

**The Role of the WOAHP Reference Laboratory  
and  
Update from Equine Surveillance Panel**

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**World Organisation  
for Animal Health**  
Founded as OIE

# WOAH Reference Laboratory

- 266 WOAH Reference Laboratories covering 108 diseases or topics in 38 countries.
- Equine Influenza three WOAH Reference Laboratories located in three continents
  - Ireland – Irish Equine Centre
  - Japan – JRA Equine Research Institute
  - USA– Gluck Equine Research Center

# Mandate of Reference Laboratory

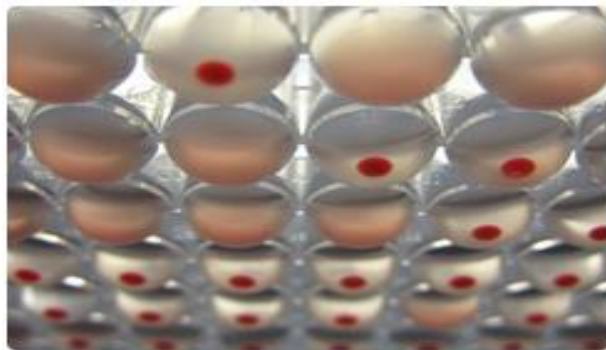
- Develop, perform and validate diagnostic tests
- Store and distribute reference reagents
- Organise proficiency tests
- Provide scientific and technical training
- Co-ordinate scientific and technical studies



Expert should advise on diagnosis and control and be a leading researcher



- Provision of **methods** for serological testing, virus isolation and real RT-PCR
- Hands on laboratory **training** in all diagnostic techniques and ISO17025 accreditation
- Provision of viruses and control sera
- Interlaboratory comparisons and **proficiency tests** to maintain uniformity of results





# Twinning and Research

- WOAH Twinning of Irish Equine Centre with Harbin Veterinary Institute, China
- Public Private Partnership WOAH, FEI, IFHA funded projects re validation of RT-PCR assay for international movement and vaccination regimes prior to movement
- Ongoing collaboration with JRA re virus characterisation and with Hanover University re evidence-based vaccination regimes

# Science Without Borders





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Organisation  
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## **Expert Surveillance Panel (ESP)**

- ESP meets annually
- OIE reference laboratories (USA, Japan, Ireland)
- Other laboratories monitoring equine influenza (China, Argentina, India, Nigeria, France, Sweden, United Kingdom, the Cameroon etc.)
- WHO influenza experts
- Review influenza activity and virus strains
- Recommendations re vaccine composition
- Publication on the WOAHA website



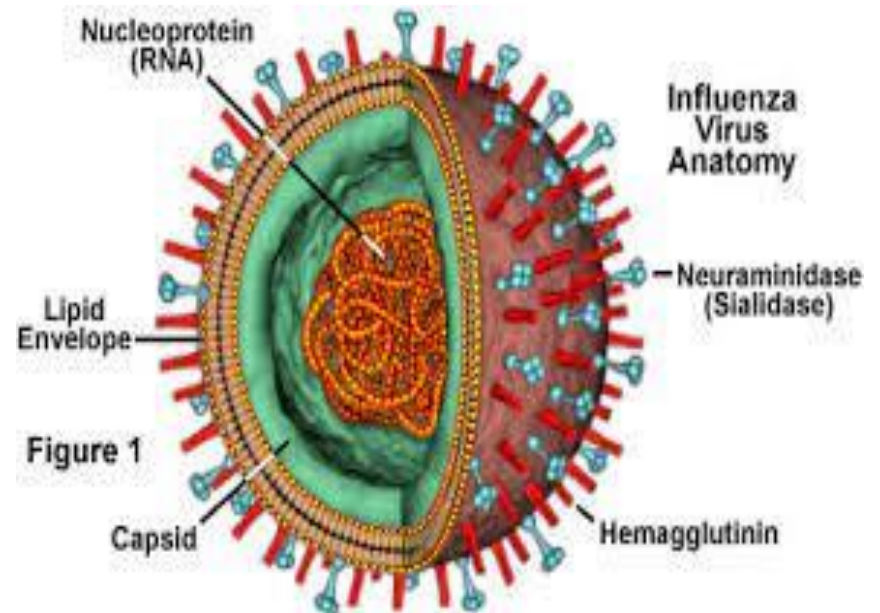
# Criteria for updating vaccines

- Field infection in well vaccinated horses
- Antigenic analysis
  - Haemagglutination inhibition with ferret antisera
  - and virus neutralisation by specific horse sera

