decisions are made within approximately three months of the close of the funding round.

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## **About UC Santa Barbara**

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.