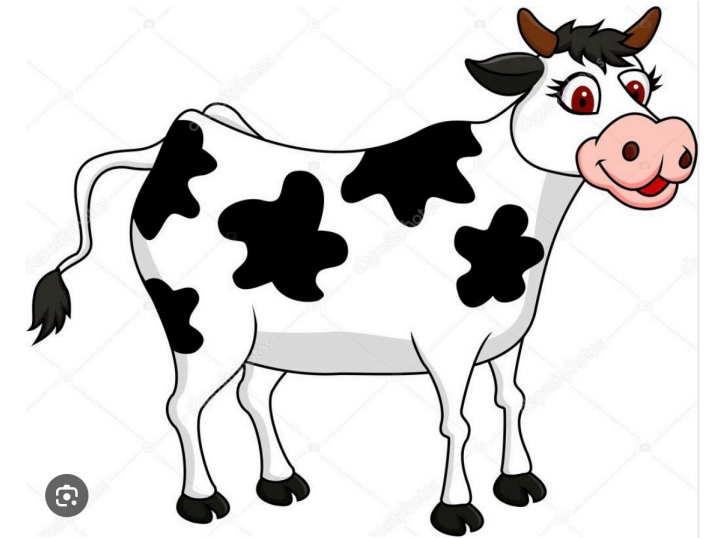


**1997:** First ever **human** cases and deaths ascribed to bird flu, in Hong Kong



**27 years of Bird Flu,  
Narratives, Vaccines  
and Questions**

**Meryl Nass, MD  
July 1, 2024**



# Moderna receives \$176 million from BARDA for mRNA influenza vaccines

July 2, 2024

\* "The U.S. government already has stockpiles of H5 vaccines made by manufacturers including CSL Seqirus and Sanofi." (The 2 deadly vaccines)

\* "The company has already been working on mRNA-based pandemic vaccines, specifically targeting H5 and H7 avian influenza viruses.... Previous research has shown that H5 viruses are poorly immunogenic in people and vaccination requires two doses to induce what is thought to be a protective response." (Surmised)

\* "The H5 virus targeted in the Moderna vaccine used in the Phase 1/2 trial was an H5N8, a cousin of H5N1, the virus spreading in dairy cattle in the United States... The Seqirus H5 vaccine in the [National Pre-Pandemic Influenza Vaccine Stockpile](#) also targets that H5N8 virus." (Did they move to H5N8 because the H5N1 vaccines were killers?)

# Good biosecurity is the key to mitigating the spread of H5N1 bird flu

*I am calling on producers to use our resources to enhance their biosecurity measures and states and producers to opt in to our support programs and herd monitoring programs.*

**Tom Vilsack** Guest columnist

Published 10:05 a.m. CT June 24, 2024

<https://www.desmoinesregister.com/story/opinion/columnists/iowa-view/2024/06/24/bird-flu-pandemic-risk-spread-mitigation-biosecurity-tom-vilsack-usda/74192664007/>

**From the Secretary of Agriculture, June 24, 2024**

- "H5N1 is highly pathogenic in birds, meaning birds that get the virus get very sick, very quickly, and almost always die as a result. REALLY?"
- It is a disease that our scientists understand well. For poultry farmers, depopulating affected flocks, disinfecting their poultry houses, barns, and equipment, and improving their biosecurity practices has helped control the spread of the disease while keeping people safe. Sadly, migrating birds bring H5N1 with them, so there will likely always be a threat of the disease for our poultry farmers.
- Sick cows do not typically die from the virus and typically recover after a few weeks and return to full milk production.
- Even just a small splash of milk can spread the disease. THEN WHY CAN'T THE USG GROW VIRUS FROM MILK?
- USDA scientists are also working with partners to develop a cattle-specific H5N1 vaccine, an important tool to eventually help to eliminate the virus from the nation's dairy cattle herd, but that process requires many steps and will take time."



3  
revised edition

ISBN 21810-1119

FAO ANIMAL PRODUCTION AND HEALTH



manual

PREPARING FOR  
HIGHLY PATHOGENIC  
AVIAN INFLUENZA



# UN Food and Agriculture Organization

2009

- "Avian influenza is caused by influenza viruses that are **common in wild birds** and occasionally infect poultry.
- **When poultry are infected, they may have no disease, mild disease or very severe disease.**
- Chickens, quail and turkeys are especially susceptible, while ducks more commonly show no disease but act as a reservoir for the virus.
- Other poultry species, including guinea fowl and pheasants, and also ostriches, can become affected.
- **While wild birds are generally not affected by the AI viruses that they carry, they can occasionally suffer disease."**
- <https://www.fao.org/4/i0808e/i0808e.pdf>

> J Wildl Dis. 2012 Jul;48(3):669-75. doi: 10.7589/0090-3558-48.3.669.

## Surveillance of avian influenza viruses in migratory birds in Egypt, 2003–09

Atef Soliman <sup>1</sup>, Magdi Saad, Emad Elassal, Ehab Amir, Chantal Plathonoff, Verina Bahgat, Maha El-Badry, Lu'ay S Ahmed, Mostafa Fouda, Mohammed Gamaleldin, Nahed Abd-Elal Mohamed, Stephanie Salyer, Claire Cornelius, Robert Barthel

Affiliations – collapse

### Affiliation

<sup>1</sup> US Naval Medical Research Unit Number 3, 3A Imtidad Ramses St., Abassia, Cairo, Egypt.  
atef.soliman.ctr.eg@med.navy.mil

- During September 2003-February 2009, the US Naval Medical Research Unit Number 3, Cairo, Egypt, in collaboration with the Egyptian Ministry of Environment, obtained cloacal swabs from 7,894 migratory birds captured or shot by hunters in different geographic areas in Egypt.
- Of the 7,894 samples, 745 (9.4%) were positive for the influenza A matrix gene
- **No major die-offs or sick migratory birds** were detected during the study.

<https://pubmed.ncbi.nlm.nih.gov/22740532/>

# Updated Ask the Expert: Highly Pathogenic Avian Influenza A(H5N1) Viruses. **February 24, 2023**



<https://www.cdc.gov/bird-flu/spotlights/avian-flu-updated.html>

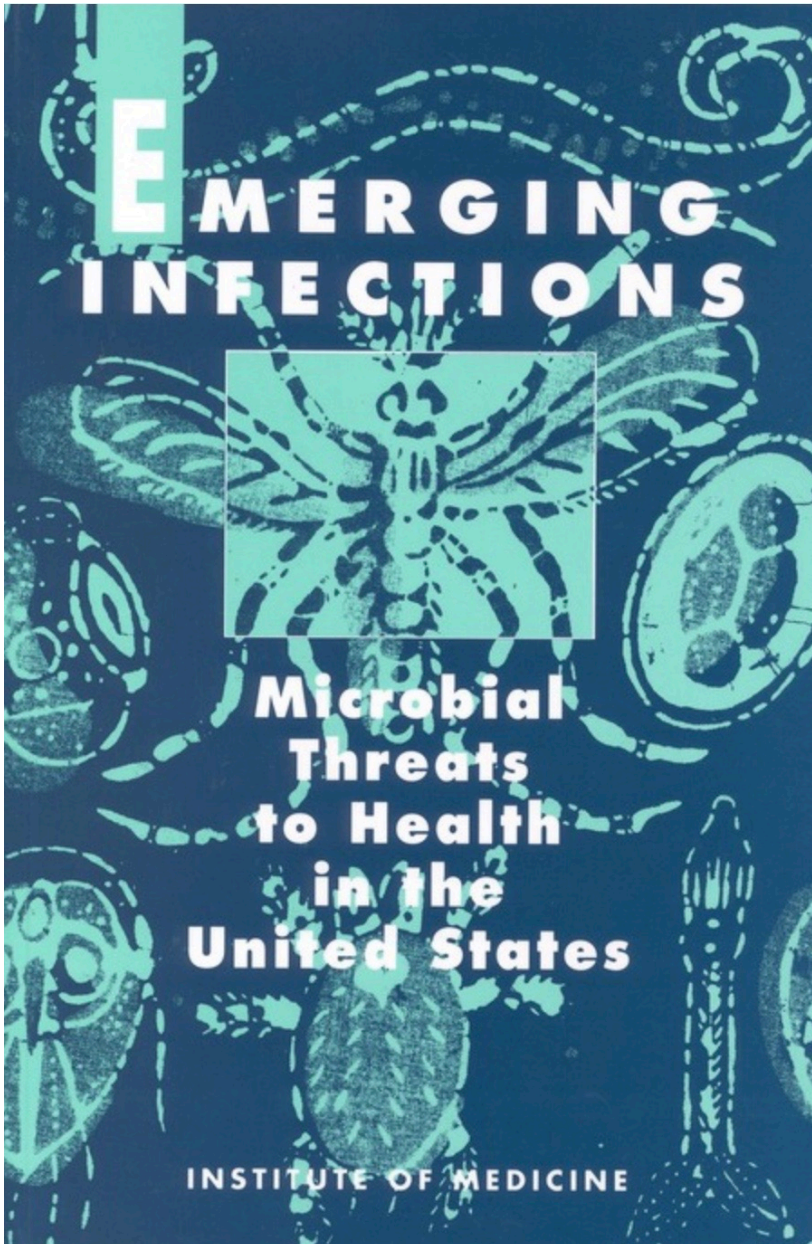
- **Several sporadic human cases associated with poultry exposures during this outbreak of contemporary HPAI A(H5N1) viruses have been reported globally since January 2022, [one of which was identified in the United States](#).** In some of these cases, no respiratory symptoms were reported. [Now 3 cases in the US, all recovered.]
- **It is possible that some of these cases did not represent virus infection but rather detection of non-infectious H5N1 virus genetic material following prolonged exposure to infected birds.**
- In other cases, severe disease occurred, including deaths.
- **No human-to-human spread of H5N1 virus** was identified in any of these cases. Sporadic human infections with contemporary H5N1 viruses are not surprising
- [Since 1997](#), more than 880 human cases, nearly all from previously circulating H5N1 virus clades, have been reported from 21 countries with high mortality, but **very few cases have been identified worldwide since 2016**. A small number of sporadic human infections with H5N1 virus does not change the risk to the general public, which CDC currently considers to be low.
- **Total 890 cases in humans with 52% mortality rate since 1997**



# The Bird Flu Enigma

- No one has gotten the virus from cooking or eating cooked poultry
- No one has gotten the virus from eggs
- No one has gotten the virus from milk or dairy products, and FDA has found NO live virus in milk
- No one has gotten the virus from eating beef





## US interest in "emerging infections" as a health, **military** and **international security** issue began around 1992

- Funding for this study was provided by the **Centers for Disease Control**, the Fogarty International Center, Lederle-Praxis Laboratories, the Lucille P. Markey Charitable Trust, the **National Institute of Allergy and Infectious Diseases of the National Institutes of Health**, the **Rockefeller Foundation**, and the **U.S. Army Medical Research and Development Command**.
- National Academies of Sciences, Engineering, and Medicine. 1992. Emerging Infections: Microbial Threats to Health in the United States. Washington, DC: The National Academies Press. <https://doi.org/10.17226/2008>.

# [Pandemic influenza vaccines. Concepts, European **mock-up licenses**, and acceptance criteria]

2003

"The concept of identifying appropriate scientific and regulatory principles to ensure rapid availability of pandemic influenza vaccines when needed were already developed starting in the year 2003. These principles **allowed licensing of three so-called mock-up vaccines far ahead of any real presenting pandemic event.** Those licenses (Marketing Authorizations) were immediately adapted to the novel H1N1 strain shortly after its identification in April 2009 ensuring that as early as September 2009 large parts of the German as well as of the EU population had access to licensed products which had undergone sufficient evaluation before first use in humans. **In contrast, for pandemic vaccine without a previously licensed mock-up version it generally took twice as much time to accumulate data supporting the granting of a Marketing Authorization."**

Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz 2010 Dec; 53 (12): 1242-9.

<https://pubmed.ncbi.nlm.nih.gov/21161474/>



## 2004: Prototype vaccines

Dr Alan Hay, director of the World Influenza Centre in London, said the prototype vaccine was made at St. Jude Children's Research Hospital in Memphis, Tennessee and by the U.K.'s National Institute for Biological Standards and Control, labs that collaborate with the WHO on animal influenza virus.

