

Zuckerberg, Chan pledge \$3B to end disease

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Facebook CEO Mark Zuckerberg (left) and his wife, Priscilla Chan, rehearse for a speech in San Francisco, California, September 20, 2016. Zuckerberg and Chan have a new lofty goal: to cure, manage or eradicate all disease by the end of this century. Photo: AP Photo/Jeff Chiu

SAN FRANCISCO, Calif. — Facebook CEO Mark Zuckerberg has a goal that's even more ambitious than connecting the entire world to the internet: He and his wife want to help eradicate all disease by the end of this century.

Zuckerberg and Priscilla Chan are committing \$3 billion over the next 10 years to accelerate basic scientific research, including the creation of research tools — from software to hardware to yet-undiscovered techniques — they hope will ultimately lead to scientific breakthroughs, the way the microscope and DNA sequencing have in generations past.

The goal, which they are unlikely to live to see accomplished, is to "cure, prevent or manage all disease" in the next 80 or so years. They acknowledge that this might sound crazy but point to how far medicine and science have come in the last century — with vaccines, statins for heart disease, chemotherapy, and so on — following millennia with little progress.

"So if you even just assume that we'll be able to continue to make progress on that same trajectory, then that implies that by the end of this century we will have been able to solve most of these types of things," Zuckerberg said in an interview. He and Chan have spent the past two years speaking to scientists and other experts to plan the endeavor. He emphasized "that this isn't something where we just read a book and decided we're going to do."

Through their philanthropic organization, the Chan Zuckerberg Initiative, the commitment includes \$600 million to fund a new research center in San Francisco, where scientific and medical researchers will work alongside engineers on long-term projects spanning years or even decades. The goal is not to focus narrowly on specific ailments, such as bone cancer or Parkinson's disease, but rather to do basic research. One example: a cell atlas that maps out all the different types of cells in the body, which could help researchers create various types of drugs.

Chan's work as a pediatrician seems to be a big driver in the couple's decision to take up this latest cause.

"I've been with families where we've hit the limit of what's possible through medicine and science," Chan said. "I've had to tell families devastating diagnoses of leukemia, or that we just weren't able to resuscitate their child."

The couple spoke with The Associated Press in their home in Palo Alto, California, where their infant daughter, Max, had just woken from a nap. Their dog, Beast, came by to sit briefly during the 25-minute interview.

Zuckerberg and Chan hope that their effort will inspire other far-reaching efforts and collaboration in science, medicine and engineering, so that basic research is no longer relegated to the margins.

"We spend 50 times more on health care treating people who are sick than we spend on science research (to cure) diseases so that people don't get sick in the first place," Zuckerberg said. He added that the approach reflects a belief that "people are always going to suffer from disease, so therefore we should focus on treating people who are sick."

Eric Lander, a professor of biology at the Massachusetts Institute of Technology and director of the Broad Institute at MIT and Harvard, said he's had some 20 conversations with Zuckerberg and Chan over the past year about the initiative and called their goal "the right kind of goal for thinking about that kind of time frame." He is not involved with the project itself but expressed confidence in it.

"Mark has brought new models to industry with Facebook," he said, adding that while organizations like the National Institutes of Health are "fantastic," there is "no point in replicating what existing models do."

"It's very hard with today's science funding to build a team to work on scientific problems that are like what you would find at a world-class technology company, that are that scale," Zuckerberg said. "So that's something I think we can concretely help out with."

Their new center, called Biohub, will run as an independent research center at the University of California, San Francisco in collaboration with UC Berkeley and Stanford University.

The Chan Zuckerberg science initiative will be headed by Cori Bargmann, a neuroscientist who is best known in scientific circles for her research on the behavior of a tiny worm called *C. elegans*. Bargmann said the idea of bringing engineers and scientists together presents a "unique opportunity to take science in a new direction."

Zuckerberg said the couple decided to focus on creating better tools because this is where they see need, based on their conversations with scientists.

"It's not that no one is doing this today, but out of all the money that our society spends on science funding, probably not enough is going toward tool development," Zuckerberg said.

Tools, he added, are long-term investments. It will likely take years for the first tools to be developed through this initiative and even longer before they are used to cure diseases.

Zuckerberg and Chan, who have committed to donating 99 percent of their wealth, have spent the past two years meeting with scientists and other experts to come up with the endeavor. The two stressed that they believe that their goal can be accomplished, if not in their lifetime, then in their child's lifetime. It was Max's birth last November that inspired the billionaire couple to give away nearly all their money to help solve the world's problems.

At the time, this was valued at more than \$45 billion worth of Facebook stock, which the couple transferred to the Chan Zuckerberg Initiative. The couple's philanthropy plan won't affect Zuckerberg's status as controlling shareholder of Facebook.

Zuckerberg and Chan often draw comparisons to Bill and Melinda Gates, whose philanthropic work also focuses on health and education. In an emailed statement, the Gateses said investing "in basic science research is at the root of the world's most important innovations and achievements." Zuckerberg and Chan, they added "are making an incredible commitment to research and development that will lead to the breakthroughs to cure disease and lift millions out of poverty."

Quiz

- 1 Read the paragraph from the article.

The couple spoke with The Associated Press in their home in Palo Alto, California, where their infant daughter, Max, had just woken from a nap. Their dog, Beast, came by to sit briefly during the 25-minute interview.

Does this paragraph support the central idea of the article? Why?

- (A) Yes, because it explains what inspired Zuckerberg and Chan to eradicate disease.
 - (B) Yes, because it highlights details of Zuckerberg's and Chan's personal lives.
 - (C) No, because it not describe Zuckerberg's and Chan's plan to fund scientific research.
 - (D) No, because it does not explain which diseases the Chan Zuckerberg Initiative plans to cure.
- 2 Which sentence from the article BEST reflects the central idea the Chan Zuckerberg science initiative is primarily concerned with preventing, not managing, disease?
- (A) The goal, which they are unlikely to live to see accomplished, is to "cure, prevent or manage all disease" in the next 80 or so years.
 - (B) They acknowledge that this might sound crazy but point to how far medicine and science have come in the last century — with vaccines, statins for heart disease, chemotherapy, and so on — following millennia with little progress.
 - (C) The goal is not to focus narrowly on specific ailments, such as bone cancer or Parkinson's disease, but rather to do basic research.
 - (D) "We spend 50 times more on health care treating people who are sick than we spend on science research (to cure) diseases so that people don't get sick in the first place," Zuckerberg said.
- 3 Based on the article, each of the following contributed to the establishment of the Chan Zuckerberg science initiative EXCEPT:
- (A) the birth of Max
 - (B) the negative impact of disease on families
 - (C) health problems experienced during Chan's pregnancy
 - (D) the need for more funding for basic scientific research

- 4 Which of the following statements BEST represents how Eric Lander, Cori Bargmann, Melinda Gates and Bill Gates are approaching the Chan Zuckerberg science initiative?
- (A) They all highlight the importance of philanthropy.
 - (B) They all support the initiative's objective.
 - (C) They all agree that curing disease is a lofty goal.
 - (D) They all believe that research should target specific diseases.