

Swine influenza surveillance in China

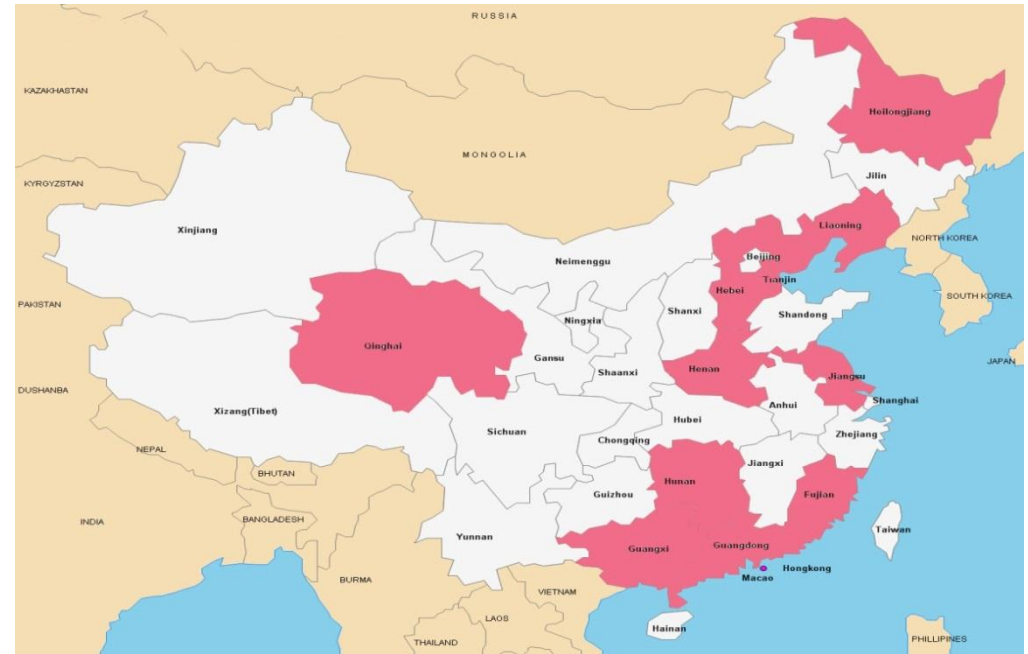
Chuanling Qiao

Harbin Veterinary Research Institute, CAAS, China

Report including

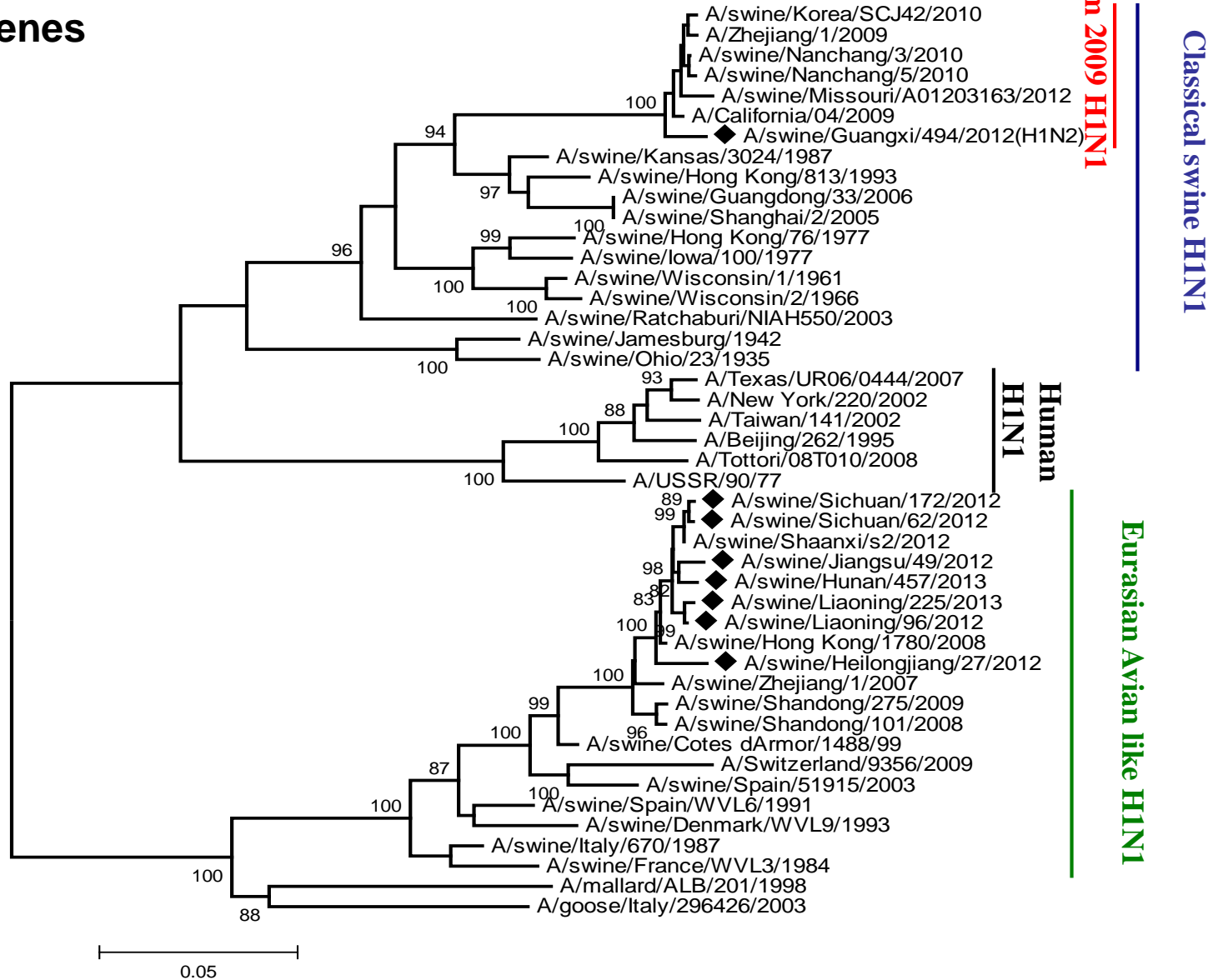
- Biannual surveillance programme on swine influenza during 2012-2013
- International cooperation project on swine influenza surveillance
- Surveillance of influenza virus in pigs after announcement of human infection with H7N9 virus