**Hay said there were still a number of obstacles before last year's prototype vaccine could be wheeled out to protect Asian populations against H5N1.**

**"There is the consideration that these viruses may be viewed as genetically modified organisms, and so some countries may take a more lenient view of that than other countries,"** he said.

## Old bird flu vaccine may do the trick

Richard Ingham  
AFP

Tuesday, 20 January 2004

Scientists hope they can wheel out a bird flu vaccine already being developed to curb the latest outbreak in Vietnam. But they don't know if the current virus strain is similar enough to earlier strains, on which the vaccine is based.

U.K. and U.S. scientists working for the World Health Organization (WHO) last year readied a potential vaccine against the H5N1 strain of avian influenza virus, just two months after the disease hit Hong Kong.

Labs in Hong Kong and Tokyo are now unravelling the genetic sequence of the flu virus that has now struck Vietnam see if it is similar to the virus in last's year brief outbreak.

"If we are lucky, in the best-case scenario, the viruses will be found by the end of this week to be very similar, which means we will already have a prototype vaccine," said Dr Klaus Stoehr, head of WHO's global influenza program.

The prototype has already passed basic tests to ensure it is safety and effective in chickens, which are the hosts for the disease, and among ferrets, as a lab substitute for humans.



This sick child is one of nine people thought to have the bird flu at Vietnam's national hospital of pediatrics in Hanoi (*Reuters/Kham*)

# Avian Flu Still Spreading, Experts Warn - 2004-02-26

<https://www.voanews.com/a/a-13-a-2004-02-26-41-avian-67487242/282001.html>

- About 100 million birds have already died or been slaughtered in the battle against the disease, which has also infected 32 people and killed more than 20.
- The bird flu first crossed into humans in 1997 in Hong Kong - then killing six of the 18 people it infected.
- Several weeks ago the government banned live chicken imports from mainland China when outbreaks were discovered across the country.
- Poultry retailers and distributors went on strike Thursday to protest the government ban, saying it was damaging consumer confidence and crippling their businesses.

2004



The NEW ENGLAND  
JOURNAL of MEDICINE

> N Engl J Med. 2004 Mar 18;350(12):1179-88. doi: 10.1056/NEJMoa040419. Epub 2004 Feb 25.

## Avian influenza A (H5N1) in 10 patients in Vietnam

Tinh Hien Tran <sup>1</sup>, Thanh Liem Nguyen, Thi Dung Nguyen, Thi San Luong, Phuong Mai Pham, van Vinh Chau Nguyen, Thi Suu Pham, Cong Dong Vo, Thi Quynh Mai Le, Thi Thi Ngo, Bach Khoa Dao, Phuc Phat Le, Thanh Truong Nguyen, Thuy Long Hoang, Viet Tung Cao, Truong Giang Le, Dac Tho Nguyen, Hong Nga Le, Kim Tien Nguyen, Hoang San Le, Van Tuan Le, Dolecek Christiane, Ian Thanh Tran, de Jong Menno, Constance Schultsz, Peter Cheng, Wilina Lim, Peter Horby, Jeremy Farrar;  
World Health Organization International Avian Influenza Investigative Team

Who raised the alarm about Bird Flu in 2004?

- \* Jeremy Farrar
- \* Jeremy Farrar's wife
- \* Peter Horby, who Farrar (Wellcome Trust) funded to conduct the HCQ overdose trial in the UK with 400 deaths
- \* The W.H.O.

**Conclusions:** Influenza A (H5N1) infection, characterized by fever, respiratory symptoms, and lymphopenia, carries a high risk of death. Although in all 10 cases the infection appears to have been acquired directly from infected poultry, the potential exists for genetic reassortment with human influenzaviruses and the evolution of human-to-human transmission. Containment of influenza A (H5N1) in poultry throughout Asia is therefore urgently required.



## Author expects avian flu pandemic

World is unprepared, Laurie Garrett says

Sarah H. Wright, News Office

October 5, 2005



<https://news.mit.edu/2005/avian-flu-1005>

"The catastrophic potential of an avian flu pandemic ranks just below that for thermonuclear war, and our global lack of preparedness for just one wave of this fierce virus promises death to millions, a Pulitzer Prize-winning author warned at a talk held on Monday, Sept. 26, at 3 p.m. at the Dibner Institute.

Laurie Garrett, senior fellow for global health at the **Council on Foreign Relations**, delivered her talk, "The Scientific, Health and Political Implications of an Avian Flu Pandemic," to a rapt audience...

To date, more than 300 million chickens have been culled or killed in an attempt to contain the virus...

H5N1 is particularly, swiftly lethal to healthy humans under the age of 35"

RealEcon

Israel-Hamas

Topics ▼

Regions ▼

Explainers ▼

Research & Analysis ▼

Webinar

# Avian Flu Outbreak and Preventing the Next Pandemic

Wednesday, May 29, 2024

2007

# EU approves Novartis's 'mock-up' pandemic vaccine

Robert Roos, May 9, 2007

Topics: [Avian Influenza \(Bird Flu\)](#), [Influenza Vaccines](#), [Pandemic Influenza](#)



May 9, 2007 (CIDRAP News) – The European Union (EU) this week approved a "mock-up" influenza vaccine made by Novartis to permit a faster start on vaccine production in the event of a flu pandemic.

When the World Health Organization (WHO) declares a flu pandemic, the vaccine, called Focetria, will be adapted to contain the pandemic virus, the Swiss-based drug company announced yesterday. The vaccine will not be manufactured until a pandemic is declared.

The European Medicines Agency's (EMA's) Committee for Medicinal Products for Human Use (CHMP) recommended approval of Focetria on Feb 22. A CHMP statement on that date said the vaccine was based on a 2004 strain of H5N1 avian flu from Vietnam.

The vaccine contains Novartis's proprietary adjuvant MF59, an immune-boosting chemical, which can



## ... But the concept of mock-up vaccines is irreparably flawed

- **2009: "Once the mock-up had received registration (in this case the H5N1 containing vaccine), licensing of the real pandemic vaccine (in this case Pandemrix) was cut down to five days (4).**
- Analogy, however, in this case has a very weak evidence base. In **2008** the American National Vaccine Advisory Committee (NVAC) report "The role of adjuvants and new technologies" stated "antigen/adjuvant combination is vaccine specific and no data are available currently that would allow an extrapolation to another antigen or even to the same formulation given by a different route"(5).
- WHO in its **2007** guidance stated that "Because of the inherent variability in the assay systems used to measure immune responses, it is unwise to directly compare results from different studies (6).
- This view was still held in **2013**, when WHO (7) warned that "an adjuvant-mediated enhancement of the immune response to one vaccine antigen, as a rule, cannot be extrapolated to the enhancement of the immune response to another antigen."
- The EMA **2005** Guideline also stresses the uncertainties of novel adjuvant use: "Unpredictability of adjuvant effects in humans results from a complex interplay between such factors as route of administration, antigen dose and the nature of the antigen. For this reason, a final safety evaluation of the newly developed vaccine formulation can only be conducted on the basis of clinical trials"(8)." <https://www.bmj.com/content/362/bmj.k3948/rr-22>

PREPARING FOR  
HIGHLY PATHOGENIC  
AVIAN INFLUENZA

V. Martin, A. Forman, J. Lubroth  
Animal Production and Health Division  
FAO, Rome, Italy

The UN's Food and Agriculture Organization published its first plan for bird flu in **2009, noting that vaccines chickens does not eliminate the disease**  
<https://www.fao.org/4/i0808e/i0808e.pdf>

**5.7 VACCINATION AGAINST AVIAN INFLUENZA OR OTHER DISEASES**

Vaccination, in general, increases the resistance of poultry to disease but does not eliminate the possibility that infection may occur in a flock. Prevention of disease and infection can be accomplished only if other aspects of prevention and improved biosecurity are in place.

# University of Wisconsin

“Experimental adaptation of an influenza H5 haemagglutinin (HA) confers respiratory droplet transmission to a reassortant H5 HA/ H1N1 virus in ferrets.” December 2012

## Collaborators:

- University of Tokyo
- Kobe University (Japan)
- ERATO Infection-Induced Host Responses Project (Japan)
- Chubu University (Japan)

**Funding:** <https://www.ncbi.nlm.nih.gov/books/NBK206985/>

- Bill & Melinda Gates Foundation (Grants #48339 and #OPPGH5383).
- The Ministry of Education, Culture, Sports, Science, and Technology of Japan.
- ERATO (Japan Science and Technology Agency)
- National Institute of Allergy and Infectious Diseases Public Health Service Research.

\*Reagents obtained from the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID and NIH.



**Masaki Imai**  
Research Lead

**Yoshihiro  
Kawaoka**  
Senior Researcher

**Accomplishments:** Combined an H5 (bird flu) virus from turkeys and H1N1 virus from pigs with four mutations and inoculated ferrets to see if the new reassorted virus was capable of droplet transmission in ferrets. The virus was transmissible in ferrets, causing lung lesions and weight loss.



# Biomedical Advanced Research and Development Authority (BARDA), ASPR, Centers for Disease Control and Prevention

“Safety and immunogenicity of influenza A(H5N1) vaccine stored up to twelve years in the National Pre-Pandemic Influenza Vaccine Stockpile (NPIVS)” December 2018

## Collaborators:

- St. Jude Children’s Hospital
- PPD in North Carolina  
(Global provider of clinical development and laboratory services)

## Funding:

- BARDA
- American Lebanese Syrian Associated Charities (Fundraising organization for St. Jude)

**Accomplishments:** Tested the H5N1 vaccines stored over the past 10-12 years and determined that that avian flu antigen and adjuvant maintain their functional integrity and can generate an antibody response. Importantly, our data suggest that a two-dose regimen of the adjuvanted vaccine *would likely be safe and could be effective* in preventing severe A (H5N1) influenza disease in healthy adults, and *may provide* some level of immune protection from divergent A(H5) influenza viruses.



**Christine Oshansky**  
Lead Author

**Rick Bright**  
Senior Author



# Global Health Security Agenda White House Event, September 26, 2014

<https://obamawhitehouse.archives.gov/the-press-office/2014/09/26/statement-chair-global-health-security-agenda-white-house-event-septembe>

"The group also affirmed the imperative to build, measure and maintain systems—including **laboratory networks**, workforce training, **interoperable systems for disease detection in real time**, national **biosecurity and biosafety systems**, national action plans for combating antibiotic resistant bacteria, and emergency operation centers—so countries can **efficiently counter biological threats through an integrated, whole-of-government approach...**

Participating Nations: Australia, Azerbaijan, Canada, Chile, China, Denmark, Ethiopia, Finland, France, Georgia, Germany, Guinea, India, Indonesia, Israel, Italy, Japan, Jordan, Kenya, Liberia, Malaysia, Mexico, Netherlands, Norway, Pakistan, Peru, Portugal, Republic of Korea, Saudi Arabia, Sierra Leone, Singapore, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Vietnam, and Yemen."

2015



LATEST IN US NEWS



Crazed woman who  
threw acid at stranger's  
face in NYC subway...



Dem se  
Republ  
commit

US NEWS

# Iowa declares state of emergency over bird flu outbreak

By Associated Press

Published May 2, 2015, 2:31 p.m. ET

Iowa Governor Terry Branstad declared a state of emergency on Friday due to a rapidly expanding avian flu outbreak, saying the entire state was at risk from the spread of the disease.

The announcement, which gives authorities powers to enforce preventative measures, was made soon after state agriculture officials announced four new poultry farms had initially tested positive for the virus.

Iowa, the top egg-producing state in the United States, is the third state to declare a state of emergency because of the viral outbreak, which either has led or will lead to the extermination of up to 21 million chickens and turkeys nationwide.

Minnesota and Wisconsin declared states of emergency in April.



# “Cashing In” on the Pandemic



## Q-Pan H5N1 AS03-Adjuvanted Pandemic Influenza Virus Vaccine for Pediatrics

**Company Sponsor:** GlaxoSmithKline (GSK)

**Division/Threat Area:** IEIDD/Influenza

**Indication & Usage:** For active immunization for the prevention of disease caused by the influenza A virus H5N1 subtype contained in the vaccine. It is approved for use in persons 6 months and older at increased risk of exposure to the influenza A virus H5N1 subtype contained in the vaccine.

