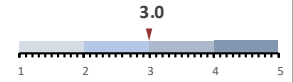


SUMMARY: RELEVANT SIGNALS (includes all signals rated ≥ 3.0)

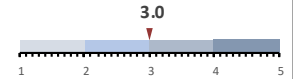
Influenza A

- ◆ **Mexico** has reported the first global laboratory-confirmed human case of influenza A(H5N2) in a 59-year-old male resident of the **State of Mexico**, with no history of exposure to poultry or other animals, and multiple underlying medical conditions, who died on April 24, 2024; **Mexico** had recently reported HPAI H5N2 in backyard poultry in March 2024
- ◆ **Mexican** officials have stated that the case did not die from influenza A(H5N2) but as a result of chronic conditions (kidney disease, type 2 diabetes, and systemic arterial hypertension) that generated septic shock

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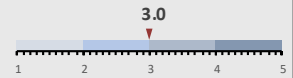
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Highly Pathogenic Avian Influenza

- ◆ **Iowa, Minnesota, and Wyoming** have confirmed first detections of influenza A H5N1 in dairy cattle, bringing the total number of affected states to 12; a total of 90 dairy herds have reported cases of influenza A H5N1 across 12 states: **Wyoming**(1), **Iowa**(1), **North Carolina**(1), **Ohio**(1), **Minnesota**(3), **Colorado**(4), **Kansas**(4), **South Dakota**(5), **New Mexico**(8), **Texas**(18), **Idaho**(20), and **Michigan**(24)
- ◆ CDC's Influenza A(H5N1) ferret study results demonstrate that the (A/Texas/37/2024) virus caused severe illness and death in ferrets and spread efficiently between ferrets via direct contact, and less efficiently with respiratory droplets (note study sample size is very small)
- ◆ In the **USA**, dairy cattle infected with influenza A H5N1 have died or been culled because they did not recover from the virus; some also died as a result of secondary infections
- ◆ Pre-print: The mammary glands of cows abundantly display receptors for circulating avian H5 viruses
 - Most of the sialome of the cow and goat respiratory tract is lined with sialic acid modifications such as N-glycolyl and O-acetyl, which are not bound by IAV; however, the H5 protein representing the cow isolates bound significantly in the mammary gland, whereas classical H5 proteins failed to do so

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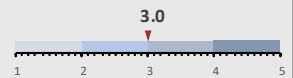
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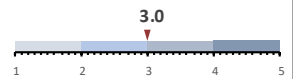
[Read More](#)



