

# Swine Influenza Virus in South Korea

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## Swine influenza virus isolates in South Korea

As previously presented, South Korea still has the FMD vaccine strategy  
Further, recently, ASFV was also reported in wild bores.  
Therefore, we have a very strict control policy for swine farms.

Therefore, only the registered person can access the swine farms under strict control.

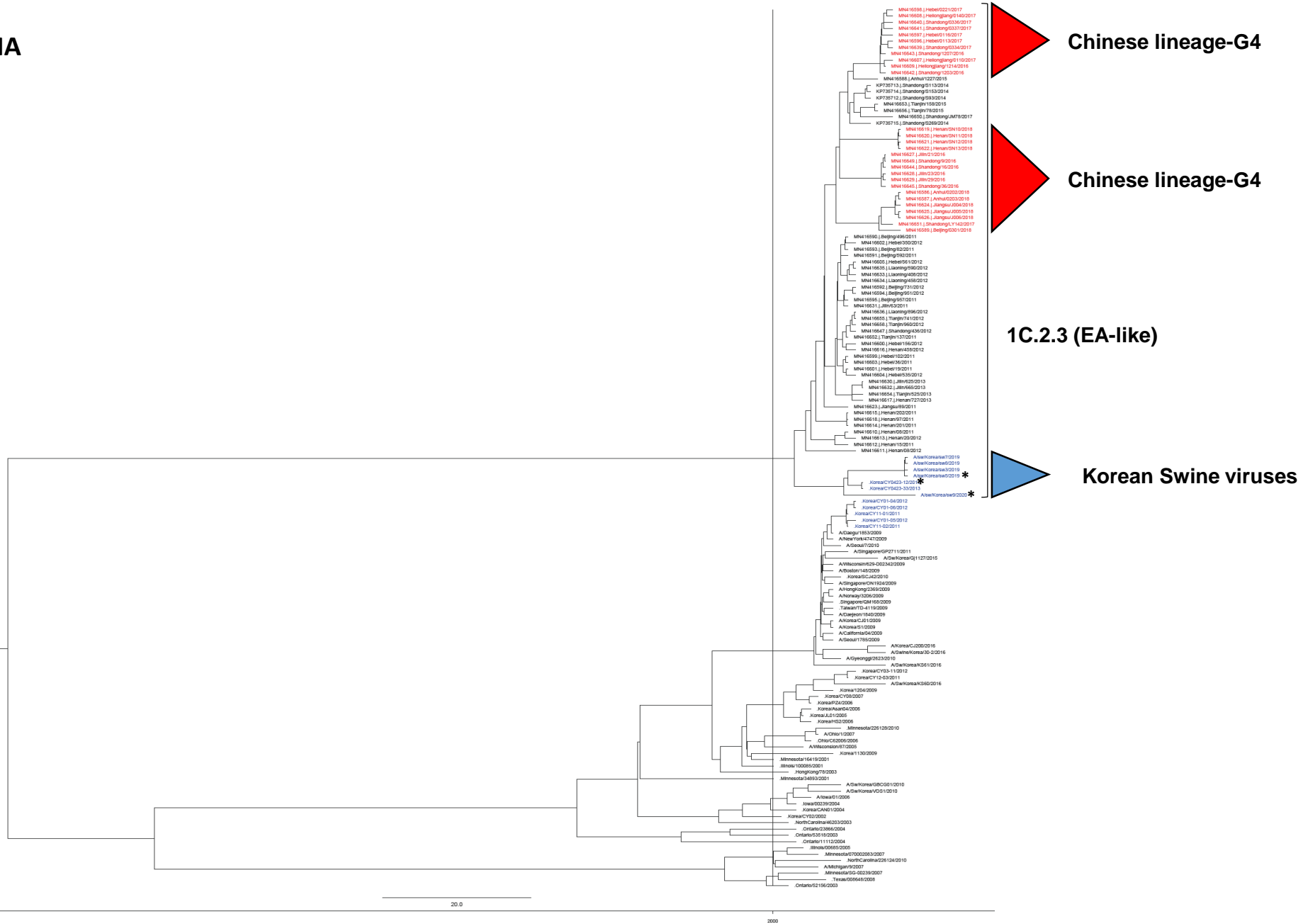
With these circumstances, we have isolated some H1N2 and H3N2 subtypes, but none of the H1N1

The H1N2 viruses have the HA genes of European avian-like H1 lineage which was reported in China recently