[FDA Prescribing Information](#)

**FDA Approval, Licensure, or Clearance Date:** September 2016

**Product Type:** Vaccine

**Impact Statement:** GlaxoSmithKline’s Q-PAN H5N1 pandemic vaccine with AS03 adjuvant was the first adjuvanted pandemic influenza vaccine licensed in the U.S. The availability and intrinsic properties of these adjuvants have increased the country’s pandemic influenza vaccine manufacturing capacity multi-fold. The vaccine ... [\[+\]](#)

# “Cashing In” on the Pandemic

2016

TECHNOLOGY ID: TAB-3295

## New Anti-Influenza Virus Neuraminidase 9 (N9) Monoclonal Antibody – for Prevention or Treatment of H7N9 Influenza (Flu) A with Less Likelihood of Drug Resistance

E-Numbers: E-200-2016-0, E-163-2018-0

Lead Inventor: Wilson, Jason (CDC)

Co-Inventors: York, Ian (CDC), Stevens, James (CDC), Guo, Zhu (CDC)

Applications: Vaccines, Therapeutics

Therapeutic Areas: Infectious Disease, Immunology

Development Stages: Pre-Clinical (in vitro)

Research Products: Antibodies

Lead IC: CDC

REQUEST MORE INFO

Licensing Contact:

Motley, Jonathan

[jonathan.motley@nih.gov](mailto:jonathan.motley@nih.gov)

Phone: 301-496-2644

CDC Technology

**Each CDC inventor can collect up to \$150,000/year in royalties; NIH is the licensing authority**

How a  
terrifying  
narrative gets  
created

May 2020



The image is a screenshot of a mobile news application interface. At the top, there is a red navigation bar with a hamburger menu icon, an envelope icon, the text "NEW YORK POST" in a bold, italicized font, and a "LOG IN" button. Below the navigation bar, there is a red banner with the text "US NEWS" in white. Underneath the banner, there is a row of six circular social media sharing icons: Facebook (blue), X (black), Reddit (red), WhatsApp (green), Email (red), and Print (red). The main headline is in large, bold, black text: "Scientists say an apocalyptic bird flu could wipe out half of humanity". Below the headline, the author's name "By Paula Froelich" is displayed in a smaller font. At the bottom, the publication date "Published May 30, 2020" and the update time "Updated May 30, 2020, 4:23 p.m. ET" are shown.

☰ ✉ **NEW YORK POST** LOG IN

**US NEWS**

Facebook X Reddit WhatsApp Email Print

# Scientists say an apocalyptic bird flu could wipe out half of humanity

By Paula Froelich

Published May 30, 2020  
Updated May 30, 2020, 4:23 p.m. ET



2022

# Avian flu has led to the killing of 140m farmed birds since last October

**Culls and compensation have cost hundreds of millions of pounds in the US, UK and Europe, with current outbreak predicted to worsen**

Supported by

the  
guardian  
.org

About this content

**Sophie Kevany**

Fri 9 Dec 2022 08.54 EST



<https://www.theguardian.com/environment/2022/dec/09/avian-flu-has-led-to-the-killing-of-140m-farmed-birds-since-last-october>



Footage taken by animal charity Essere Animali in Italy appeared to show live chickens being



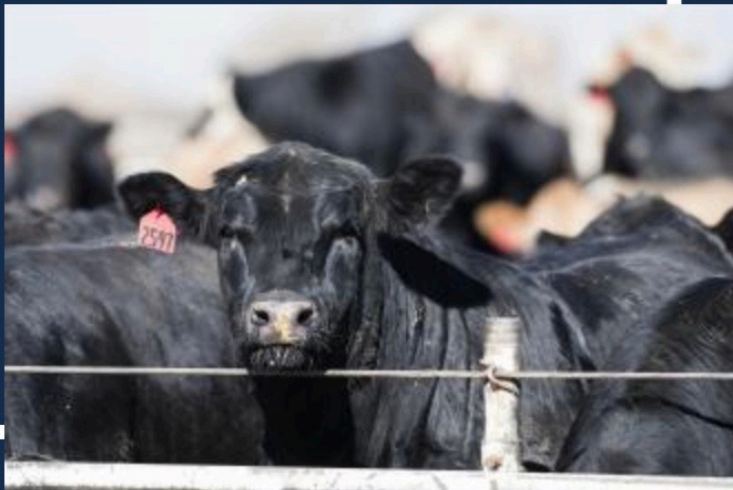
# Humane slaughter vs chicken culling

- "During a six-month period in 2013, the USDA cited Brooksville at least 10 times for [serious violations](#) of humane handling and slaughter regulations. Almost all concerned the plant's failure to accurately stun animals in order to render them insensible to pain before slaughter."
- <https://www.foodsafetynews.com/2016/01/custom-exempt-slaughter-should-not-be-expanded/>
- Chicken culling often involves turning up the heat in a chicken house to kill by heat stroke or removing the oxygen and letting the birds suffocate. Neither is a humane method.
- Farmers are paid for the birds and so they do not complain.





# Humane Methods of Slaughter Act



The Humane Methods of Slaughter Act (HMSA) requires the humane treatment and handling of food animals at the slaughter plant while also providing a quick and effective death. The Act was originally passed on August 27, 1958 and is enforced by the [USDA](#) Food Safety and Inspection Service (FSIS). In 1978, the Act was amended to allow [USDA](#), FSIS inspectors to stop slaughter activities if they think an animal is being handled inhumanely. HMSA protects all livestock except poultry.



# *A Cruel Way to Control Bird Flu? Poultry Giants Cull and Cash In.*

<https://www.nytimes.com/2024/04/02/science/bird-flu-aid-animal-welfare.html>

NY Times, **April 2, 2024**

- Last year, the Department of Agriculture paid poultry producers more than half a billion dollars for the turkeys, chickens and egg-laying hens they were forced to kill after the flu strain, H5N1, was detected on their farms.
- Among the biggest recipients of the agency's bird flu [indemnification](#) funds from 2022 to this year were Jennie-O Turkey Store, which received more than \$88 million, and Tyson Foods, which was paid nearly \$30 million. Despite their losses, the two companies reported billions of dollars in profits last year.
- To critics of large-scale commercial farming, the payments highlight a deeply flawed system of corporate subsidies, which last year included more than \$30 billion in taxpayer money directed to the agriculture sector...
- "If you wanted to create the ideal environment for fostering the mutation of pathogens, industrial farms would pretty much be the perfect setup," said Gwendolen Reyes-Illg, a scientist at the [Animal Welfare Institute](#) who focuses on meat production.
- Many scientists, fearing that the [next pandemic](#) could emerge from a human-adapted version of bird flu, have been urging the White House to embrace a vaccination campaign.

# Evidence suggests migratory birds are not a reservoir for highly pathogenic flu viruses

2016

Analysis from St. Jude Children's Research Hospital and scientists with the Centers of Excellence for Influenza Research and Surveillance indicates the perpetuation of dangerous flu viruses is blocked in wild water birds

- "While wild ducks and other aquatic birds are known to be natural hosts for low pathogenic flu viruses associated with milder symptoms, the results of this study indicate that is not the case with the highly pathogenic flu viruses that are associated with more severe illness. The research suggests that wild ducks and other aquatic birds are not an ongoing source of highly pathogenic flu infection in domestic poultry.
- "The findings provide a scientific basis for the decision by officials to use culling and quarantines to stop the 2014-15 outbreak in domestic poultry," said corresponding author [Robert Webster, Ph.D.](#), an emeritus member of the St. Jude [Department of Infectious Diseases](#). "Now, research is needed to identify the mechanism that has evolved in these wild birds to disrupt the perpetuation of highly pathogenic influenza."
- Such viruses have not been identified in any of the more than **100,000 wild birds tested** since the flu surveillance sampling began 43 years ago, Webster said.

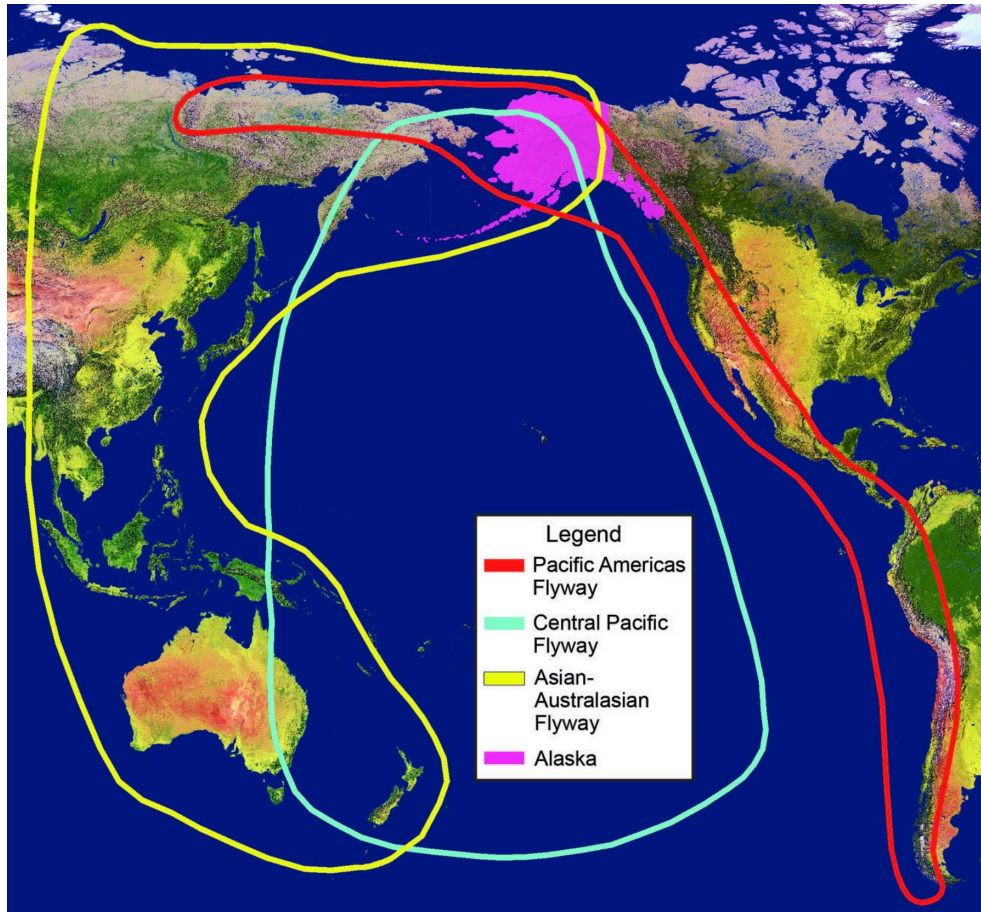
<https://www.stjude.org/media-resources/news-releases/2016-medicine-science-news/evidence-suggests-migratory-birds-are-not-a-reservoir-for-highly-pathogenic-flu-viruses.html>



# The Bird Flu Enigma

- No one has gotten the virus from cooking or eating cooked poultry
- No one has gotten the virus from eggs
- No one has gotten the virus from milk or dairy products, and FDA has found NO live virus in milk
- No one has gotten the virus from eating beef
- It is unclear if you can wipe out the disease by culling animals since it is in the wild bird and mammal populations—spillover from them, or not?
- Are we wiping out flocks that would develop immunity?
- **SO WHY HAVE OVER 500 MILLION CHICKENS, DUCKS AND TURKEYS BEEN CULLED, OFTEN INHUMANELY, IN A VAIN ATTEMPT TO STOP THE VIRUS?**

# Wild Bird migrations from the US gov't Geological Survey



2018

- "Wild birds, in particular certain species of waterfowl and shorebirds, are considered to be the natural reservoirs for avian influenza viruses.
- **These subtypes that naturally occur in wild species usually cause little or no disease.**
- In domestic birds, however, some AI viruses can be more pathogenic and mutation or recombination of a virus acquired from wild birds can increase disease potential."

<https://www.usgs.gov/centers/nwhc/science/avian-influenza>



> J Wildl Dis. 2012 Jul;48(3):669-75. doi: 10.7589/0090-3558-48.3.669.