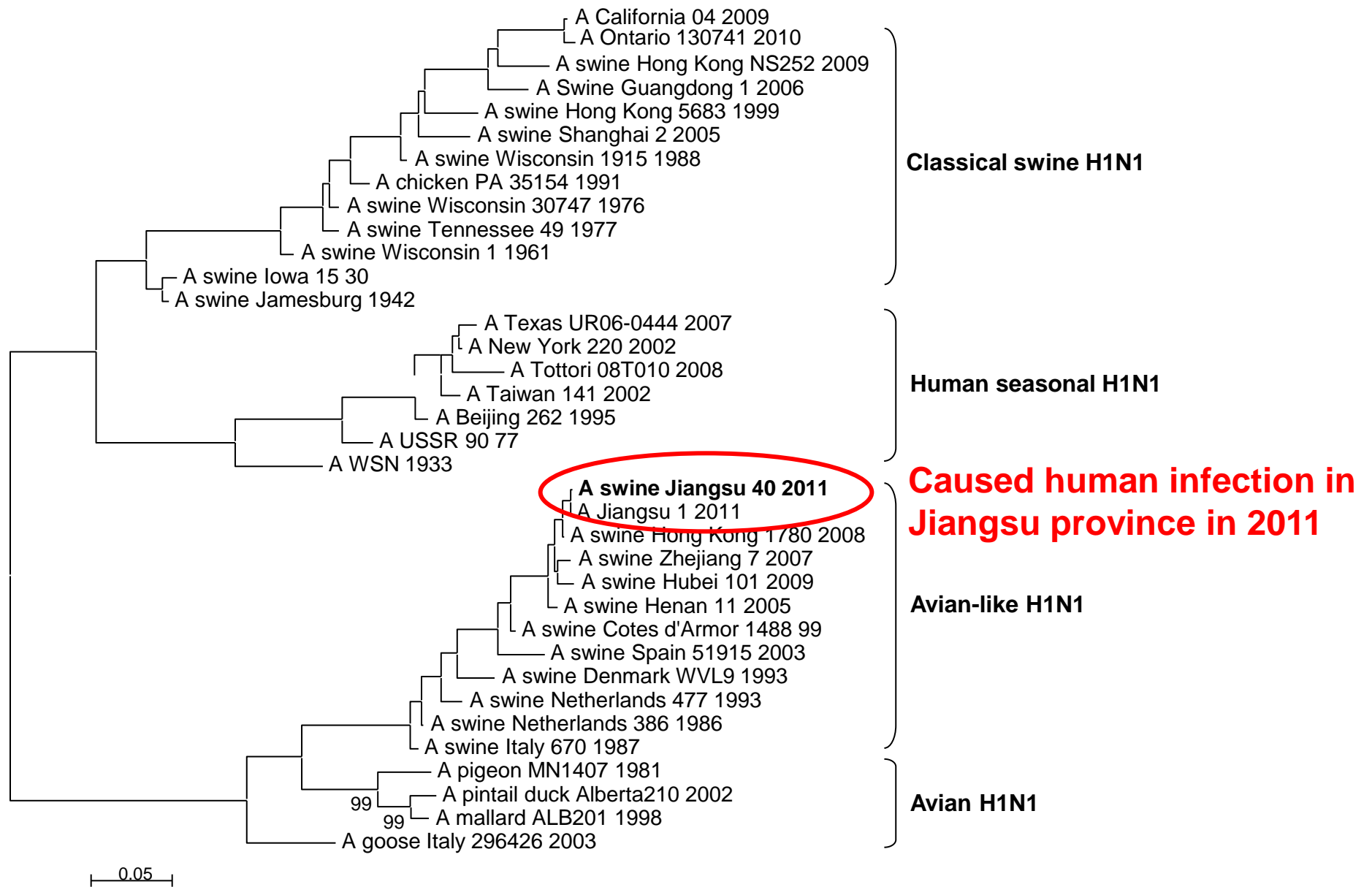
About 12,000 nasal swabs were collected from pigs in 20 provinces during 2012.04-2013.03



