World Organisation for Animal Health

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WOAH Reference Laboratory Reports Activities 2024

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LABORATORY INFORMATION

***Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:**	Equine influenza
***Address of laboratory:**	1400 Nicholasville Rd, Lexington, KY 40503
***Tel:**	+1-859 257 47 57 ext. 81094
***E-mail address:**	fli230@uky.edu
Website:	https://gluck.ca.uky.edu/
***Name (including Title) of Head of Laboratory (Responsible Official):**	Brett Sponseller, Chair, Department of Veterinary Science, Director, Gluck Equine Research Center, University of Kentucky
***Name (including Title and Position) of WOAH Reference Expert:**	Feng Li, Professor and William Robert Mills Endowed Chair
***Which of the following defines your laboratory? Check all that apply:**	Academic institution

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 WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
HI (type A influenza, equine H3	Yes	3754	0
Direct diagnostic tests		Nationally	Internationally
virus isolation in embryonated eggs	Yes	3030	0

TOR2: REFERENCE MATERIAL

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

No

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

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAH Member Countries	Country of recipients
equine influenza virus strains	comparative HI and sequncing	60 produced	3ml	0	1	UNITED STATES OF AMERICA,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

No

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 WOAH Standards for the designated pathogen or disease?

No

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

Yes

Name of the new vaccine developed	Description and References (Publication, website, etc)
New generation equine influenza bivalent VLP vaccine	Vaccine in press

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOAH Member Country receiving a technical consultancy	Purpose	How the advice was provided
JAPAN	provision of sequence information	email and in person
UNITED KINGDOM	provision of sequences, comparative HI data	email and in person

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAH Member Countries involved other than your country
Expert Surveillance Panel for equine influenza	ongoing	monitoring of incidence of equine influenza and characterization of viruses	Irish Equine Centre, JRA , others	ARGENTINA CANADA CHINA (PEOPLE'S REP. OF) FRANCE GERMANY HONG KONG INDIA IRELAND JAPAN NIGERIA SWEDEN UNITED KINGDOM
New generation equine influenza bivalent VLP vaccine	Manuscript in press	development of new EIV vaccine	CSIR South Africa, Ireland, Grayson Jockey Club Research Foundation	SOUTH AFRICA

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

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:
vaccination histories of infected horses

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:
WOAH Equine influenza expert surveillance panel 2024

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:

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Kreutzfeldt N., Reedy S., Chambers T., and Pusterla, N.: Antibody response to equine influenza virus and equine herpesvirus -1 vaccine in adult horses receiving intravenous dexamethasone. Journal of Veterinary Internal Medicine 2024, 38:424-430.

Martha M O'Kennedy, Stephanie E. Reedy, Celia Abolnik, Amjad Khan, Tanja Smith, Ilse du Preez, Edward Olajide, Janet Daly, Ann Cullinane, Thomas M Chambers. Protective Efficacy of a Bivalent Equine Influenza H3N8 Virus-like Particle Vaccine in Horses. Vaccine, in press.

Murcia PR, Chambers TM, Daly JM, Pusterla N, Damdinjav B, Ankhanbaatar U, Mojsiejczuk L. Should the equine community be concerned about the emergence of the H5N1 subtype of highly pathogenic avian influenza in US cattle? Equine Vet J. 2024 Dec 11. doi: 10.1111/evj.14439. Epub ahead of print. PMID: 39660460.

Kawanishi N, Kinoshita Y, Reedy S, Garvey M, Kambayashi Y, Bannai H, Tsujimura K, Yamanaka T, Cullinane A,. Chambers T, Nemoto M.: A comparative evaluation of seven commercial human influenza virus antigen detection kits for the diagnosis of equine influenza. Equine Vet. J., in press.

b) International conferences:

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5th International Symposium on Neglected Influenza Viruses

Twelfth International Equine Infectious Disease Conference (IEIDCXII)

2024 Equine Influenza Expert Surveillance Panel Meeting

c) National conferences:

0

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

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 0

b) Seminars : 0

c) Hands-on training courses: 1

d) Internships (>1 month) 2

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
C	PAKISTAN	1

D	CHINA (PEOPLE'S REP. OF)	1
D	NEPAL	1

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

No

Our ISO17025 accreditation plan is in process.

19. Is your quality management system accredited?

No

per the letter of 24 October 2023 from Dr Montserrat Arroyo, our reference laboratory status is temporarily suspended while we pursue ISO17025 accreditation.
We anticipate that our ISO17025 accreditation will be completed by Fall 2025.

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

Yes

We have our university-approved pathogen management plan and relevant IBC protocols.

TOR9: SCIENTIFIC MEETINGS

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

Yes

National/ International	Title of event	Co-organiser	Date	location	No. Participants
International	5th International Symposium on Neglected Influenza Viruses	Mark Tompkins	2024-04-08	Lexington, Kentucky, USA	100

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

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
Annual meeting of the Equine Influenza Expert Surveillance Panel	2024-09-27	Paris, France	Speaker	update on equine influenza activity in the USA with sequence and antigenicity comparisons

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

Yes

24. Do you network (collaborate or share information) with other WOAH Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS
equine influenza Expert Surveillance Panel	participant	12	Ireland, Japan

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

No

No inter-laboratory proficiency tests were conducted in 2024

26. Did your laboratory collaborate with other WOAH 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 WOAH Reference Laboratories
Comparative antigenicity by serum neutralization testing of recent equine influenza virus isolates	comparison of results between labs	Equine Research Institute, JRA
Equine influenza surveillance and virus characterization	international surveillance of equine influenza viruses in circulation and their relation to vaccine strains	WOAH reference labs for EIV in Ireland, Japan, USA

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

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

No

No activities in 2024

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No