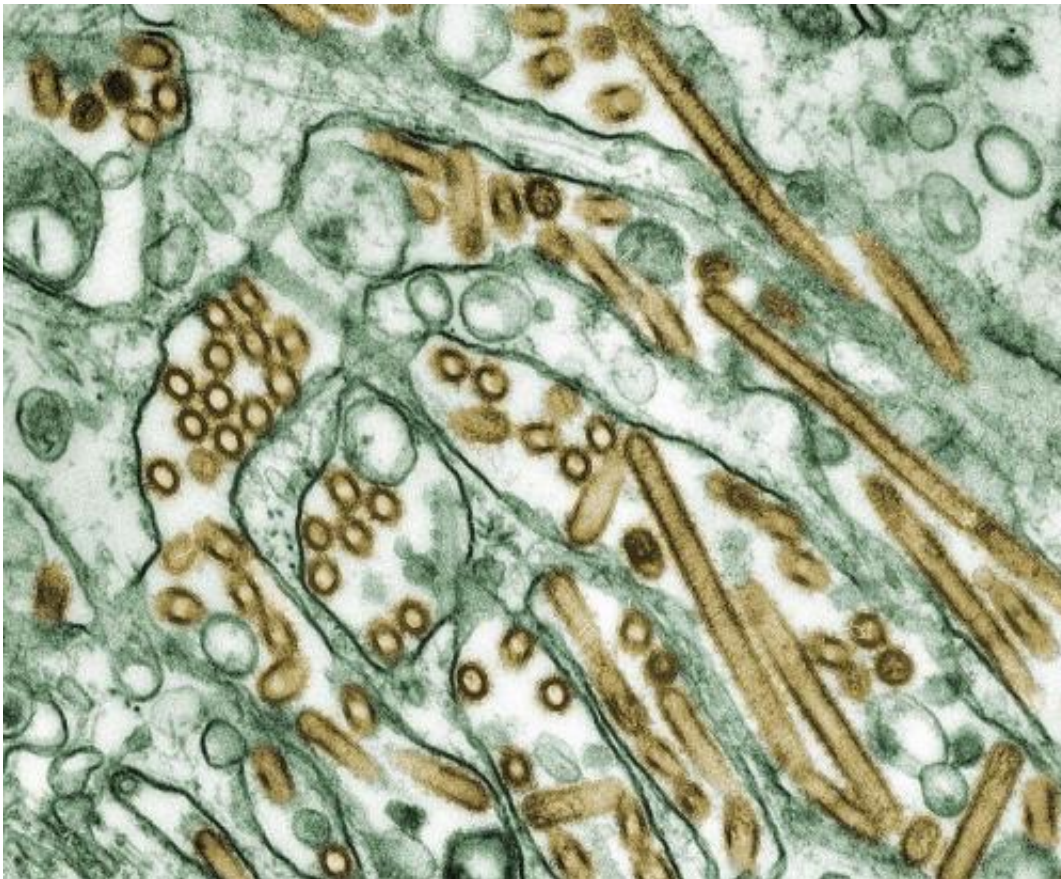


New push for mRNA bird flu vaccine development: WHO

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Colorized transmission electron micrograph of Avian influenza A H5N1 viruses.
Credit: Public Domain

The World Health Organization announced Monday a new project to accelerate the development in poorer countries of vaccines for human

bird flu infections using cutting-edge messenger RNA technology.

The WHO said Argentinian manufacturer Sinergium Biotech would lead the effort and had already begun developing candidate H5N1 vaccines.

The bird flu H5N1 first emerged in 1996, but since 2020 an [exponential growth](#) in outbreaks in birds has occurred in parallel with the virus increasingly jumping to mammals, including cattle in US farms and a few humans.

This has prompted fears the virus could spark a future pandemic.

Sinergium is aiming to establish proof-of-concept in [preclinical models](#) for its [candidate vaccines](#), the WHO said.

Once the preclinical data is ready, the technology, materials, and expertise will be shared with a network of manufacturers in [poorer countries](#), allowing them to accelerate their own development and production.

The UN health agency said the project would be rolled out through the mRNA technology transfer program it established with the UN-backed Medicines Patent Pool (MPP) in 2021, at the height of the COVID-19 crisis.

That program was aimed to help low- and [middle-income countries](#), which found themselves dramatically underserved during the pandemic, to develop and produce their own vaccines using mRNA.

The technology instructs the body to produce a unique protein that stimulates an immune response, teaching it to defend against the infection.

Vaccine equity

Swiftly developed mRNA COVID vaccines were game-changers during the pandemic, but they also exposed glaring global vaccine inequity and demands for a fairer distribution amid efforts to use the [technology](#) against other diseases.

"This initiative exemplifies why WHO established the mRNA Technology Transfer Program," the agency's chief Tedros Adhanom Ghebreyesus said in a statement.

That program, which counts 15 manufacturing partners in countries ranging from South Africa to Ukraine to Vietnam, was aimed "to foster greater research, development and production in low- and middle-income countries", he said.

That way, "when the next pandemic arrives, the world will be better prepared to mount a more effective and more equitable response".

Avian influenza viruses are among those considered to carry the potential of sparking a future pandemic.

The WHO has said there are a range of traditional influenza vaccines already licensed for pandemic use that could potentially be tailored to combat H5N1 if it begins spreading among people.

But Martin Friede, who heads the WHO's vaccine research unit, said focusing on developing mRNA-based vaccines was particularly interesting when seeking to establish sustainable production capacity.

Previous efforts to boost influenza vaccine production in developing countries had often faltered, with facilities narrowly focused on egg-based [pandemic](#) influenza jabs shutting after the threat dissipated and

governments stopped procuring the doses.

"The advantage of mRNA is that, in theory, we can make a COVID vaccine, we can make H5N1 vaccines, but also many other vaccines and importantly also therapeutics," Friede told reporters.

If the need for H5N1 vaccines or other jabs fades, instead of shutting down production, "we hope that all of the partners will be able to produce something else", he said.

He said half of the manufacturers in the program had already begun installing necessary equipment to develop and produce mRNA-based vaccines, meaning they will be able to act far more swiftly if disaster strikes again.

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