

Science chief wants next pandemic vaccine ready in 100 days

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In this Jan. 16, 2021 file photo, Eric Lander speaks during an event at The Queen theater in Wilmington, Del. Credit: AP Photo/Matt Slocum

The new White House science adviser wants to have a vaccine ready to fight the next pandemic in just about 100 days after recognizing a

potential viral outbreak.

In his first interview after being sworn in Wednesday, Eric Lander painted a rosy near future where a renewed American emphasis on science not only better prepares the world for the next pandemic with plug-and-play vaccines, but also changes how medicine fights disease and treats patients, curbs [climate change](#) and further explores space. He even threw in a "Star Trek" reference.

"This is a moment in so many ways, not just health, that we can rethink fundamental assumptions about what's possible and that's true of climate and energy and many areas," Lander told The Associated Press.

Lander took his oath of office on a 500-year-old fragment of the [Mishnah](#), an ancient Jewish text documenting oral traditions and laws. He is the first director of the [Office of Science and Technology Policy](#) to be promoted to Cabinet level.

Lander said President Joe Biden's [elevation of the science post](#) is a symbolic show "that science should have a seat at the table" but also allows him to have higher-level talks with different agency chiefs about making policy.

Lander is a mathematician and geneticist by training who was part of the [human genome mapping project](#) and directed the Broad Institute at MIT and Harvard. He said he is particularly focused not so much on this pandemic, but the lessons learned from this one to prepare for the next one.

"It was amazing at one level that we were able to produce highly effective vaccines in less than a year, but from another point of view you'd say, 'Boy, a year's a long time,'" even though in the past it would take three years or four years, Lander said. "To really make a difference

we want to get this done in 100 days. And so a lot of us have been talking about a 100-day target from the recognition from a virus with pandemic potential."

"It would mean that we would have had a vaccine in early April if that had happened this time, early April of 2020," Lander said. "It makes you gulp for a second, but it's totally feasible to do that."

Scientists were working on so-called all-purpose ready-to-go platform technologies for vaccines long before the pandemic. They're considered "plug-and-play." Instead of using the germ itself to make a vaccine, they use messenger RNA and add the genetic code for the germ. That's what happened with the Pfizer and Moderna COVID-19 shots.

Beyond being optimistic about confronting future pandemics, Lander wonders about the implications for preventing cancer.

"Maybe the same sort of experience about moving so much faster than we thought is applicable to cancer," said Lander, who during the Obama administration was co-chair of the [Presidential Council of Advisors on Science and Technology](#). A company already has been working on that.

For that matter, the pandemic and telehealth brought the doctor to patients in some ways. Lander said he is reimagining "a world where we rearrange a lot of things" to get more patient-centered health care, including community health workers checking up every few weeks on people about their blood pressure, blood sugar and other chronic problems.

Two of Lander's predecessor praised him. Neal Lane, President Bill Clinton's science adviser, said Lander is "perfect" for the pandemic because of the need for a strategy and international agreements. Obama's science chief, John Holden, called him "a Renaissance man."

Lander's nomination had been delayed for months as senators sought more information about meetings he had with the late Jeffrey Epstein, a financier who was charged with sex trafficking before his apparent suicide. Lander said he only met with Epstein twice, in 2012, and never requested or received funds from Epstein or his foundation. At his confirmation hearing, Lander also apologized for a 2016 article he wrote that downplayed the work of two Nobel Prize-winning female scientists.

Lander, who has visited Greenland on a balmy 72-degree day, told the AP he sees climate change as "an incredibly serious threat to this planet in many, many ways."

Still, Lander said he was more optimistic now than he and others were a decade ago because "I see a path to doing something about it."

Lander pointed to a drop of about 90% in solar and energy wind costs, making them now as cheap as fossil fuels that cause climate change. But he said what's also needed is "an explosion of ideas" to improve battery life and provide carbon-free energy that is not weather-dependent. Those innovations need federal incentives that are part of Biden's jobs package, he said.

Reducing methane is key to fighting climate change, Lander added, but first improvements are needed in technology to determine where methane is leaking from.

As for space, Lander said he was too new to comment on whether heading to the moon or Mars should be the goal. The Obama administration redirected NASA away from the Bush-era plan to send astronauts back to the moon and was more aimed for Mars or an asteroid. The Trump administration not only focused back on the moon but set a 2024 goal for a new moon landing.

"Are we going to go to the moon and are we going to go to Mars and are we going to moons of Jupiter? Sure. The exact order I think is great to think about or great to talk about," Lander said.

He quoted "Star Trek IV: The Voyage Home," when Captain James T. Kirk's love interest asked if he was from outer space. He responded: "I'm from Iowa, I only work in outer space."

Adds Lander: "That was a fun line in 'Star Trek IV,' but folks in Iowa are really going to say that."

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