## Surveillance of avian influenza viruses in migratory birds in Egypt, 2003–09

Atef Soliman <sup>1</sup>, Magdi Saad, Emad Elassal, Ehab Amir, Chantal Plathonoff, Verina Bahgat, Maha El-Badry, Lu'ay S Ahmed, Mostafa Fouda, Mohammed Gamaleldin, Nahed Abd-Elal Mohamed, Stephanie Salyer, Claire Cornelius, Robert Barthel

Affiliations

### Affiliation

<sup>1</sup> US Naval Medical Research Unit Number 3, 3A Imtidad Ramses St., Abassia, Cairo, Egypt.  
atef.soliman.ctr.eg@med.navy.mil

- During September 2003-February 2009, the US Naval Medical Research Unit Number 3, Cairo, Egypt, in collaboration with the Egyptian Ministry of Environment, obtained cloacal swabs from **7,894 migratory birds captured or shot by hunters** in different geographic areas in Egypt.
- Of the 7,894 samples, **745 (9.4%)** were positive for the influenza A matrix gene
- **No major die-offs or sick migratory birds** were detected during the study.

<https://pubmed.ncbi.nlm.nih.gov/22740532/>

# The GOF-Biowarfare aspect of Bird Flu research

# EXCLUSIVE: Controversial experiments that could make bird flu more risky poised to resume

Two “gain of function” projects halted more than 4 years ago have passed new U.S. review process



8 FEB 2019 · BY JOCELYN KAISER

2019

"In 2011, Fouchier and Kawaoka alarmed the world by revealing they had separately modified the deadly avian H5N1 influenza virus so that it spread between ferrets.

Advocates of such gain of function (GOF) studies say they can help public health experts better understand how viruses might spread and plan for pandemics. But by enabling the bird virus to more easily spread among mammals, the experiments also raised fears that the pathogen could jump to humans. And critics of the work worried that such a souped-up virus could spark a pandemic if it escaped from a lab or was intentionally released by a bioterrorist. After extensive discussion about whether the two studies should even be published (they ultimately were) and a voluntary moratorium by the two labs, the experiments resumed in 2013 under new U.S. oversight rules."

"Kawaoka's grant is the same one on H5N1 that was paused in 2014."

<https://www.science.org/content/article/exclusive-controversial-experiments-make-bird-flu-more-risky-poised-resume>

This GOF research on bird flu, paid for by the US government, has gone on since at least 2011.

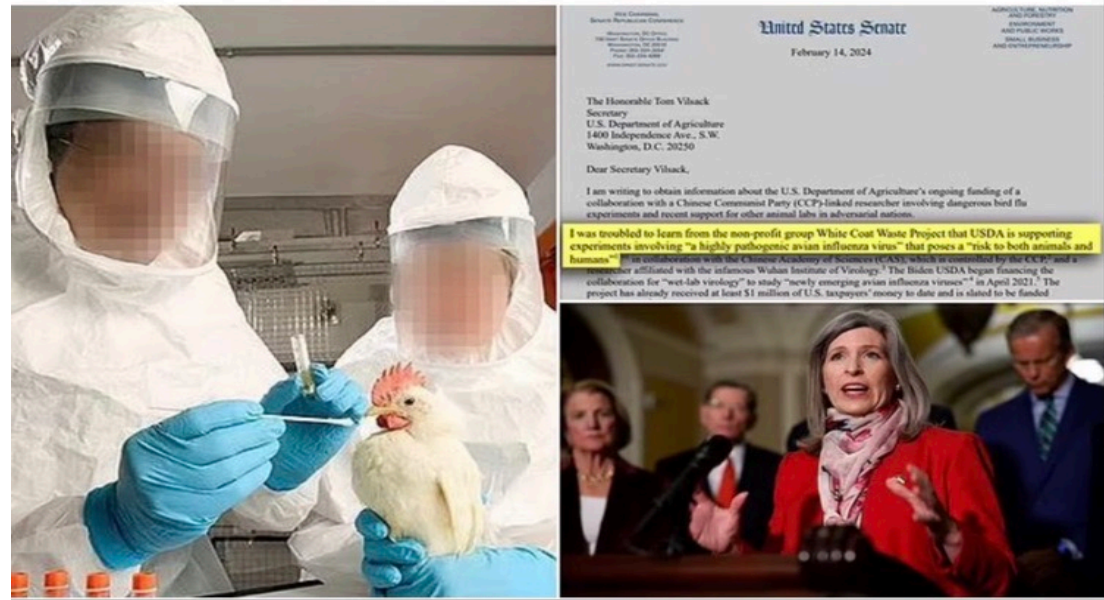
Why are we, the world's citizens, still putting up with this?

Feb 2024

# REVEALED: US is collaborating with Chinese scientists to make bird flu strains more infectious and deadly as part of \$1m project - despite fears similar tests unleashed Covid

By Alexa Lardieri U.S. Deputy Health Editor  
Dailymail.Com

18:35 EDT 15 Feb 2024 , updated 14:43 EDT 16 Feb 2024





# Congress of the United States

Washington, DC 20515

April 12, 2024

The Honorable Tom Vilsack  
Secretary  
U.S. Department of Agriculture  
1400 Independence Ave. SW  
Washington, DC 20250

Dear Secretary Vilsack,

We are disturbed by recent reports about the U.S. Department of Agriculture's (USDA) collaboration with the Chinese Communist Party (CCP)-linked Chinese Academy of Sciences (CAS) on bird flu research. This research, funded by American taxpayers, could potentially generate dangerous new lab-created virus strains that threaten our national security and public health.<sup>1</sup>

## Exotic & Emerging Avian Viral Diseases Research: Athens, GA

[Research](#) ▾ [People](#) ▾ [USNPRC](#) ▾ [Research Units at USNPRC](#) ▾

[ARS Home](#) » [Southeast Area](#) » [Athens, Georgia](#) » [U.S. National Poultry Research Center](#) » [Exotic & Emerging Avian Viral Diseases Research](#) » [Research](#) » Research Project #439621

### Project Team

**Kapczynski, Darrell**

### Related National Programs

Animal Health (103)

**Research Project:** **US-UK-China Collab:** Predictive phylogenetics for evolutionary and transmission dynamics of newly emerging avian influenza viruses

**Location:** [Exotic & Emerging Avian Viral Diseases Research](#)

Project Number: 6040-32000-081-008-I

Project Type: Interagency Reimbursable Agreement

Start Date: Apr 1, 2021

End Date: Mar 31, 2026

Former CDC  
Director,  
virologist  
Robert  
Redfield, MD  
said he would  
be able to  
make a GOF  
bird flu in  
weeks to  
months



**Camus** @newstart\_2024 · 4h

Bird flu engineered to infect humans could be lab-produced 'in months,' former CDC Director says

Bioengineered bird flu souped up via gain-of-function lab work could be developed in a shockingly short period of time, former CDC Director Robert Redfield told News Nation recently:...

[Show more](#)





# Pandemic experts express concern over avian influenza spread to humans

18 April 2024 [Health](#)

"Dr. Jeremy Farrar, chief scientist at the World Health Organization ([WHO](#)), said that the avian influenza virus, which is also known as H5N1, has had an "extremely high" mortality rate among the several hundred people known to have been infected with it to date."

 <https://news.un.org/en/story/2024/04/1148696>



**United Nations**

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Global perspective Human stories

On the potential H5N1 public health risk, the WHO chief scientist cautioned that **vaccine development was not "where we need to be"**. Neither was it the case that regional offices and country offices and public health authorities around the world have the capability to diagnose H5N1, he noted.

**"Public health authorities around the world" can't diagnose it!!!**





**CEPI was announced in Davos in 2017 by Bill Gates and Jeremy Farrar.**

**CEPI received \$1.95 billion in 2022 alone.**

<https://static.cepi.net/downloads/2023-12/CEPI-Annual-Progress-Report-2022.pdf>

**The 2023 report highlights how the world could deliver future pandemic-beating vaccines in 100 Days and outlines five key areas of innovation that are needed to contribute to accelerated development of vaccines: 1. pre-existing prototype vaccines for representative pathogens**

Making pandemic vaccines in 100 Days #100DaysMission

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# Preparing for future pandemics

A photograph of a healthcare worker wearing a white face shield and a white surgical mask. The worker is looking towards the camera. The background is a blurred crowd of people, suggesting a public health setting. The image is overlaid with a dark blue semi-circle on the left side, which contains the CEPI logo and navigation menu.

Building the narrative:  
Implying we are not prepared, but we could "pull the trigger" and start vaccinating

April 2024

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The Observer Bird flu

## 'The issue is when to pull the trigger': how prepared are we for human bird flu?

The H5N1 virus has been devastating bird populations, and is now infecting mammals too. Is human-to-human transmission next? And are we ready for another pandemic?





April 2024

# Marks confident in bird flu vaccine stockpile

By DAVID LIM and LAUREN GARDNER | 04/02/2024 12:00 PM EDT



Dr. Peter Marks, the FDA's top vaccine regulator, said Monday he's confident the U.S. stockpile of avian flu-specific vaccines would work well if deployed. The remarks came the same day [the CDC confirmed](#) that a Texas dairy worker fell ill with bird flu.

"We believe that, if we needed to, they would be reasonably good matches," Marks said at the World Vaccine Congress in Washington,

**Whether the federal government would activate** new vaccine production depends on how the situation unfolds, Marks indicated.


**"... there's probably a pretty low threshold to pull the trigger here," he said.** "This is one case we're a little luckier because it's a pathogen that we know. We know what this is and what we have in the freezer, so to speak. We have a little bit of a leg up on at least getting started."

But at the conference, Dr. Luciana Borio, a former FDA official, questioned the vaccines' potency "I'm not as confident as Dr. Marks," she said after his remarks.

<https://www.politico.com/newsletters/prescription-pulse/2024/04/02/marks-confident-in-bird-flu-vaccine-stockpile-00150008>



Jerome Adams  
was Trump's  
Surgeon  
General,  
pushing the  
pandemic  
narrative now

 **Jerome Adams** ✓  
@JeromeAdamsMD

Just in case anyone on here isn't 100% focused on Trump and his trial right now, we still have a potential pandemic 2.0 brewing... 🙄

 **CDC Flu** ✓ @CDCFlu · 7h

CDC confirmed a third H5 bird flu human infection in the U.S. tied to dairy cow outbreaks. While the risk to the general public remains low, people with certain animal exposures should take precautions: [bit.ly/4bFacGX](https://bit.ly/4bFacGX)



[cdc.gov/birdflu](https://cdc.gov/birdflu)  
ALT

7:26 PM May 30, 2024 · 49.9K Views



## What risk does the virus pose to humans?

Avian flu viruses rarely infect humans. The World Health Organization (WHO) reports that from 2003 to April 1, 2024, 23 countries reported a total of 889 human cases of H5N1. The most common symptoms in people, according to the CDC, include eye redness (conjunctivitis), respiratory difficulties, fever, cough, sore throat, and pneumonia.

However, more than half of the worldwide human cases (463) resulted in death. "It is a highly pathogenic strain," explains Erin M. Sorrell, PhD, MSc, senior scholar at the Johns Hopkins Center for Health Security and associate professor at Johns Hopkins Bloomberg School of Public Health in Maryland. "It has the ability to replicate outside the traditional locations where low-pathogenic influenza does: the intestinal tract for poultry; the upper and lower respiratory tracts in humans. The virus becomes systemic in its infection."

In the United States, the first known case of transmission to a human occurred in 2022. The CDC says that person, who worked directly with infected poultry, reported mild fatigue and recovered.

The second known case was reported in March 2024, in a dairy farm worker in Texas. The only symptom was conjunctivitis in both eyes, which receded, according to a [case assessment](#) by the CDC and Texas health agencies.

"As of now, this is a low-risk situation for humans," says Michael Osterholm, PhD, MPH, director of the Center for Infectious Disease Research and Policy at the University of Minnesota. But that could change as the virus spreads among more animals, he warns.



Home › News Releases › Penn Researchers Develop Experimental mRNA Avian Flu Va...

## News Release

# Penn Researchers Develop Experimental mRNA Avian Flu Vaccine

*Promising preclinical results suggest mRNA vaccine platform could limit the impact of avian flu pandemics*

May 23, 2024

PHILADELPHIA— An experimental mRNA vaccine against avian influenza virus H5N1 is highly effective in preventing severe illness and death in preclinical models. The vaccine could potentially help manage the outbreak of the H5N1 virus currently circulating in birds and cattle in the United States, and prevent human infections with the virus, according to research from the Perelman School of Medicine at the University of Pennsylvania, published today in [Nature Communications](#).



