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Shot Sighted: NIH Backs Away from mRNA Vaccine Technology

A letter from David A. Brenner, MD, President and CEO of Sanford Burnham Prebys

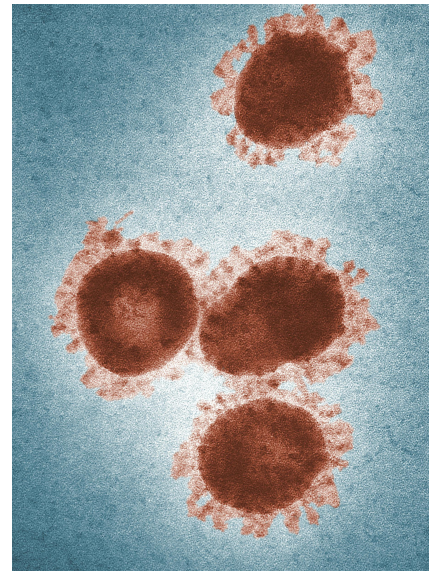
In a 2020 [speech](#) at the height of the pandemic, President Trump celebrated his administration's Operation Warp Speed for its rapid development and deployment of COVID-19 vaccines. He called it "an incredible success." And rightly so.

The two most widely deployed COVID vaccines came from the biopharmaceutical companies Moderna and Pfizer. They were administered billions of times worldwide during and after the pandemic. It is estimated these vaccines (with a handful of others) [prevented](#) at least 14.4 million deaths worldwide, including [more than 3 million](#) in the United States alone

Three years later, the two scientists whose groundbreaking work led to the COVID-19 vaccines, would win the [2023 Nobel Prize in Physiology or Medicine](#).

What made the Moderna and Pfizer vaccines particularly notable was how quickly they were created—just 10 months from when the virus got its [official name](#). The speed of development was due to the technology used, which is based on messenger RNA (mRNA), a single-strand molecule that instructs cells how to build specific proteins.

In the case of COVID-19 vaccines, the mRNA contains the blueprint to create the characteristic protein spikes on the virus' surface which then primes the body's immune system to respond quickly and effectively when exposed to the actual virus.



Traditional vaccines use bits of weakened, inactive or synthetic virus, which requires growing massive amounts of cultured live virus or cells, an extremely time-consuming and costly endeavor. In contrast, once a vaccine target mRNA is designed and synthesized, it can be quickly mass-produced.

Now, in its latest inexplicable and counter-productive order, the National Institutes of Health is [reportedly](#) urging scientists to remove all references to mRNA vaccine technology from their grant applications. It has already [terminated](#) at least one grant. It has offered no explanation.

The move, say observers, may signal the agency's abandonment of mRNA technology, which has huge therapeutic potential, not just for treating or preventing infectious diseases, but also [immunological and cardiovascular conditions](#), [tissue damage](#) and [cancer](#). Some [cancer mRNA vaccines](#) are already in clinical trials

The NIH's apparent opposition to mRNA research is not surprising. It is a continuation of a series of actions based on misinformation, lack of knowledge or, in this case, a particular antipathy for vaccines, which conspiracy theorists claim without any scientific evidence are dangerous and health threatening.

Robert F. Kennedy, Jr., the Health and Human Services Secretary in the second Trump administration, has a long history of making [false and misleading claims](#) about vaccines and COVID-19. In 2021, he unsuccessfully petitioned government regulators to rescind approval of mRNA COVID-19 vaccines, falsely declaring them to be “the deadliest vaccine ever made,” based on unverified claims of side effects.

Kennedy has long opposed vaccines of all sorts. He has wrongly alleged that the childhood vaccine for measles, mumps and rubella (MMR) is linked to [autism](#) and other neurological disorders. That specious allegation was rebutted by hard science long ago.

Under Kennedy's watch, the NIH has [terminated](#) at least 33 research grants for projects to better understand why some people are hesitant to receive vaccines or to evaluate strategies that encourage key vaccinations.

“It is the policy of NIH not to prioritize research activities that focuses [sic] gaining scientific knowledge on why individuals are hesitant to be vaccinated and/or explore ways to improve vaccine interest and commitment,” the termination letters said.

As a result, less critical science is being done, less knowledge is being learned and more health catastrophes are the offing.

Measles is an example. It is a highly contagious disease that was officially declared eliminated in the U.S., thanks in large part to the [MMR vaccine](#), which was introduced in 1971. With larger numbers of Americans deciding to forego MMR vaccinations of their children, [herd immunity](#) has declined and the disease has returned.

An [outbreak](#) in Texas is growing with no end in sight. It has already killed an unvaccinated 6-year-old child in Gaines County, Texas, the center of the outbreak. It is also the suspected cause of death of an unvaccinated adult in New Mexico.

A measles outbreak, to quote an infectious disease epidemiologist, is “like a forest fire throwing out sparks.” The outbreak will burn past state lines.

The [Centers for Disease Control](#) is keeping tabs, but federal health authorities have been mostly silent on the measles outbreak. Kennedy has promoted alternative treatments, such as steroids, antibiotics and cod liver oil.

None are known to be effective against measles, but cod liver oil has been proven effective as an [antidepressant](#). That might be needed.

Sincerely,

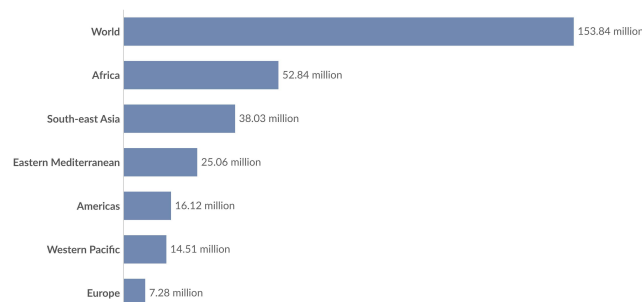


David A. Brenner, MD
President and Chief Executive Officer
Donald Bren Chief Executive Chair

Number of lives saved by vaccines from 1974 to 2024

Estimated deaths averted thanks to vaccinations against fatal diseases, including measles, tuberculosis, whooping cough, rubella, diphtheria, and others.

Our World in Data



Data source: Shattock et al. (2024). Contribution of vaccination to improved survival and health: modelling 50 years of the Expanded Programme on Immunization.

Note: India, Nepal and Bangladesh are included in "South-east Asia".

OurWorldinData.org/vaccination | CC BY