Tools: Antigenic Cartography and Reverse Genetics

# Criteria for updating vaccines

- Genetic analysis
  - Haemagglutinin
  - Neuraminidase
  - Whole genome

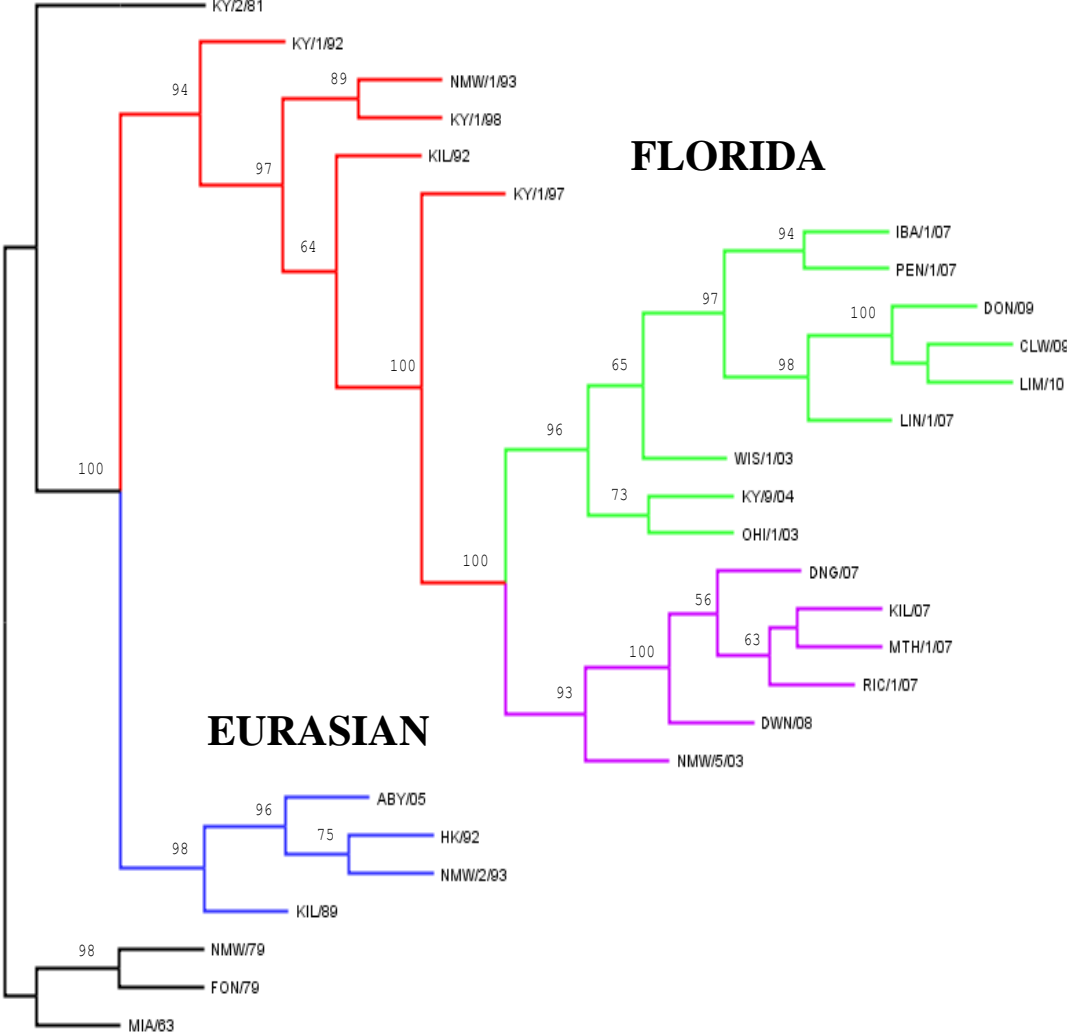


**AMERICAN**

**FLORIDA**

**CLADE 1**

**CLADE 2**



# OIE ESP Recommendations 2010 - 2022

- Inclusion of representative from Florida sublineage clades 1 and 2
- A/eq/South Africa/2003 (for clade 1 viruses)  
A/eq/Richmond/1/2007 (for clade 2 viruses)
- Recent viruses do not differ significantly from recommended vaccine strains
- More recent clade 1 and 2 viruses are available from WOAHP reference laboratories
- Updated vaccines internationally available

# Thank you



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