Scott Hensley, PhD, and Drew Weissman, MD, PhD

“The mRNA technology allows us to be much more agile in developing vaccines; we can start creating a mRNA vaccine within hours of sequencing a new viral strain with pandemic potential,” said [Scott Hensley, PhD](#), a professor of Microbiology at the Perelman School of Medicine. “During previous influenza pandemics, like the 2009 H1N1 pandemic, vaccines were difficult to manufacture and did not become available until after the initial pandemic waves subsided.”

# May 2024

## Scientists are testing mRNA vaccines to protect cows and people against bird flu

The bird flu outbreak in U.S. dairy cows is prompting development of new, next-generation mRNA vaccines — akin to the shots deployed during the COVID-19 pandemic

By MIKE STOBBE Associated Press and LAURAN NEERGAARD Associated Press  
May 31, 2024, 12:49 PM



- The pharmaceutical company **Moderna already has a bird flu mRNA vaccine in very early-stage human testing.** In a statement, Moderna confirmed that “we are in discussions with the U.S. government on advancing our pandemic flu candidate.”
- Similar work has been going on **at Pfizer.** Company researchers in December gave human **volunteers an mRNA vaccine against a bird flu strain that's similar to — but not exactly the same as — the one in cows.** Since then, researchers have performed a lab experiment exposing blood samples from those volunteers to the strain seen in dairy farms, and saw a “notable increases in antibody responses,” Pfizer said in a statement.
- **As for the vaccine for cows,** Penn immunologist Scott Hensley worked with mRNA pioneer and Nobel laureate Drew Weissman to produce the experimental doses. **Hensley said that vaccine is similar to the Moderna one for people.**



<https://www.ema.europa.eu/en/human-regulatory-overview/public-health-threats/avian-influenza-bird-flu>

"One vaccine is authorised for use in the EU during avian influenza outbreaks without there being a declared pandemic, including to protect poultry workers, veterinarians and other people at increased risk of exposure. It might need adapting to match more closely the current virus strains:

[Aflunov](#)

There are four **pandemic preparedness influenza vaccines** authorised in the EU that can be rapidly modified to protect people in a pandemic situation:

[Pandemic influenza vaccine H5N1 AstraZeneca \(previously Pandemic influenza vaccine H5N1 Medimmune\)](#)

[Pandemic Influenza Vaccine H5N1 Baxter AG](#)

[Adjupanrix \(previously Pandemic influenza vaccine \(H5N1\) \(split virion, inactivated, adjuvanted\) GlaxoSmithKline Biologicals\)](#)

[Foclivia](#). <https://merylnass.substack.com/p/more-on-the-looming-bird-flu-disaster>

These were authorised based on immunogenicity data. They can be **adapted to protect against any pandemic influenza virus strain** if necessary.

They are only for use if the WHO or the EU were to officially declare a pandemic, which has not happened."



# Aflunov

## ⊗ Application withdrawn

The application for this medicine has been withdrawn

- There is no immune correlate of protection established for influenza A (H5N1)
- This indication is based on immunogenicity data from healthy subjects from the age of 18 years onwards following administration of two doses of the vaccine containing A/turkey/Turkey/1/2005 (H5N1)-like strain (see sections 4.4 and 5.1).

- **4.4 Special warnings and precautions for use:**

The vaccine should under no circumstances be administered intravascularly or intradermally.

Healthcare providers need to assess the benefit and potential risks of administering the vaccine to pregnant women taking into consideration official recommendations.

Date of first authorisation: 29 November 2010

Date of latest renewal: 17 July 2015

<https://www.ema.europa.eu/en/medicines/human/EPAR/aflunov>

A pre-pandemic vaccine for a virus not currently infecting humans in Europe to be rolled out: as part of the hype, or in preparation for a lab release?

"There are no active cases in humans or in cattle in the EU, as of early June according to the European Centre for Disease Prevention and Control (ECDC)."

# EU to secure 40 million avian flu vaccines for 15 countries - officials

By Julia Payne

June 10, 2024 7:47 AM EDT · Updated 7 days ago



<https://www.reuters.com/business/healthcare-pharmaceuticals/eu-secure-40-million-avian-flu-vaccines-15-countries-officials-2024-06-10/>

# Pandemic influenza vaccine H5N1 AstraZeneca (previously Pandemic influenza vaccine H5N1 Medimmune)

*pandemic influenza vaccine (H5N1) (live attenuated, nasal)*



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

✓ **Authorised**  
This medicine is  
authorised for use in  
the European Union

The full EPAR for Pandemic influenza vaccine H5N1 AstraZeneca can be found on the Agency's website: [ema.europa.eu/Find/medicine/Human/medicines/European\\_public\\_assessment\\_reports](https://www.ema.europa.eu/Find/medicine/Human/medicines/European_public_assessment_reports). For more information about prevention of influenza with Pandemic influenza vaccine H5N1 AstraZeneca, read the package leaflet (also part of the EPAR) or contact your doctor or pharmacist.

This summary was last updated in 05-2017.

<https://www.ema.europa.eu/en/medicines/human/EPAR/pandemic-influenza-vaccine-h5n1-astrazeneca-previously-pandemic-influenza-vaccine-h5n1-medimmune#related-information-841>

The screenshot shows the EMA Clinical Data website. At the top, there is the EMA logo and the text 'EUROPEAN MEDICINES AGENCY Clinical data'. Below this is a navigation bar with 'Home', 'Find Clinical Data', and 'About'. The main content area has a breadcrumb trail: 'Clinical Data Publication > Login/Registration > Login and Registration'. There is a button labeled 'Login and Registration'. To the right of the button, the text reads 'Login and Registration' followed by 'Log in with an EMA account' and 'EMA account holders should log in with their login credentials.'

## 403 ERROR

**The request could not be satisfied.**

Request blocked. We can't connect to the server for this app or website at this time. There might be too much traffic or a configuration error. Try again later, or contact the app or website owner. If you provide content to customers through CloudFront, you can find steps to troubleshoot and help prevent this error by reviewing the CloudFront documentation.





# Zoonotic Influenza Vaccine Seqirus

*Zoonotic influenza vaccine (H5N8) (surface antigen, inactivated, adjuvanted)*

Medicine

Human

Share

RSS

✓ **Authorised**

This medicine is authorised for use in the European Union

## Page contents

Overview

Product information

Product details

Authorisation details

## Overview

Zoonotic influenza vaccine Seqirus is a vaccine used in adults to protect against flu caused by H5 strains of the influenza A virus (also known as avian influenza or bird flu). Bird flu is a zoonotic infection (an infection that can spread from animals to humans).

Zoonotic influenza vaccine Seqirus contains a flu strain called A/Astrakhan/3212/2020 (H5N8)-like strain (CBER-RG8A) (clade 2.3.4.4b) and is based on parts of influenza virus that has been inactivated (killed) so that it does not cause any disease.



**2021**

The vaccine  
Finland initially  
said it would  
use was  
developed  
from this virus

[Home](#) / [News](#) / Avian influenza A(H5N8) infects humans in Russian Federation

# Avian influenza **A(H5N8)** infects humans in Russian Federation

2 March 2021 | News release | Reading time: 2 min (457 words)

Russian authorities have reported 7 poultry farm workers aged 29 to 60 years infected with the A(H5N8) strain of avian influenza, also known as bird flu. This is the first reported detection of this strain of avian influenza in humans. The human infections occurred on a poultry farm in Astrakhan, Russian Federation, and were reported to WHO by Russian health officials via channels of the International Health Regulations (2005).

Concerns were raised when 101 000 out of 900 000 egg-laying hens on the farm died in early December 2020. An investigation by Russian veterinary public-health authorities detected avian influenza A(H5N8), which was then confirmed by the World Organisation for Animal Health (OIE) Reference Laboratory and the Federal Centre for Animal Health in the city of Vladimir, Russian Federation.

## No clinical evidence of onward transmission

Follow-up tests on the 7 workers from the poultry farm suggested recent infection with the virus, though they showed no symptoms. There was no clinical evidence of onward transmission to families or close associates of the workers. Further information on serology among contacts of the positive cases is required to fully assess the risk.

# Europe's H5N8 vaccine

- [https://www.ema.europa.eu/en/documents/product-information/zoonotic-influenza-vaccine-seqirus-epar-product-information\\_en.pdf](https://www.ema.europa.eu/en/documents/product-information/zoonotic-influenza-vaccine-seqirus-epar-product-information_en.pdf)
- [https://www.ema.europa.eu/en/documents/overview/zoonotic-influenza-vaccine-seqirus-epar-medicine-overview\\_en.pdf](https://www.ema.europa.eu/en/documents/overview/zoonotic-influenza-vaccine-seqirus-epar-medicine-overview_en.pdf)

## 4.8 Undesirable effects

### Summary of the safety profile

No clinical data exist with Zoonotic Influenza Vaccine Seqirus A/Astrakhan/3212/2020 (H5N8)-like strain (CBER-RG8A) (clade 2.3.4.4b). The safety of Zoonotic Influenza Vaccine Seqirus H5N8 is inferred from safety data of the Zoonotic Influenza Vaccine H5N1 vaccine (at least 7.5 micrograms (mcg) HA, MF59C.1 adjuvanted) containing either the A turkey/Turkey/1/2005 (NIBRG 23) (clade 2.2.1) or the A Vietnam/1194/2004 (NIBRG-14) (clade 1) strains.

- \* "The safety of Zoonotic influenza vaccine Seqirus H5N8 is derived from safety data of vaccines containing either the H5N1 turkey/Turkey/1/2005 (NIBRG 23) (clade 2.2.1) or the H5N1 Vietnam/1194/2004 (NIBRG-14) (clade 1) strains
- \* "The European Medicines Agency therefore decided that Zoonotic influenza vaccine Seqirus's benefits are greater than its risks and it can be authorised for use in the EU."

## What Zoonotic Influenza Vaccine Seqirus contains

- Active substance:  
Influenza virus surface antigens (haemagglutinin and neuraminidase)\* of strain:  
  
A/Astrakhan/3212/2020 (H5N8)-like strain (CBER-RG8A) (clade 2.3.4.4b) 7.5 micrograms\*\* per 0.5 ml dose  
  
\* propagated in fertilised hens' eggs from healthy chicken flocks  
\*\* expressed in microgram haemagglutinin.
- Adjuvant MF59C.1:  
The vaccine contains per 0.5 ml: 9.75 mg squalene, 1.175 mg polysorbate 80, 1.175 mg sorbitan trioleate, 0.66 mg sodium citrate and 0.04 mg citric acid.
- Other ingredients:  
The other ingredients are: sodium chloride, potassium chloride, potassium dihydrogen phosphate, disodium phosphate dihydrate, magnesium chloride hexahydrate, calcium chloride dihydrate and water for injections. See Section 2 - Zoonotic Influenza Vaccine Seqirus contains sodium and potassium.

## What benefits of Zoonotic influenza vaccine Seqirus have been shown in studies?

The H5N8 bird flu vaccine shipped to Finland has never been shown to work or be safe--Nass

The ability of Zoonotic influenza vaccine Seqirus containing A/Astrakhan/3212/2020 (H5N8)-like strain (CBER-RG8A) (clade 2.3.4.4b) to produce sufficient antibodies to stimulate an immune response and protect against bird flu is based on the following studies.

Two main studies using a strain called A/Vietnam/1194/2004 (H5N1)-like strain (NIBRG-14) (clade 1) provided data on vaccination with Zoonotic influenza vaccine Seqirus in healthy adults aged below and above 60 years.

In one study involving 3,372 people, subjects were given either a seasonal flu vaccine followed by two doses of Zoonotic influenza vaccine Seqirus three weeks apart, or placebo (a dummy vaccine) followed by two doses of an adjuvanted seasonal vaccine three weeks apart. In the first study, 21 days after the second injection, around 90% of people aged below 60 years and around 80% of those aged above 60 years had levels of antibodies that would protect them against H5N1.

In the second study involving 240 people, subjects were given Zoonotic influenza vaccine Seqirus using different vaccination schedules. The studies looked at the ability of the vaccine to trigger the production of antibodies ('immunogenicity') against the flu virus. This study established that Zoonotic influenza vaccine Seqirus should be given as two doses at least three weeks apart.

A third study, using a vaccine with strain A/turkey/Turkey/1/2005 (H5N1)-like strain (NIBRG-23) (clade 2.2.1), was carried out in 343 adults aged below and above 60 years. The study showed that 21 days after the second injection, around 70% of adults below 60 years and around 64% of adults above 60 years achieved an acceptable antibody response.