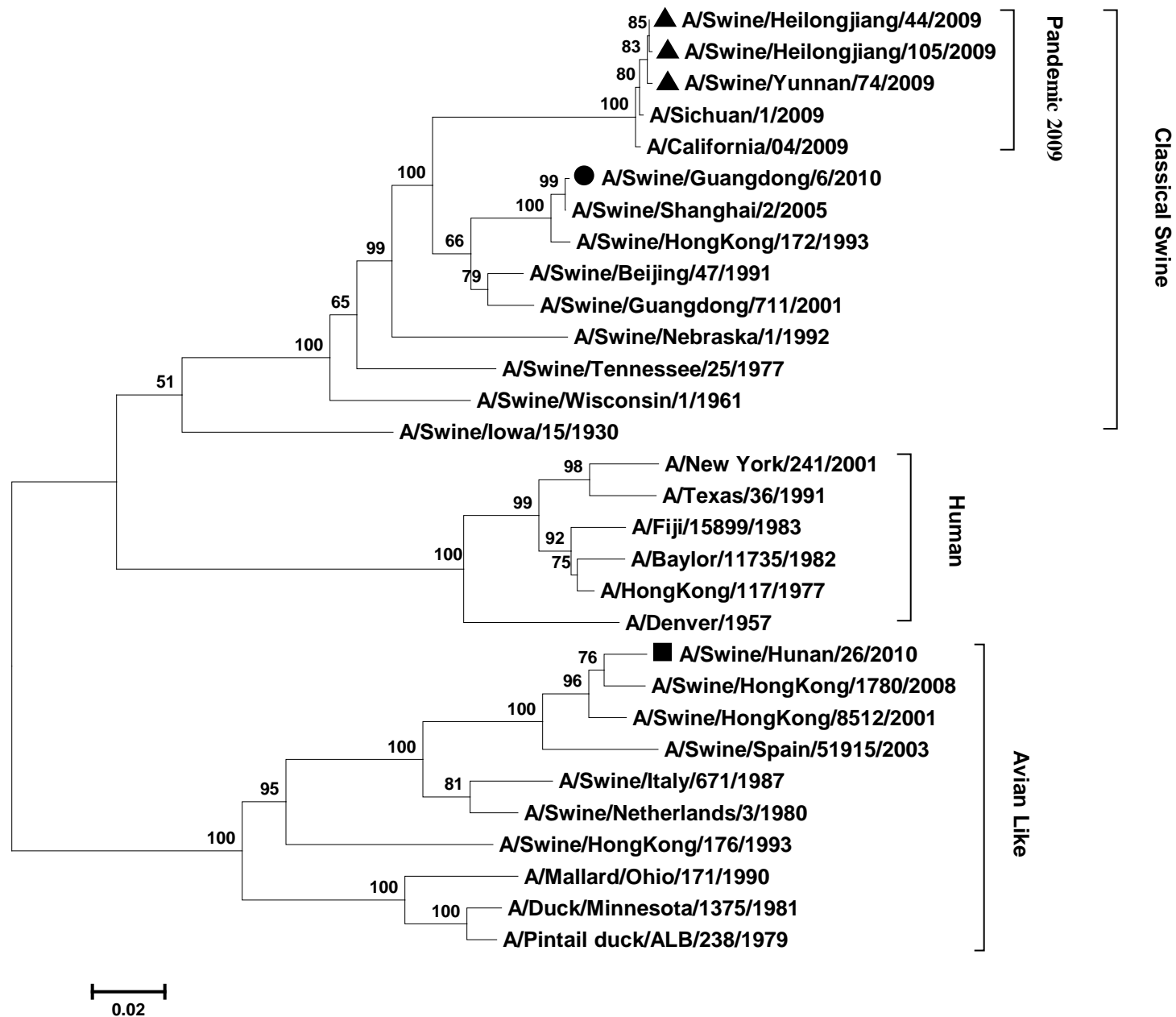
Total 76 SIVs were isolated from these samples, including 50 H1N1 SIVs, 25 H1N2 SIVs, and one H9N2 SIV.

