

WOAH Reference Laboratory Reports Activities 2025

This report has been submitted: 29 janvier 2026 21:12

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Equine influenza
*Address of laboratory:	Equine Research Institute, Japan Racing Association 1400-4 Shiba, Shimotsuke, Tochigi 329-0412 JAPAN
*Tel:	+81-285 44.0090
*E-mail address:	manabu_nemoto@jra.go.jp, nemoto_manabu@equinst.go.jp
Website:	https://japanracing.jp/en/about/jra_organization/jeri.html
*Name (including Title) of Head of Laboratory (Responsible Official):	Toshiyuki Takahashi DVM, PhD, Director
*Name (including Title and Position) of WOA Reference Expert:	Manabu Nemoto DVM, PhD
*Which of the following defines your laboratory? Check all that apply:	Horse racing authority

TOR1: DIAGNOSTIC METHODS

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.? (Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Haemagglutination Inhibition	Yes	6	0
Direct diagnostic tests			
Conventional RT-PCR	No	20	0
Real-time RT-PCR	Yes	525	0

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA Members?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOA Member Countries	Country of recipients
Equine influenza viral RNA	Conventional and real-time RT-PCR	24 produced	24ml	0	1	JAPAN,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHA Members?

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

7. Did your laboratory validate diagnostic methods according to WOAHA Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

9. Did your laboratory validate vaccines according to WOAHA Standards for the designated pathogen or disease?

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAHA Members?

No

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAHA Member?

Yes

Name of the WOAHA Member Country receiving a technical consultancy	Purpose	How the advice was provided
KOREA (REP. OF)	Provision of information on the outbreaks of equine influenza in Japan in 2025	E-mail
INDONESIA	Advice about conventional and real-time RT-PCR	E-mail
JAPAN	Provision of information on how to manage the outbreaks of equine influenza in Japan in 2025	E-mail, Telephone, in person
HONG KONG	Provision of information on rapid antigen detection kits for equine influenza	E-mail

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAHA Members other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHA Member Countries involved other than your country
Antigenic characterisation of Florida sublineage clade 1 strains	2022-2025	To evaluate the effectiveness of vaccines against recently circulating Florida sublineage clade 1 strains.	Irish Equine Centre Gluck Equine Research Center, University of Kentucky	IRELAND UNITED STATES OF AMERICA
Genetic and serological analyses of equine influenza viruses isolated in Japan in 2025	2025	Elucidation of the origin of viruses and evaluation of cross-reactivity of an antiserum against a current vaccine strain.	Gluck Equine Research Center, University of Kentucky	UNITED STATES OF AMERICA
A comparative evaluation of commercial human influenza virus antigen detection kits for the diagnosis of equine influenza	2023-2025	Evaluation of human influenza virus antigen detection kits to determine their use for the diagnosis of equine influenza including recently circulating strains.	Irish Equine Centre	IRELAND UNITED STATES OF AMERICA

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOAHA?

No

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:

We performed an epidemiological investigation of outbreaks, as well as genetic and serological analyses of viruses.

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:

We submitted the data to the WOAHA expert surveillance panel on equine influenza vaccine composition.
We disseminated the data as a scientific article.

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

5

1. Nemoto M, Kawanishi N, Kamei R, Furusho K, Kawauchi K, Yabuuchi Y, Oue Y, Uchida Y, Nishiura H, Reedy SE, Chambers TM, Li F, Bannai H, Yamanaka T, Tsujimura K. Genetic and serological analyses of equine influenza viruses isolated in Kumamoto and Hokkaido, Japan in 2025. *Vet Microbiol.* 2025. 310:110701.
2. Nemoto M, Kawanishi N, Kambayashi Y, Bannai H, Yamanaka T, Garvey M, Cullinane A, Yamayoshi S, Kawaoka Y, Tsujimura K. Growth properties of recombinant equine influenza viruses with different backbones generated by reverse genetics in embryonated chicken eggs. *Arch Virol.* 2025. 170:181
3. Mojsiejczuk L, Whitlock F, Chen H, Magill C, Aranday-Cortes E, Bone J, Tong L, Da Silva Filipe A, Bryant N, Newton JR, Chambers TM, Reedy SE, Nemoto M, Yamanaka T, Hughes J, Murcia PR. Multiple introductions of equine influenza virus into the United Kingdom resulted in widespread outbreaks and lineage replacement. *PLoS Pathog.* 2025. 21:e1013227.
4. Kawanishi N, Kinoshita Y, Reedy SE, Garvey M, Kambayashi Y, Bannai H, Tsujimura K, Yamanaka T, Cullinane A, Chambers TM, Nemoto M. A comparative evaluation of seven commercial human influenza virus antigen detection kits for the diagnosis of equine influenza. *Equine Vet J.* 2025. doi: 10.1111/evj.14500.
5. Nemoto M, Kawanishi N, Kambayashi Y, Bannai H, Yamanaka T, Tsujimura K. Detection of equine influenza virus gene in the air around infected horses. *Vet Microbiol.* 2025. 302:110388.