<https://www.ema.europa.eu/en/medicines/human/EPAR/zoonotic-influenza-vaccine-seqirus>

"Benefits" of the vaccine are inferred from studies on different vaccines!

+ MF59 adjuvant



<https://www.cidrap.umn.edu/avian-influenza-bird-flu/h5n1-avian-flu-strikes-another-finnish-fur-farm>

# H5N1 avian flu strikes another Finnish fur farm

*Lisa Schnirring, September 28, 2023*

Topics: [Avian Influenza \(Bird Flu\)](#)



SHARE

The Finland Food Authority has **reported** another H5N1 avian flu outbreak at a fur farm, this time at a facility housing minks in a newly affected region.

The virus was detected on September 27 at a farm in Alavieska, a town in Northern Ostrobothnia region in the west central part of the country. The outbreak brings the number of outbreaks in the country's fur farms since the middle of July to 27.

Finland recently ordered **culling** of animals at all outbreak farms. Minks are thought to be a potential mixing vessel for respiratory viruses.

The outbreaks in Finland have intensified scientists' calls for shuttering fur farms to reduce the risk of flu viruses that have pandemic potential.





Healthcare &amp; Pharmaceuticals | Biopharma | Government Health Policy | Public Health

# Finland to start bird flu vaccinations for humans, in world first

By Reuters

June 25, 2024 7:28 AM EDT · Updated a day ago

<https://www.reuters.com/business/healthcare-pharmaceuticals/finland-start-bird-flu-vaccinations-humans-2024-06-25/>

- Finland has not detected the virus in humans, THL said.
- However, the country is eager to roll out vaccinations given transmission risks posed by its fur farms.
- "The conditions in Finland are very different in that we have fur farms where the animals can end up in contact with wildlife," Chief Physician Hanna Nohynek at the Finnish Institute for Health and Welfare (THL) told Reuters.
- Widespread [outbreaks](#) of bird flu among mink and foxes at Finland's mostly open-air fur farms led to the culling last year of some 485,000 animals to stop the virus from spreading among the animals as well as to humans.
- People working in sanctuaries caring for wild birds, in livestock farms or in the cleaning of premises, such as animal by-products processing plants, will also be offered vaccines, THL said.

## Is this how it works? You must buy a minimum # of vaccines, so then you are obliged to use them?

- The EU's health crisis authority contracted with CSL Seqirus to secure hundreds of thousands of doses of its H5N1 flu shot adapted to protect people against the latest deadly strain of bird flu — and first doses will head to Finland.
- The Health Emergency Preparedness and Response Authority (HERA) signed the joint procurement contract with CSL Seqirus on behalf of 15 member countries
- In **Finland**, workers in mink farms are considered at risk of contracting the virus from contaminated animals.
- HERA, which has been **in talks with CSL Seqirus** for months, approached the company last year to ask it to **update its zoonotic flu vaccine to the dominant circulating avian flu strain**. But to do so, CSL Seqirus asked for a minimum guarantee of sale, to make the transaction profitable — something HERA could guarantee through the joint procurement.
- CSL Seqirus's adapted zoonotic influenza vaccine was given the backing of the European Medicines Agency (EMA) in April.
- <https://www.politico.eu/article/finland-to-receive-first-eu-procured-bird-flu-shots/>

**June 6, 2024**

## "CSL Seqirus, a Proud Champion of Pandemic Preparedness, Signs an Agreement with the European Commission to Provide Pre-Pandemic Vaccines to the EU"

- *CSL Seqirus to provide 665,000 pre-pandemic (zoonotic) vaccines to support fifteen EU and EEA Member States.*
- *Outbreaks of highly pathogenic avian influenza (HPAI) viruses in birds and poultry have been reported in Europe.*
- *The decision by the Health Emergency Preparedness and Response Authority (HERA) demonstrates their commitment to support Member States' pandemic preparedness in the face of these outbreaks.*

"Under the terms of the agreement, CSL Seqirus will deliver 665,000 doses of **pre-pandemic vaccine** that is **well-matched to the H5 of the currently circulating H5N1 strain**, to fifteen EU and EEA Member States, as well as the "Union Civil Protection Mechanism" (rescEU). In addition, the 4-year contract includes an option for participating authorities to purchase up to an additional 40 million doses of the pre-pandemic vaccine over the life of the contract."

<https://newsroom.csl.com/2024-06-11-CSL-Seqirus,-a-Proud-Champion-of-Pandemic-Preparedness,-Signs-an-Agreement-with-the-European-Commission-to-Provide-Pre-Pandemic-Vaccines-to-the-EU>





## Vaccines for pandemic influenza

- Pandemic influenza vaccines need to be **specifically developed** against the strain of virus causing the **pandemic**. Because the strain of flu virus causing a pandemic is not known before a pandemic is imminent, pandemic influenza **vaccines can only be prepared once a pandemic has started** and the exact strain of flu virus responsible can be identified.
- **Pandemic preparedness vaccines can be authorised but not marketed** before an influenza pandemic.
- In the event of a pandemic, once the virus strain causing the pandemic is identified, the manufacturer can include this strain in the authorised pandemic preparedness vaccine and apply for the vaccine to be authorised as a 'final' **pandemic vaccine**.
- The zoonotic flu **vaccines currently available contain the virus strain A/H5N1** (bird flu) because health experts believe that this strain could cause a future flu pandemic and is responsible for recurrent outbreaks.

<https://www.ema.europa.eu/en/human-regulatory-overview/public-health-threats/pandemic-influenza/vaccines-pandemic-influenza>

**HMMM... there is no H5N8 vaccine listed as authorized or approved in the EU as of June 17, 2024 according to the EMA**

# Avian influenza in Finland in 2024

<https://www.ruokavirasto.fi/en/animals/animal-health-and-diseases/animal-diseases/poultry/avian-influenza/avian-influenza-in-finland/>

- **As of June 12, Finland has detected only ONE bird with H5N1 virus during all of 2024, no cows and no people**

Table of the HPAI cases in birds detected in Finland in 2024

Case number	Date of detection	Location where the disease was found	Bird species	Avian influenza
1	3.6.2024 (found 24.1.2024)	Helsinki	Northern goshawk	highly pathogenic H5N1

## More information

[Avian influenza cases in Finland 2016-2023](#)

Page last updated 6/12/2024

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# Man dies from H5N2 avian flu in Mexico; Minnesota reports first case in dairy cow

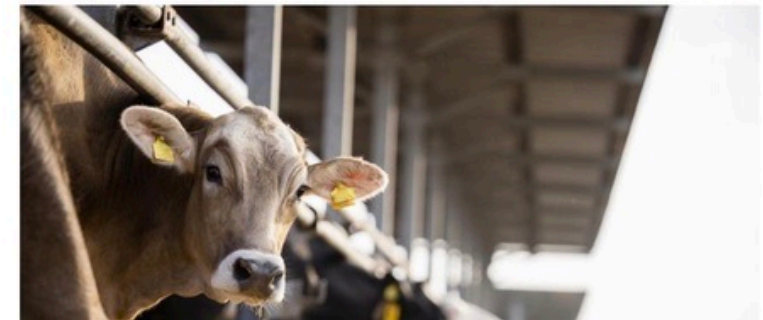
*Stephanie Soucheray, MA* June 6, 2024

Topics: *Avian Influenza (Bird Flu)*



SHARE

The World Health Organization (WHO) **has confirmed** that a 59-year-old Mexican man with no known exposure to infected animals has died from the H5N2 subtype of avian flu.



Padding  
the  
narrative



Sometimes the lies don't work: Mexico's health ministry denied a death was caused by bird flu in a patient who died of his underlying conditions

**June 2024**

## **WHO, Mexican Health Secretary Clash Over Bird Flu Death**

Last updated 1 hour ago

The World Health Organization (WHO) reported the first human death from the H5N2 bird flu strain in Mexico, but Mexican Health Secretary Jorge Alcocer denied this claim, stating that the man died from other causes. The man had been bedridden for weeks prior to developing symptoms and had several underlying health conditions. The WHO reported that the man died from multiple factors, and investigations are ongoing, sparking a debate among health experts and the public.

This story is a summary of posts on X and may evolve over time. Grok can make mistakes, verify its outputs.

## Disease Outbreak News

# Avian Influenza A (H9N2) - India

11 June 2024

- Child tested positive for 4 viruses in 6 weeks but it was the bird flu (by PCR) that made him sick
- On 22 May 2024, the International Health Regulations (IHR) National Focal Point (NFP) for India reported to WHO a case of human infection with avian influenza A(H9N2) virus detected in a 4 y/o male.
- <https://www.who.int/emergencies/disease-outbreak-news/item/2024-DON523>

Breakingviews

# Moderna stock is lone omen of bird flu pandemic

By Robert Cyran

June 18, 2024 8:01 AM EDT · Updated 15 hours ago



Commentary | By Robert Cyran



Test tubes labelled "Bird Flu" and eggs are seen in this picture illustration, January 14, 2023. [Purchase Licensing Rights](#)

NEW YORK, **June 18** (Reuters) - The recent rise of Moderna's (MRNA) stock tells a grim tale. The **\$56 billion company** which pioneered a Covid vaccine has seen its market **value rise 40% since the discovery of bird flu in American cows in March**




# Is Bird Flu a "Select Agent" or Not?

- Select agents are those that may cause a pandemic in humans, or serious threat to animals, plants
- Research on them is highly regulated by CDC
- Select agents can only be studied in high containment (BSL-3 or BSL-4) labs
- How dangerous is bird flu?
- Can US labs study it, or not?





MISSOURI DEPARTMENT OF  
**HEALTH &  
SENIOR SERVICES**

 <https://health.mo.gov/lab/respiratory.php>

Because the sensitivity of commercially available rapid diagnostic tests for influenza may not always be optimal, RT-PCR testing may be performed even if influenza rapid diagnostic testing is negative on patients meeting the clinical criteria for avian influenza infection.

Highly pathogenic avian influenza A (H5N1) is classified as a select agent and must be worked with under stringent Biosafety Level (BSL) 3+ laboratory conditions. Therefore, respiratory virus cultures should not be performed in most clinical laboratories and such cultures should not be ordered for patients suspected of having H5N1 infection.

Requests for avian influenza collection kits should be directed to the Missouri State Public Health Laboratory at 573-751-3334. Instructions for specimen collection and transport may be found in the "Instructions for Submitting Avian Influenza Specimens to the State Public Health Laboratory" (see link below).

Bird flu is NOT a "potential pandemic pathogen"

Letting the cat out of the bag

May 8, 2024



HEALTH NEWS

### Biden Admin to Exclude Avian Influenza, COVID-19 From Risky Research Rules

Avian influenza strain H5N1 and the Ebola virus are not considered to be potential pandemic pathogens by the National Science and Technology Council.

🎁 70 91 Save



President Joe Biden speaks in Washington on April 10, 2024. (Madalina Vasiliu/The Epoch Times)



By Zachary Stieber, Senior Reporter  
5/8/2024 Updated: 5/8/2024





Either it is deadly or it isn't. Right now it isn't.

So strict regulations for handling bid flu were relaxed.

May 14, 2024

# US relaxes regulations for labs handling bird flu samples to ease virus response

By Julie Steenhuisen

May 14, 2024 5:15 PM EDT · Updated 8 days ago



A person holds a test tube labelled "Bird Flu", in this picture illustration, January 14, 2023. REUTERS/Dado Ruvic/Illustration/File Photo [Purchase Licensing Rights](#)

CHICAGO, May 14 (Reuters) - U.S. government officials have temporarily relaxed strict guidelines on how public health laboratories and healthcare facilities handle, store and transport H5N1 bird flu samples, which are considered high-risk pathogens, in response to the recent spread of the virus to dairy cattle.

