



Trump Team's \$500 Million Bet on Old Vaccine Technology Puzzles Scientists

Other universal flu vaccine candidates use newer technologies, and some are at more advanced stages of human testing.

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The Trump administration's unprecedented \$500 million grant for a broadly protective flu shot has confounded vaccine and pandemic preparedness experts, who said the project was in early stages, relied on old technology, and was just one of more than 200 such efforts.

Health and Human Services Secretary Robert F. Kennedy Jr. shifted the money from a pandemic preparedness fund to a vaccine development program led by two scientists whom the administration recently named to senior positions at the National Institutes of Health.

While some experts were pleased that Kennedy had supported any vaccine project, they said the [May 1 announcement](#) contravened sound scientific policy, appeared arbitrary, and raised the kinds of questions about conflicts of interest that have dogged many of President Donald Trump's actions.

Focusing vast resources on a single vaccine candidate "is a little like going to the Kentucky Derby and putting all your money on one horse," said William Schaffner, a Vanderbilt University professor and past president of the National Foundation for Infectious Diseases. "In science we normally put money on a number of different horses because we can't be entirely sure who's going to win."

Others were mystified by the decision, since the candidate vaccine uses technology that was largely abandoned in the 1970s and eschews techniques developed in recent decades through funding from the Department of Health and Human Services and the Defense Department.

"This is not a next-generation vaccine," said Rick Bright, who led HHS' Biomedical Advanced Research and Development Authority, or BARDA, in the first Trump administration. "It's so last-generation, or first-generation, it's mind-blowing."

The vaccine is being developed at the National Institute for Allergy and Infectious Diseases by Jeffery Taubenberger, whom Trump named as acting chief of the institute in late April, and his colleague Matthew Memoli, a critic of U.S. covid-19 policy whom Trump picked to lead the NIH until April 1, when Jay Bhattacharya took office. Bhattacharya named Memoli his principal deputy.

Taubenberger gained fame as an Armed Forces Institute of Pathology scientist in 1997 when his lab sequenced the genome of the 1918 pandemic influenza virus, using tissue samples from U.S. troops who died in that plague. He joined the NIH in 2006.

In a [May 1 news release](#), HHS called the Taubenberger-Memoli vaccine initiative “Generation Gold Standard,” saying it represented “a decisive shift toward transparency, effectiveness, and comprehensive preparedness.”

Bhattacharya said it represented a “paradigm shift.”

But the NIH vaccine-makers’ goal of creating a shot that protects against multiple or all strains of influenza — currently vaccines must be given each year to account for shifts in the virus — is not new.

Then-NIAID Director Anthony Fauci launched a network of academic researchers in pursuit of a broadly protective flu vaccine in 2019. In addition to that [NIH-led consortium](#), more than 200 flu vaccines are under development in the U.S. and other countries.

Many use newer technologies, and some are at more advanced stages of human testing than the Taubenberger vaccine, whose approach appears basically the same as the one used in flu vaccines starting in 1944, Bright said.

In the news release, HHS described the vaccine as “in advanced trials” and said it would induce “robust” responses and “long-lasting protection.” But Taubenberger and his colleagues haven’t published a complete human study of the vaccine yet. [A study showing the vaccine](#) protected mice from the flu appeared in 2022.

For Operation Warp Speed, which led to the creation of the COVID vaccine during Trump’s first term, government scientists reviewed detailed plans and data from academic and commercial laboratories vying for federal money, said [Greg Poland](#), a flu expert and president of the Atria Health Academy of Science and Medicine. “If that’s happening here, it’s opaque to me,” he said.

When asked what data beyond its press release supported the decision, HHS spokesperson Andrew Nixon pointed to the agency’s one-page statement. Asked whether the decision would curtail funding for the Fauci-created consortium or other universal vaccine approaches, Nixon did not specifically respond. “Generation Gold Standard is the most promising,” he said in an email.

Taubenberger did not respond to a request for comment. Nixon and NIH spokesperson Amanda Fine did not respond to requests for an interview with Taubenberger or Memoli.

The HHS statement stressed that by developing the vaccine in-house, the government “ensures radical transparency, public accountability, and freedom from commercial conflicts of interest.” While any vaccine would eventually have to be made commercially, NIH involvement through more stages of development could give the government greater influence on any vaccine’s eventual price, Schaffner said.

If the mRNA-based COVID shots produced by Moderna and Pfizer-BioNTech represented the cutting edge of vaccine technology, applying ultra-sophisticated approaches never before seen in an inoculation, the approach by Taubenberger and Memoli represents a blast from the past.

Their vaccine is made by inactivating influenza viruses with a carcinogenic chemical called beta-propiolactone. Scientists have used the chemical to neutralize viruses since at least the 1950s. This whole-virus inactivation method, mostly using other chemicals, was the standard way to make flu vaccines into the 1970s, when it was modified, partly because whole-virus vaccines caused high fevers or even seizures in children.

The limited published data from the Taubenberger vaccine, [from an initial safety trial](#) involving 45 patients, showed no major side effects. The scientists are testing the vaccine as a regular shot and as an intranasal spray with the idea of stopping the virus in the respiratory tract before it causes a broad infection.

“The notion of a universal influenza A pandemic vaccine is a good one,” said Poland, who called Taubenberger an excellent scientist. But he added: “I’m not so sure about the platform, and the dollar amount is a puzzler. This vaccine’s in very early development.”

Paul Friedrichs, a retired Air Force general who led the Office of Pandemic Preparedness and Response Policy in President Joe Biden’s White House, said that “giving \$500 million upfront with very little data to support it is unlike anything I’ve ever seen.”

“The technology for developing vaccines has tremendously evolved over many decades,” Friedrichs said. “Why would we go back to an approach historically associated with greater or more frequent adverse events?”

The government appeared to be transferring the money for the Taubenberger vaccine development from an existing \$1.3 billion vaccine fund at Project NextGen, a mostly COVID-focused program at BARDA, Friedrichs said. Most of that money was earmarked to support advanced research on COVID and other viral vaccines, including those protecting against emerging diseases.

It is “very concerning that we’re de-emphasizing COVID, which we may live to regret,” Poland said. “It assumes we won’t have a COVID variant that escapes the current moderately high levels of COVID immunity.”

Nixon said Project NextGen, for which some funds were earmarked for mRNA research, is under review. Kennedy is critical of mRNA vaccines, once claiming, falsely, that they are the deadliest vaccines in history.

Ted Ross, director of global vaccine development at the Cleveland Clinic, said he was “happy to see them investing in respiratory vaccines, including a universal flu vaccine, with all the programs they’ve been cutting.”

“But I don’t think this is the only approach,” Ross said. “Other universal flu vaccines are in progress, and their success and failure are not known yet.”

His team, part of the NIAID-funded flu vaccine consortium, is using artificial intelligence and computer modeling to design vaccines that produce the broadest immunity to influenza, including seasonal and pandemic strains.

As interim director, Memoli oversaw the start of the administration’s massive cuts at the NIH, with the elimination of some 800 agency grants worth over \$2 billion. [More than 1,200 NIH employees](#) have been fired, and many researchers, including Ross, are in limbo.

His lab is close to testing a candidate vaccine on people, Ross said, while waiting to find out about its NIH funding. “I’m not sure whether my contract is on the chopping block,” he said.

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