b) International conferences:

1

WOAH expert surveillance panel on equine influenza vaccine composition

c) National conferences:

0

d) Other (Provide website address or link to appropriate information):

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

Manabu Nemoto - - JAPAN

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA H Members?

Yes

a) Technical visit : 1

b) Seminars : 1

c) Hands-on training courses: 1

d) Internships (>1 month) 0

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
A	FRANCE	2
B	JAPAN	19
C	KOREA (REP. OF)	1

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025	PDF	L24-737.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Conventional RT-PCR for equine influenza	Perry Johnson Laboratory Accreditation (PJLA)
Haemagglutination Inhibition	Perry Johnson Laboratory Accreditation (PJLA)

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

We have specific laboratories with restricted access. Experiments have been performed and viruses have been stored at specific laboratories with safety cabinets and autoclaves. The application related to biorisk management was submitted to MAFF of Japan to use equine influenza virus for our research and was accepted.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA H?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA H?

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
WOAH Expert Surveillance Panel on equine influenza vaccine composition	2025-09-14	Paris, France	Speaker	Cross-neutralising activities of antisera against vaccine strains to recent strains. Genetic and serological analyses of equine influenza viruses isolated in Japan in 2025.
OFFLU work plan for year 2026	2025-12-15	Videoconference	Speaker	OFFLU work plan in 2026 for equine influenza

TOR10: NETWORK WITH WOA H REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOA H Reference Laboratories designated for the same pathogen or disease?

Yes

24. Are you a member of a network of WOA H Reference Laboratories designated for the same pathogen?

Yes

Manabu Nemoto - - JAPAN

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
Equine influenza	Participant	8	Irish Equine Centre, Gluck Equine Research Center, University of Kentucky

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen during the past 2 years?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAHP Ref. Labs/ organising WOAHP Ref Lab
Assessing competency for real-time RT-PCR	Participant	2	Irish Equine Centre

26. Did your laboratory collaborate with other WOAHP Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

Yes

Title of the project or contract	Scope	Name(s) of relevant WOAHP Reference Laboratories
Antigenic characterisation of Florida sublineage clade 1 strains	Evaluation of vaccine efficacy against recently circulating strains.	Irish Equine Centre, Gluck Equine Research Center, University of Kentucky
Genetic and serological analyses of equine influenza viruses isolated in Japan in 2025	Elucidation of the origin of viruses and evaluation of cross-reactivity of an antiserum against a current vaccine strain.	Gluck Equine Research Center, University of Kentucky
A comparative evaluation of commercial human influenza virus antigen detection kits for the diagnosis of equine influenza	Evaluation of human influenza virus antigen detection kits to determine their use for the diagnosis of equine influenza including recently circulating strains.	Irish Equine Centre, Gluck Equine Research Center, University of Kentucky

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHP Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAHP Member Countries
Assessing competency for haemagglutination Inhibition and conventional RT-PCR	Organiser	1	Haemagglutination Inhibition and conventional RT-PCR	JAPAN,
Assessing competency for conventional RT-PCR	Organiser	1	Conventional RT-PCR	INDONESIA,

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAHP?

Yes

Kind of consultancy	Location	Subject (facultative)
Revision of WOAHP Manual Chapter	E-mail	Equine influenza

29. Additional comments regarding your report:

No