The revised guidance, which has not been previously reported, came at the request of the Association of Public Health Laboratories (APHL), which represents state and local labs that monitor and detect public

# Current and next generation influenza vaccines: Formulation and production strategies

Peter C. Soema<sup>a b</sup>, Ronald Kompier<sup>a c</sup>, Jean-Pierre Amorij<sup>a</sup>  , Gideon F.A. Kersten<sup>a b</sup>

- "In addition to H1N1 vaccines, several pandemic H5N1 mock-up vaccines have been currently licensed. Mock-up vaccines are developed to generate a registration dossier, which can subsequently be used for the licensing of an actual pandemic vaccine after inclusion of a pandemic vaccine strain. This could speed up the regulatory approval process in case of a pandemic."
- "Nonetheless, extra care should be given to the safety profile when combining powerful adjuvant with [complex protein](#) vaccines such as WIV, split, virosomal or subunit influenza vaccines, since the induction of broad antibody responses increases the risk of cross-reactivity with self-proteins."
- [European Journal of Pharmaceutics and Biopharmaceutics](#) [Volume 94](#), August **2015**, Pages 251-263

<https://www.sciencedirect.com/science/article/pii/S0939641115002556>

1. Is the vaccine being rolled out in Finland a "mock-up" or pre-pandemic vaccine that is being used to generate a dossier for some future vaccine?
2. So that a future pandemic strain can be swapped into the platform being used in Finland later, if needed, because the existing H5N1 platforms are unsatisfactory?
3. Is the **0.5% death rate** in the **H5N1 Audenz** trial and **1% death rate** in the **H5N1 Sanofi** trial scaring the regulators?



# H5N1 Influenza Virus Vaccine, manufactured by Sanofi Pasteur, Inc. Questions and Answers

## Why didn't the clinical trial include more people?

FDA recognizes that a limited number of people were studied in the clinical trial. The study was designed by the National Institutes of Health (NIH) as an exploratory study to look at the amount of antibodies generated in people from various doses. Because the results showed promise for providing protection against the H5N1 influenza virus and helping with national preparedness for influenza pandemic, Sanofi Pasteur submitted a Biologics License Application to FDA.

<https://www.fda.gov/media/74534/download?attachment>

**sanofi pasteur**  
**Influenza Virus Vaccine, H5N1**

- 1 Four serious adverse events (SAEs), all considered unrelated to vaccine, occurred after
- 2 vaccination including one death and three other SAEs (one each: menorrhagia, cerebrovascular
- 3 event, and breast cancer).

<https://public4.pagefreezer.com/browse/FDA/06-02-2023T10:15/>  
<https://www.fda.gov/vaccines-blood-biologics/vaccines/h5n1-influenza-virus-vaccine-manufactured-sanofi-pasteur-inc-questions-and-answers>

illnesses. A total number of 103 subjects (mean age: 39.4 years; age range 18 through 64 years; 53.4 % female, race: 81.6% White, 10.7% Black or African American, and 7.8% Asian) received an intramuscular injection of an investigational vaccine formulation of A/Vietnam/1203/2004 (H5N1, clade 1) containing 90 µg hemagglutinin and no preservative, followed by another injection of the same dose approximately 28 days later. Forty-eight (48) subjects received 0.5 mL

# FDA licensed 3 bird flu vaccines for humans

## Vaccines Licensed for Use in the United States

<a href="#">Influenza Virus Vaccine, H5N1</a> (for National Stockpile)	No Trade Name
<a href="#">Influenza A (H5N1) Virus Monovalent Vaccine, Adjuvanted</a>	No Trade Name
<a href="#">Influenza A (H5N1) Monovalent Vaccine, Adjuvanted</a>	AUDENZ

Latest bird flu vax licensed in  
**2020**

**HIGHLIGHTS OF PRESCRIBING INFORMATION**  
These highlights do not include all the information needed to use AUDENZ™ (Influenza A (H5N1) Monovalent Vaccine, Adjuvanted) safely and effectively. See full prescribing information for AUDENZ.

AUDENZ (Influenza A (H5N1) Monovalent Vaccine, Adjuvanted) injectable emulsion for intramuscular use

Initial U.S. Approval: 2020

### Serious Adverse Events (SAEs)

In Study 3, fatal and non-fatal SAEs reported in the 12 months following vaccinations among adults 18 through 64 years of age occurred in 2.9% of subjects who received AUDENZ and 3.3% of subjects who received placebo. SAE rates among adults 65 years of age and older were 10.5% in subjects administered AUDENZ and 15.3% in subjects who received placebo. Fatal SAEs included 11 (0.5%) AUDENZ recipients and 1 (0.1%) placebo recipients. No SAEs were assessed as being related to AUDENZ.

# USDA faulted for disclosing scant information about outbreaks of H5N1 avian flu in cattle



By Helen Branswell  April 18, 2024

STAT Reporting from the frontiers  
of health and medicine

[Rick] Bright criticized the U.S. for not being more forthcoming now, noting that [WHO] international negotiations on pandemic preparedness are currently trying to reach an agreement that could be signed off on at the May meeting of the World Health Assembly. “In the context of these pandemic accord discussions right now, where they’re trying to come up with this agreement about sharing data and benefits from data, etc., and we’ve got the United States of America in the midst of an outbreak in dairy cattle ... not willing to share data in a timely, transparent manner, what does that tell the rest of the world?”

<https://www.statnews.com/2024/04/18/h5n1-bird-flu-scientists-want-usda-genetic-data-faster/>



# U.S. government in hot seat for response to growing cow flu outbreak

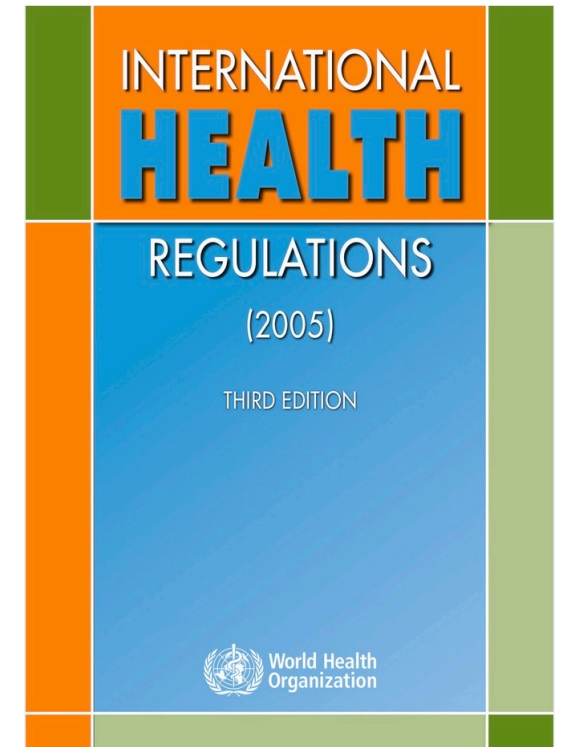
Veterinarians and researchers on the front lines say it has taken too long to share data on viral changes, spread, and milk safety

Science

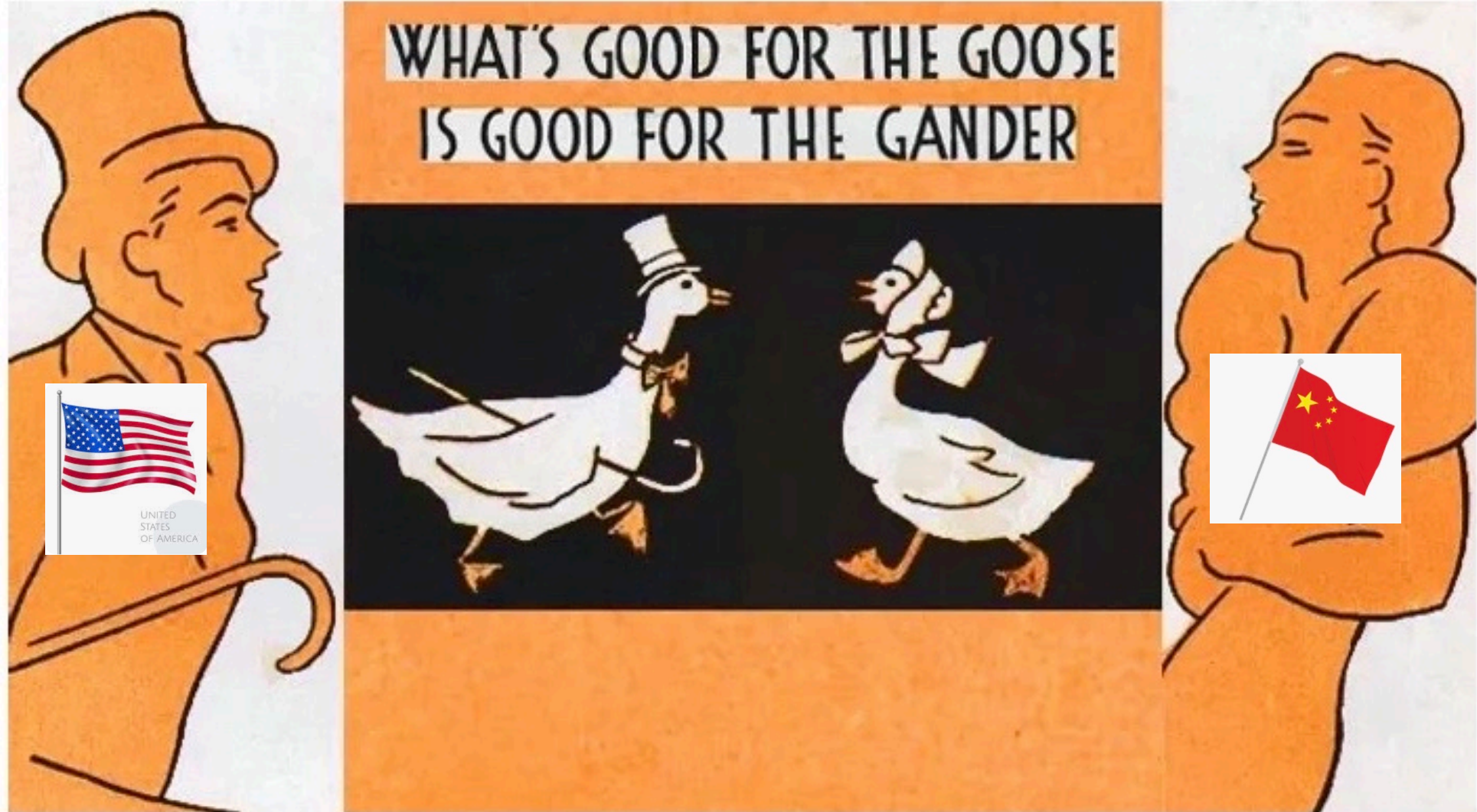
22 APR. 2024 · 11:45 A.M. ET · BY JON COHEN

"Thijs Kuiken, an avian influenza researcher at Erasmus Medical Center, says the "very sparse" information released by the U.S. government has international implications, too. State and federal animal health authorities have "abundant information ... that [has] not been made public, but would be informative for health professionals and scientists" in the United States and abroad, he says, "to be able to better assess the outbreak and take measures, both for animal health and for human health." He notes that even the new sequences released by USDA do not include locations of the samples or the date they were taken. The release appears to include data from only 39 cows."

<https://www.science.org/content/article/u-s-government-hot-seat-response-growing-cow-flu-outbreak>



**Double standards eventually present problems. How long does "Do as I say, not as I do" work in international diplomacy?**





# The Globalists are desperate for the pandemic agenda to go forward

... the world remains unprepared to stop an outbreak from becoming a pandemic.

High-level political momentum has waned.

...Countries are not investing the domestic resources required for preparedness and response, while international finance remains insufficient....

[Some] positive moves are not nearly advanced enough or at the scale required.

Nor do they focus sufficiently on research and development...

Too many dangerous gaps and vulnerabilities remain, and pathogens have ample opportunity to spill over, slip through, and spread fast.