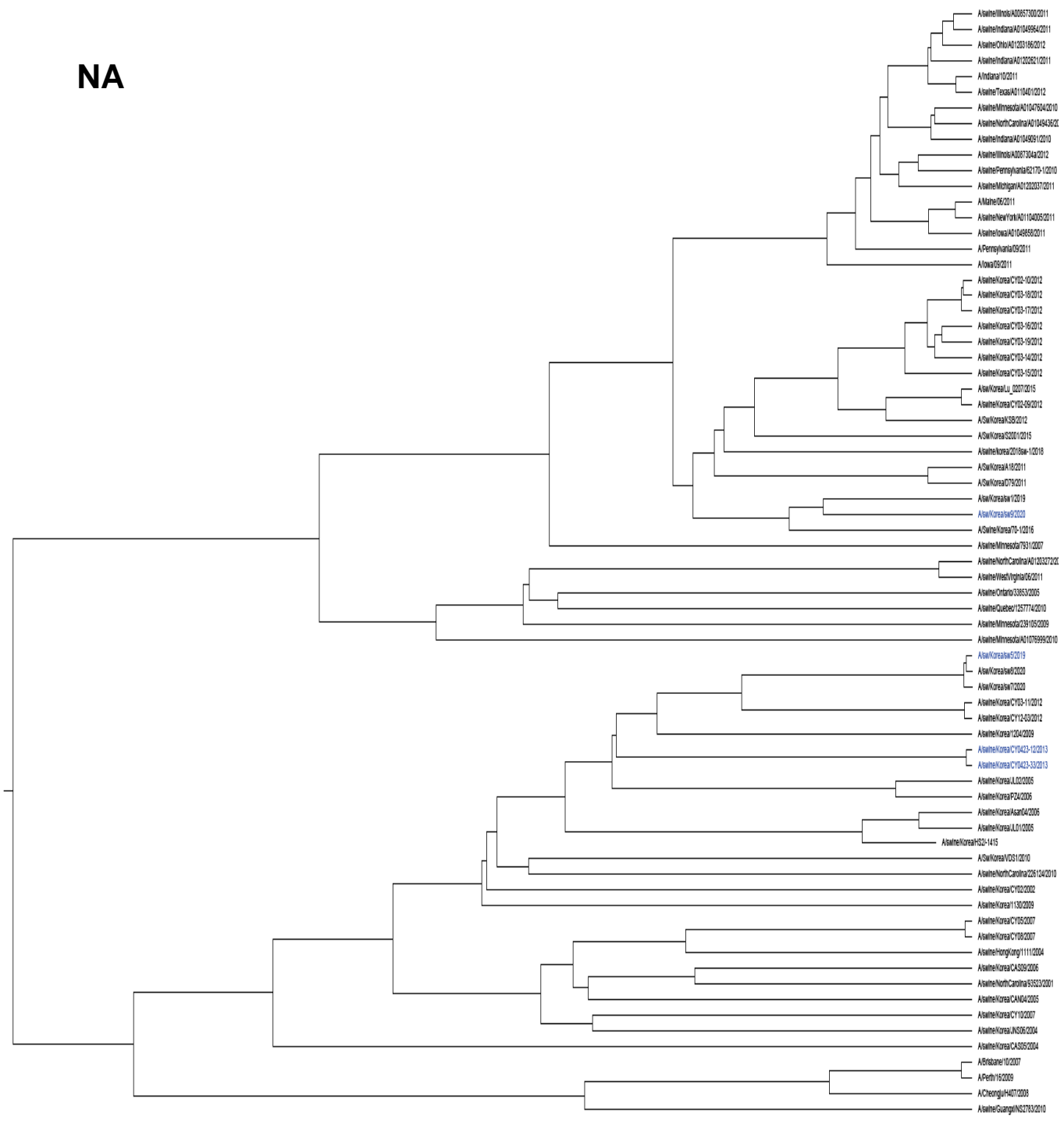
However, one NA gene was originated from 2005 Ontario-like lineage (the same lineage of recent Korean H3N2) while the 2019 isolates were clustered with old NTR lineage

The H3N2 viruses shared all gene segments with recent North American swine viruses.