H1 HA genes

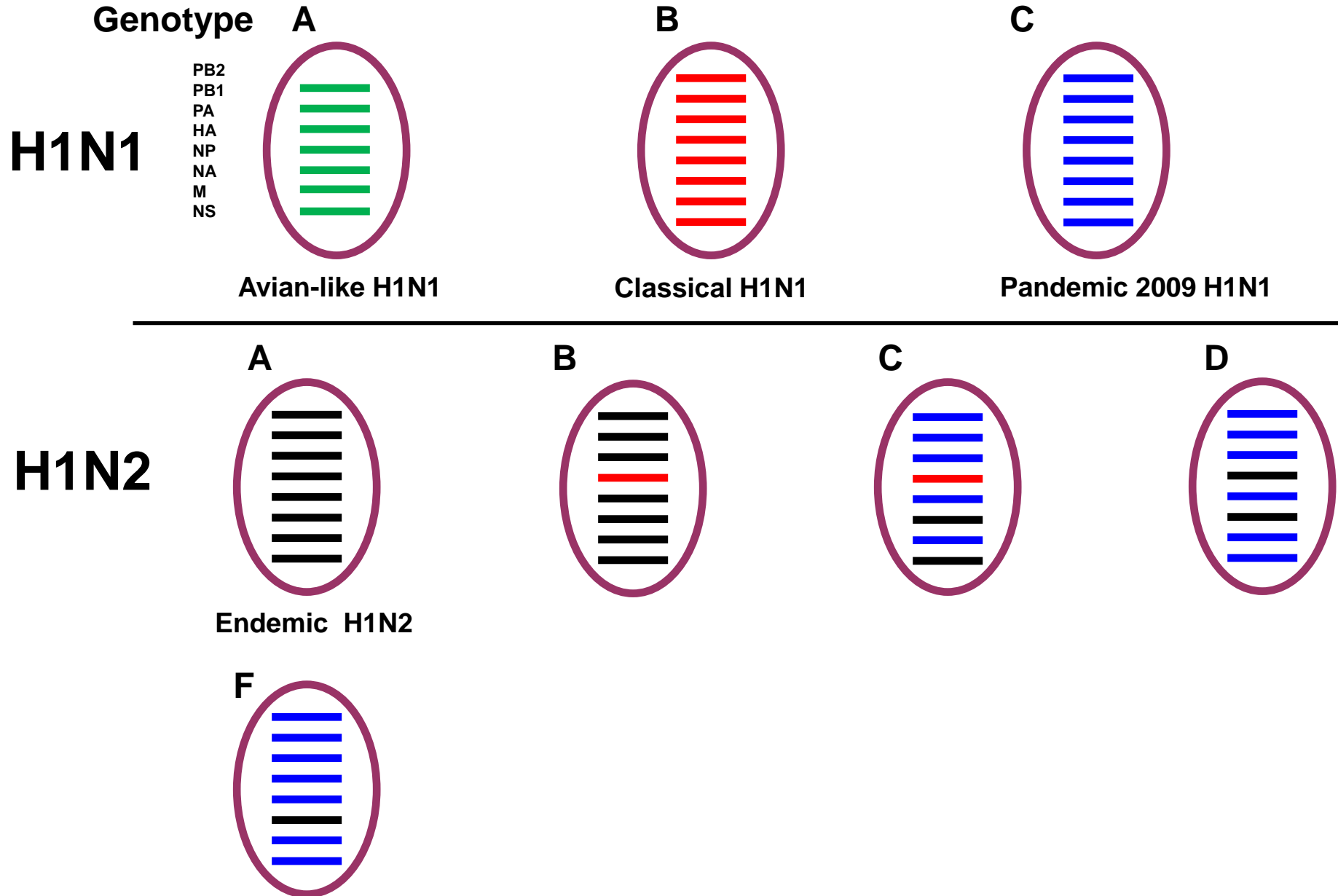




Yang H and Qiao C, et al. *Emerging Infectious Diseases*, 2012,18(7):1144-6.



Multiple genotypes of H1N1 and H1N2 SIVs



About 10,000 nasal swabs and serum samples were collected from pigs in Guangdong and Hunan provinces (2003.01-2013.4)



| Province | Nasal swabs | Serum samples |
|-----------|-------------|---------------|
| Hunan | 5000 | 5000 |
| Guangdong | 5000 | 5000 |
| Total | 10,000 | 10,000 |

Virus isolation and serological test are being carried out.

Human infection with influenza A (H7N9) in China



| Province (city) | Cases | Death |
|-----------------|-------|-------|
| Shanghai | 24 | 9 |
| Jiangsu | 17 | 1 |
| Zhejiang | 16 | 2 |
| Anhui | 3 | 1 |
| Henan | 2 | |
| Beijing | 1 | |
| Total | 63 | 14 |

Surveillance of H7N9 influenza virus in pigs (April 2-5)



| Province (city) | Nasal swabs |
|-----------------|-------------|
| Shanghai | 450 |
| Jiangsu | 346 |
| Zhejiang | 262 |
| Anhui | 312 |
| Shandong | 480 |
| Hubei | 300 |
| Total | 2150 |

No influenza virus was isolated in swine populations.