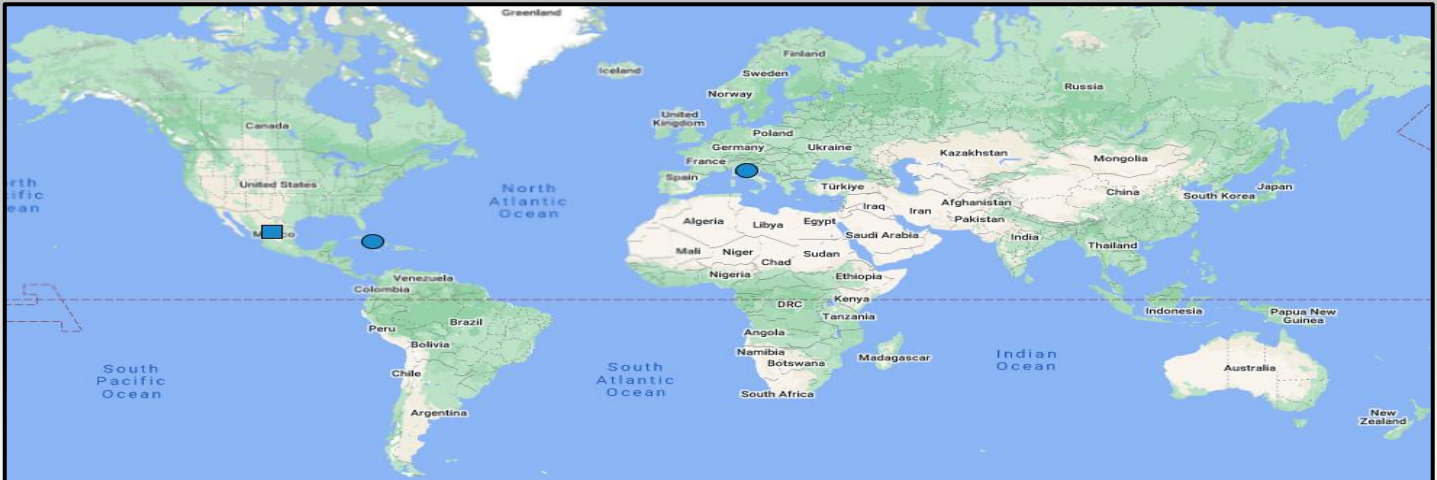
Oropouche virus

- ◆ **Cuba** has reported human cases of Oropouche virus for the first time; cases were identified during surveillance for non-specific fever syndromes in the province of **Santiago de Cuba**
 - Since the initial report, cases have also been detected in **Mayabeque**, and a travel-related case was reported in **Italy**, in a traveler returning from **Cuba**

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NEW EVENTS: (events rated > 2)



Influenza A(H5N2) in Mexico

Pathogen: virus; **Transmission:** direct contact, fomite, aerosol; **Species affected in event:** human

① On May 23, 2024, Mexico confirmed a fatal case of human infection with avian influenza A(H5N2) virus in a resident of the State of Mexico. This is the first laboratory-confirmed human case of infection with an influenza A(H5N2) virus reported globally and the first avian H5 virus infection in a person reported in Mexico. The virus was detected in a 59-year-old male resident of the State of Mexico who was hospitalized in Mexico City and had no history of exposure to poultry or other animals. The case had multiple underlying medical conditions. All close contacts have tested negative. According to health officials, the case suffered from type 2 diabetes, nephropathy, and systemic arterial hypertension for more than 14 years, which ultimately caused septic shock and death. Further investigation is ongoing as the source of infection has not been identified. [Read More](#)

Avg. Rating	2.5 - 3.0
No. of Signal	6
No. of Ratings	3 - 6

Oropouche virus in Cuba (and Italy traveler ex. Cuba)

Pathogen: virus; **Transmission:** vector – culicoidies, mosquito; **Species affected in event:** human

① Cuba has announced the detection of Oropouche virus cases in two cities in Santiago province in the southeastern part of the country. The cases were identified during surveillance for nonspecific fever syndromes in Santiago province. Cases have also been detected in the municipality of San Nicolas, in Mayabeque. However, the number of infected people is not specified. Oropouche fever is spread by *Culicoides paraensis* (which has not been detected in Cuba), and by the mosquito *Culex quinquefasciatus* (which is very common on the island). [Read More](#)

Avg. Rating	2.3 - 3.0
No. of Signal	4
No. of Ratings	2 - 4

A travel-related case of Oropouche virus was reported in an Italian traveler returning from Cuba. The patient, a 26-year-old female with no relevant prior medical history, visited Ciego de Ávila, Cuba, from May 12-26, 2024. The patient reported that her relatives in Cuba experienced similar symptoms, where an outbreak of Oropouche virus infection is currently ongoing. [Read More](#)

CONTINUED EVENTS: (events rated ≥ 2.4)

Highly Pathogenic Avian Influenza in North America

No. of Signals: 33

No. of weeks in report: 119

Avg. Rating: 1.7 - 3.0

- [Canada](#) has not reported any outbreaks of HPAI in domestic poultry over the last week
- Since May 29, 2024, the [USA](#) has reported outbreaks of HPAI in commercial poultry in: Minnesota(2) and Iowa(1); and in WOA Non-poultry in: South Carolina(1)
- [Iowa](#), [Minnesota](#), and [Wyoming](#) have confirmed first detections of influenza A H5N1 in dairy cattle, bringing the total number of affected states to 12
- In the [USA](#), a total of 90 dairy herds have reported cases of influenza A H5N1 across 12 states: Wyoming(1), Iowa(1), North Carolina(1), Ohio(1), Minnesota(3), Colorado(4), Kansas(4), South Dakota(5), New Mexico(8), Texas(18), Idaho(20), and Michigan(24)
- [Iowa](#) has also reported its second case of H5N1 in dairy cattle (not yet on the USDA website) in Sioux county, where a recent outbreak of HPAI H5N1 affected a 4.2 million bird operation
- In the [USA](#), dairy cattle infected with influenza A H5N1 have died or been culled because they did not recover from the virus; some also died as a result of secondary infections
- The USDA has reported 11 house mice tested positive for HPAI H5N1 in Roosevelt county, [New Mexico](#) (mouse entries no longer appear on the [USDA HPAI in mammals list](#))
- [Michigan](#) will soon be sero-testing dairy farm workers for signs of prior influenza A H5N1 infection
- The [FDA](#) has issued a letter to all states regarding the sale and consumption of raw milk
- The [CDC](#) has released an additional week of Influenza A (not strain specific) wastewater surveillance data on its dashboard