HA



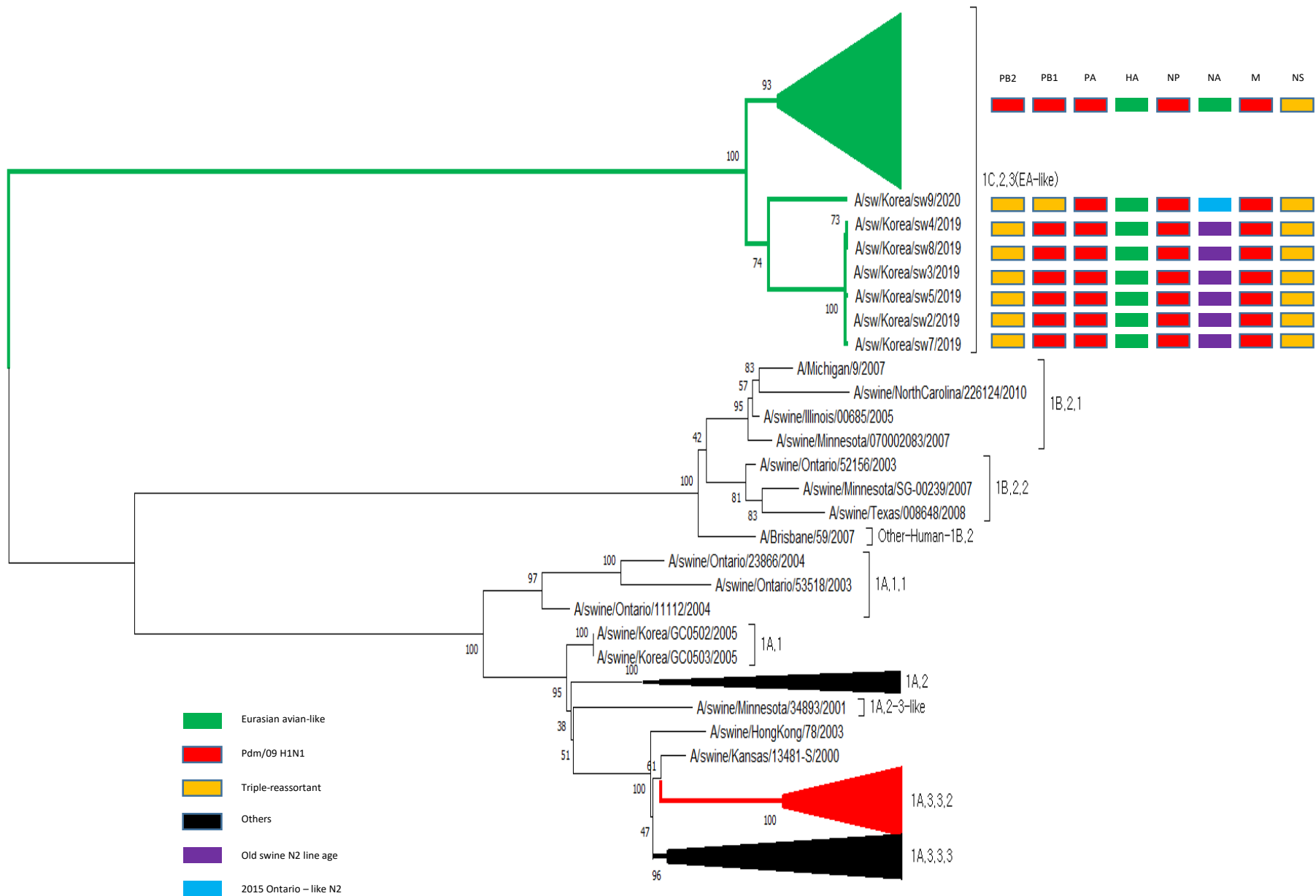
NA



sw/Ontario/33853/05 – like

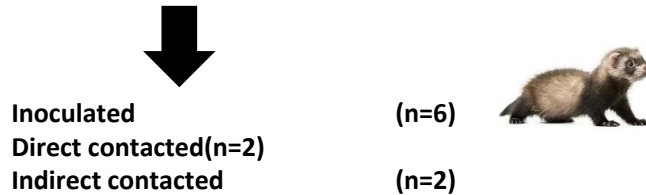
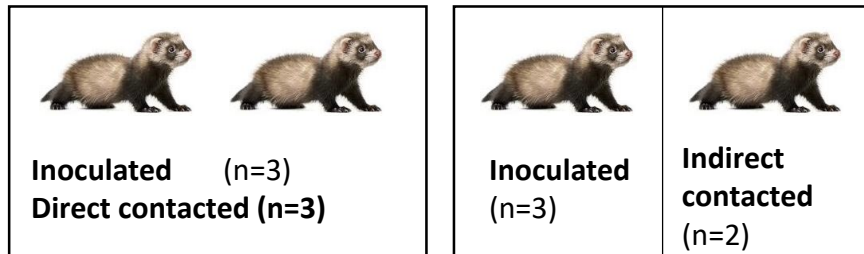
North American TR-origin

Early N2-lineage



0.050

# Design



- Group 1 : **A/Swine/Korea/CY0423-12/2013** (H1N2) (n=6/2/2)
- Group 2 : **A/Swine/Korea/SW5/2019** (H1N2) (n=6/2/2)
- Group 3 : **A/Swine/Korea/SW9/2020** (H1N2) (n=6/2/2)

**SARS-CoV-2**  
 (1ml,  $10^{6.0}$  TCID<sub>50</sub>/ml, intranasally)

Sacrifice (Nasal turbinate, Trachea, Lung)

Harvest samples (Nasal wash, n=3/2/2)  
 &  
 Clinical signs (B.W., B.T., Symptoms)

Harvest serum for HI test

Days after virus inoculation

- Group 1 : **A/Swine/Korea/CY0423-12/2016** (H1N2)
- Group 2 : **A/Swine/Korea/SW5/2019** (H1N2)
- Group 3 : **A/Swine/Korea/SW9/2020** (H1N2)