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- Novel reassortments happened between 2009 pandemic endemic H1N1 or H1N2 swine influenza virus.
- The co-existing of 2009 pandemic H1N1 influenza virus and other subtypes viruses (e.g. avian like H1N1, H9N2 and H5N1) in the animals may produce new reassortants with pandemic potential.
- Systemic surveillance and analysis of SIVs are now high priorities in our research activities.

Acknowledgments

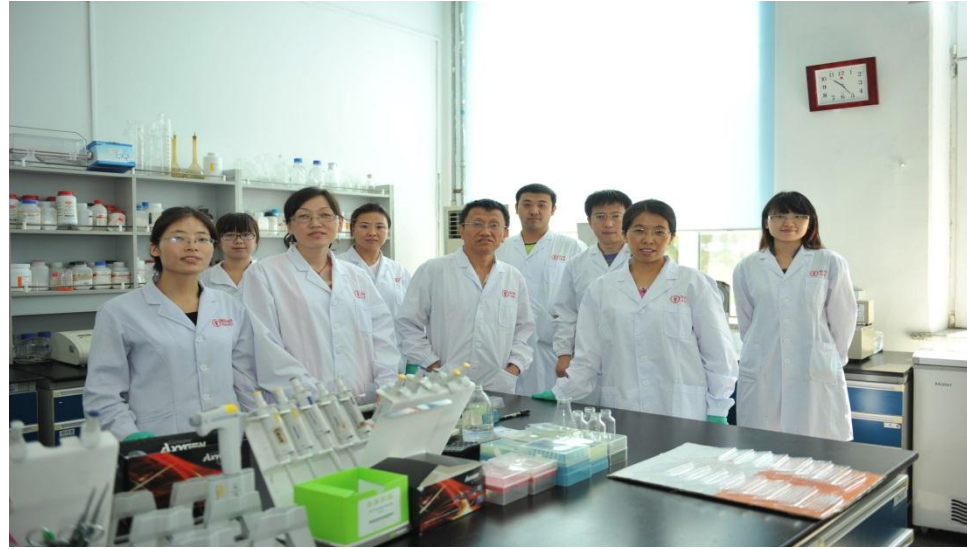


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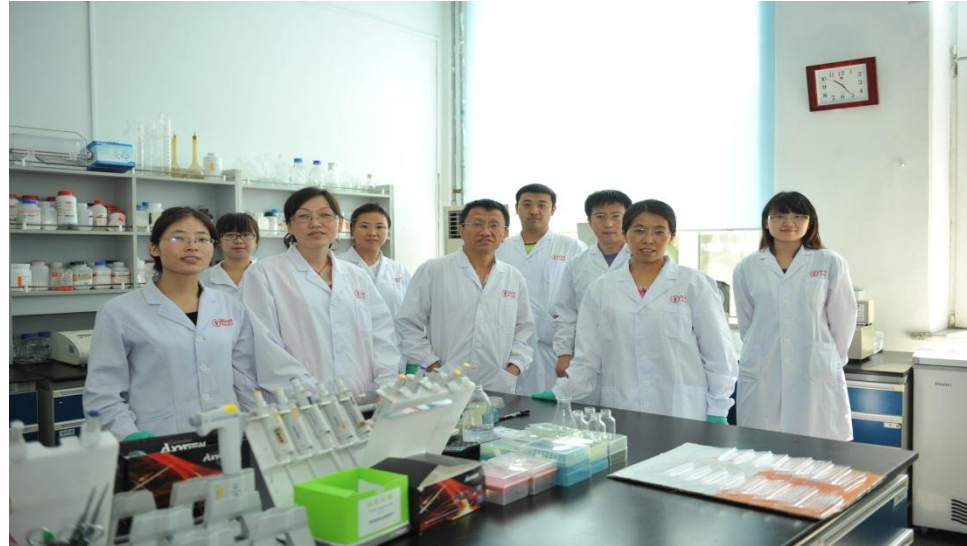
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- Important animal disease surveillance program (MOA)
- China-EU collaboration project for swine influenza surveillance (MOST) linked to ESNIP3 (Dr. Ian Brown)
- 973 programs (MOST)
- International cooperation projects (FAO)