[https://live-the-independent-panel.pantheonsite.io/wp-content/uploads/2024/06/The-Independent-Panel\\_No-time-to-gamble.pdf](https://live-the-independent-panel.pantheonsite.io/wp-content/uploads/2024/06/The-Independent-Panel_No-time-to-gamble.pdf)



## No Time to Gamble

Leaders Must Unite to Prevent Pandemics

The Right Honourable Helen Clark  
Her Excellency Ellen Johnson Sirleaf

June 2024



# What do we know about bird flu in cows? Practically nothing, but milk and meat are safe

<https://www.nyas.org/ideas-insights/blog/hpai-ah5n1-transmission-among-dairy-cattle-in-the-u-s-new-findings-and-safety-measures/>

- "While prior data on Influenza A virus in cattle is scarce, the current geographic expansion of HPAI H5N1 among herds across multiple U.S. states demonstrates clade 2.3.4.4b's affinity for cattle." **Decoded: We have no idea how many other bird flu or other influenza viruses have previously affected cattle and whether they are a concern or not.**
- "On May 1, 2024, the U.S. Food and Drug Administration confirmed that pasteurization inactivates H5N1 virus in a variety of milk products. [No infectious H5N1 virus was found in nearly 300 retail dairy samples](#) that were positive for viral nucleic acid by quantitative PCR. Additionally, neither viral nucleic acid nor infectious virus was found in retail powdered infant formula and powdered milk. This supports pasteurization's effectiveness in inactivating concentrations of H5N1 virus found in the milk supply among samples collected in April." **Decoded: all pasteurized milk is perfectly safe, and while we don't say so, raw milk has also been found to be safe. (June 28 updated)**

<https://www.fda.gov/food/alerts-advisories-safety-information/updates-highly-pathogenic-avian-influenza-hpai>



# Updates on Highly Pathogenic Avian Influenza (HPAI)

<https://www.fda.gov/food/alerts-advisories-safety-information/updates-highly-pathogenic-avian-influenza-hpai>

- 297 samples from the FDA's initial survey of retail dairy products were found to be negative for viable Highly Pathogenic H5N1 Avian Influenza (H5N1 HPAI) virus.
- The FDA collected the 297 samples at retail locations in 17 states. These retail samples represent products produced at 132 processing locations in 38 states.
- **Viral RNA was detected in 60 samples (20.2%)**
- Viability testing by egg inoculation was performed on the qPCR samples that were positive for viral nucleic acid. **All of these 297 samples did not detect any viable virus.**

<https://www.medrxiv.org/content/10.1101/2024.05.21.24307706v1#p-5>

# Influenza Diagnostic Tests



<https://www.fda.gov/medical-devices/in-vitro-diagnostics/influenza-diagnostic-tests>

- "In response to requests from the public, the FDA is providing a list of in vitro diagnostic tests that have FDA 510(k) clearance, or granted de novo request, or are authorized for emergency use (EUA), for the detection of influenza in certain specimens from humans. Most tests listed below for the detection of seasonal influenza may be capable of detecting influenza A/H5N1, which is a subtype of influenza A. However, only tests specifically designed for subtyping will be able to determine if the person has seasonal flu, or influenza A/H5."
- Then FDA only lists a single H5N1 test, from 2019, before the current clade was found in the US in late 2021. It is unlikely this is the test being used today, since other tests have been developed more recently, for instance at NIH.

Influenza A/H5 Subtyping Tests			
Search: <input type="text"/>			
Manufacturer	Device Name	Virus Detection Method	Authorization
Centers For Disease Control and Prevention	CDC Human Influenza Virus Real-Time RT-PCR Diagnostic Panel: Influenza A/B Typing Kit, Influenza A Subtyping Kit (VER 2), Influenza B Lineage Genotyping Kit (VER 1.1 and VER 2), and Influenza A/H5 Subtyping Kit (VER 3)	Nucleic Acid Detection	<a href="#">K190302</a>

Showing 1 to 1 of 1 entries



2007

- Furthermore, there is no evidence that a human pandemic or even an epidemic has been caused by any previous HPAI virus reported in poultry for more than 125 years.
- None of the last 4 pandemics is known to have been temporally associated with a poultry or wild bird epizootic, leaving no historical data to support the possibility that poultry are capable of serving as intermediate hosts in pandemic development.

[JAMA](#). Author manuscript; available in PMC 2008 Aug 11.

Published in final edited form as:

[JAMA](#). 2007 May 9; 297(18): 2025–2027.

doi: [10.1001/jama.297.18.2025](https://doi.org/10.1001/jama.297.18.2025)

PMCID: PMC2504708

NIHMSID: NIHMS54790

PMID: [17488968](https://pubmed.ncbi.nlm.nih.gov/17488968/)

## The Next Influenza Pandemic: Can It Be Predicted?

[Jeffery K. Taubenberger](#), MD, PhD, [David M. Morens](#), MD, and [Anthony S. Fauci](#), MD

▶ [Author information](#) ▶ [Copyright and License information](#) [PMC Disclaimer](#)

The publisher's final edited version of this article is available at [JAMA](#)

Although most experts believe another influenza pandemic will occur, it is difficult to predict when or where it will appear or how severe it will be. Neither is there agreement about the subtype of the next pandemic influenza virus. However, the continuing spread of H5N1 highly pathogenic avian influenza A (HPAI) among poultry on several continents, associated with an increasing number of severe and fatal human infections, has raised the pandemic stakes.<sup>1</sup> Genetically and antigenically divergent H5N1 HPAI strains appeared in 1997 and have been spreading globally since 2003.<sup>2-3</sup> To date, epizootics in approximately 60 countries have caused a reported 291 human cases with 172 deaths.<sup>4</sup>

Although overshadowed by H5N1, at least 8 other poultry epizootics have recently occurred, some involving human infections and, uncommonly, human deaths.<sup>5</sup> H5N1 epizootics are unique, however, in causing mortality in wild birds, occasional infections in mammals, severe human infections, and in rare instances possible human-to-human transmission.<sup>6</sup>

# H7N9 Avian Influenza A Virus and the Perpetual Challenge of Potential Human Pandemicity

**2013**

Authors: David M. Morens, Jeffery K. Taubenberger, Anthony S. Fauci | [AUTHORS INFO & AFFILIATIONS](#)

- In the 2003 Netherlands H7N7 outbreak, the majority of infected humans had conjunctivitis alone
- From the 1940s, if not earlier (32), until the 1970s, a well-adapted H7N7 virus was widely enzootic in horses and seems also to have caused uncommon and mild spillover infections in humans
- Since the 1970s, the equine H7N7 virus has become extinct or at least virtually undetectable by surveillance
- LPAI H7N7 viruses have also caused fatal outbreaks in seals (marine mammals) without stable adaptation and have been associated with spillover seal-to-human infections
- In 94 years of virologic surveillance, we have never seen a poultry-adapted influenza virus cause widespread human transmission

<https://journals.asm.org/doi/full/10.1128/mbio.00445-13>

# The WHO's Proposed Amendments Will Increase Man-Made Pandemics

BY  MERYL NASS AUGUST 17, 2023 GOVERNMENT 25 MINUTE READ

2023



## "Funding for (Natural) Pandemics, Including Yearly Influenza, was Lumped Together with Biological Defense Funding"

Perhaps the comingling of funding was designed to make it harder for Congress and the public to understand what was being funded, and how much taxpayer funding was going to gain-of-function work? Understanding the huge sums involved might have led Americans to question why this research was being done at all, given its prohibition by the Biological Weapons Convention, and could have raised additional questions about its lack of benefit for human health. Former CDC Director Robert Redfield, a physician and virologist, told Congress in March of 2023 that gain-of-function research had not resulted in a single beneficial drug, vaccine, or therapeutic to his knowledge."

<https://doortofreedom.org/the-whos-proposed-treaty-will-increase-man-made-pandemics/>





February 14, 2005

# Impact of Influenza Vaccination on Seasonal Mortality in the US Elderly Population

2005

Lone Simonsen, PhD; Thomas A. Reichert, MD, PhD; Cecile Viboud, PhD; et al

» [Author Affiliations](#) | [Article Information](#)

*Arch Intern Med.* 2005;165(3):265-272. doi:10.1001/archinte.165.3.265

**Conclusions** We attribute the decline in influenza-related mortality among people aged 65 to 74 years in the decade after the 1968 pandemic to the acquisition of immunity to the emerging A(H3N2) virus. We could not correlate increasing vaccination coverage after 1980 with declining mortality rates in any age group. Because fewer than 10% of all winter deaths were attributable to influenza in any season, we conclude that observational studies substantially overestimate vaccination benefit.

<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/486407>

# What is One Health?

"One Health is an integrated, unifying approach that aims to **sustainably balance and optimize the health of people, animals and ecosystems**. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent.

The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and **tackle threats to health and ecosystems**, while **addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate changes and contributing to sustainable development.**"

[https://www.onehealthcommission.org/en/why\\_one\\_health/what\\_is\\_one\\_health/](https://www.onehealthcommission.org/en/why_one_health/what_is_one_health/)

The One Health High Level Expert Panel created this definition.



<https://organicconsumers.org/is-bird-flu-being-weaponized/>



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## Is Bird Flu Being Weaponized?

January 4, 2023 | Alexis Baden-Mayer  
Organic Consumers Association



# Evolutionary basis of human diseases in western Eurasia: insights from ancient genomics—Ron Fouchier, Wellcome grant, **2018**

- The evolutionary underpinnings for the variations in health status and disease susceptibilities among different populations around the world remain poorly understood despite their importance to assessing and addressing disease risk in an increasingly complex world.
- We will investigate past demographic, selective and epidemiological processes that shaped the present-day genetic profile of western Eurasians using genomic data from ancient humans and their pathogens spanning the past 10,000 years. We will clarify their evolutionary histories and their pathogens and evaluate the effect on the health status and disease profiles of present-day populations in the region.
- <https://wellcome.org/grant-funding/people-and-projects/grants-awarded/evolutionary-basis-human-diseases-western-eurasia>

# Adaptation of avian influenza virus polymerase to humans during pandemic emergence—Wendy Barclay. Wellcome grant

2018

- In birds, influenza virus infection is silent but when an avian influenza infects humans, the mismatch between virus and host factors leads first to replication block and later to severe disease after some adaptive mutations.
- I intend to discover the key host factors that underlie these observations. These might be excellent new targets for antiviral strategies. It will also assist with pandemic preparedness and therapeutic options for severe influenza.
- <https://wellcome.org/grant-funding/people-and-projects/grants-awarded/adaptation-avian-influenza-virus-polymerase-humans>

# Things to remember

1. There are multiple bird flu viruses, but their relative roles in killing wild birds and poultry are unclear and the role of wild birds as an H5N1 reservoir is questionable.
2. In Egypt, between 2003 and 2009, US Navy scientists found that 10% of healthy birds were positive for an influenza A (bird flu) virus
3. Information on how many chickens actually died from bird flu vs testing positive vs were in a chicken house being culled is withheld from the public
4. Under 500 humans are said to have died from H5N1 bird flu, around the world, since 1997
5. US-paid scientists have been making bird flu viruses more contagious, more deadly and more infectious for humans since at least 2011.
6. At least 2 licensed bird flu vaccines may be deadly; what about the rest?
7. Jeremy Farrar has stoked fear of bird flu viruses for 20 years, along with others. This seems to have been part of a plan, for which his projects are now cashing in.
8. Jeremy Farrar with Bill Gates initiated CEPI to collect billions in donations and make vaccines for emerging pathogens like bird flu, expanding their charities.



(continued)

9. Wellcome and BMGF helped sponsor scientists who performed GOF research on bird flu
10. Jeremy Farrar is now the Chief Scientist at WHO, pushing for globalizing the use of unlicensed, fast-tracked vaccines with no liability in drafts of the IHR and pandemic treaty
11. The WHO's Director-General, who is guided by Farrar, said, **I think it's time to be more aggressive in pushing back on anti-vaxxers"** a month ago.
12. Chickens are being vaccinated in China; Cows are being given mRNA vaccines for bird flu experimentally in the US and vaccines are tentatively being given to humans in Finland and the US.
13. The Finland vaccines may be a prototype, designed to gather data to enable the use of other vaccines employing the same "platform," using low-paid workers as guinea pigs
14. It is almost a certainty that multiple countries possess strains of lab-derived bird flu that will be deadly to humans. Whether they will quickly mutate into non-virulent forms is in question. Were prototype viruses tested in ferrets, the human model? In humans?
15. Why are poultry being culled? Are cows next? Is this virus control or food control? Testing farmers and consumers to see what they will tolerate?

# They lied about

@rubiofuerte



Tobacco



Mercury



Opioids



Aluminum



Talcum



Sweeteners



Saturated  
fats



GMO's



Raw milk



Cholesterol



Fluoride



Glyphosate

## But they're now telling the truth?

**INSTEAD OF KILLING  
MILLIONS OF CHICKENS  
BECAUSE OF BIRD FLU,  
COULDN'T WE JUST  
LOCK THEM DOWN IN  
THE COOP FOR  
TWO WEEKS  
TO FLATTEN  
THE CURVE?**



IG/X AWAKENINGSWEDEN

KobieThatcher on X

9:29 AM

**Thanks for listening!**

**Meryl Nass, MD**