Highly Pathogenic Avian Influenza in Australia

No. of Signals: 06

No. of weeks in report: 03

Avg. Rating: 2.0 - 2.8

- [Australia](#) has reported HPAI at two additional poultry farms, bringing the total number of affected farms to five; four infected properties near Meredith are confirmed to have HPAI H7N3, and the infected property near Terang is confirmed to have HPAI H7N9

African Swine Fever in Europe

No. of Signals: 11

No. of weeks in report: 155

Avg. Rating: 2.0 - 2.4

- [Germany](#), [Poland](#), [Romania](#), and [Greece](#) have reported outbreaks of ASF in domestic swine
- [North Macedonia](#), [Hungary](#), [Greece](#), [Italy](#), and [Germany](#) have reported cases of ASF in wild boar

Highly Pathogenic Avian Influenza in Asia

No. of Signals: 03

No. of weeks in report: 144

Avg. Rating: 2.0

- [China](#) has reported HPAI H5 in 190 wild birds in Xizang
- [India](#) has reported an additional outbreak of HPAI in Kerala

SCIENTIFIC FINDINGS, REPORTS, AND GUIDANCE:

Coronavirus

- ◆ SARS-CoV-2 delta variant in African lions (*Panthera leo*) and humans at Utah's Hogle Zoo, USA, 2021-22 [Read More](#)

Influenza

- ◆ CDC - Reports A(H5N1) Ferret Study Results [Read More](#)
- ◆ CDC - Summary of H5N1 Seroprevalence Studies [Read More](#)
- ◆ CDC - Technical Report: Highly Pathogenic Avian Influenza A(H5N1) Viruses [Read More](#)
- ◆ Avian Influenza A(H5N1) Virus among Dairy Cattle, Texas, USA [Read More](#)
- ◆ Pre-print: The mammary glands of cows abundantly display receptors for circulating avian H5 viruses [Read More](#)
- ◆ Pre-print: Assessment of Ontario-purchased commercially available milk products for the presence of influenza A viral RNA [Read More](#)
- ◆ Pre-print: Avian influenza virus neuraminidase stalk length and haemagglutinin glycosylation patterns reveal molecularly directed reassortment promoting the emergence of highly pathogenic clade 2.3.4.4b A (H5N1) viruses [Read More](#)
- ◆ Pre-print: Mucus physically restricts influenza A viral particle access to the epithelium [Read More](#)
- ◆ Pre-print: Deep mutational scanning of H5 hemagglutinin to inform influenza virus surveillance [Read More](#)
- ◆ Pre-print: A systematic review of laboratory investigations into the pathogenesis of avian influenza viruses in wild a vifauna of North America [Read More](#)
- ◆ The H5 subtype of avian influenza virus jumped across species to humans - a view from China [Read More](#)
- ◆ Panzootic HPAIV H5 and risks to novel mammalian hosts [Read More](#)
- ◆ Avian influenza viruses in New Zealand wild birds, with an emphasis on subtypes H5 and H7: Their distinctive epidemiology and genomic properties [Read More](#)

Mpox

- ◆ WHO - Multi-country outbreak of mpox, External situation report #33- 31 May 2024 [Read More](#)

Vectors and Vector-borne Diseases

- ◆ WHO - Dengue - Global situation [Read More](#)

Other

- ◆ France - Weekly Bulletin for International Animal Health Surveillance 11/06/2024 [Read More](#)
- ◆ ECDC - Communicable disease threats report, 1 - 7 June 2024, week 23 [Read More](#)
- ◆ SHIC Domestic Disease Monitoring Report - June 2024 [Read More](#)
- ◆ SHIC Global Disease Monitoring Report - June 2024 [Read More](#)

Disclaimer

This intelligence report is intended to provide information to risk managers about emerging and zoonotic disease events that could pose a threat to Canada. It is based on information signals acquired and selected from twenty-one distinct disease surveillance sources via the Knowledge Integration using Web-based Intelligence (KIWI) tool hosted on the Canadian Network for Public Health Intelligence (CNPHI) informatics platform. The report is based on the activities of the CEZD Community of Practice and subject to change based on evolving user needs.