

# OIE Reference Laboratory Reports Activities

## *Activities in 2019*

**This report has been submitted : 2020-01-15 20:53:18**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	Equine influenza
<b>Address of laboratory:</b>	108 Gluck Equine Research Center Lexington, Kentucky 40546-0099 UNITED STATES OF AMERICA
<b>Tel.:</b>	+1-859 257 47 57
<b>Fax:</b>	+1-859 257 85 42
<b>E-mail address:</b>	tmcham1@uky.edu
<b>Website:</b>	<a href="http://gluck.ca.uky.edu/">http://gluck.ca.uky.edu/</a>
<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	David W. Horohov Ph.D., Chair, Department of Veterinary Science, University of Kentucky
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Thomas M. Chambers Ph.D., Professor
<b>Which of the following defines your laboratory? Check all that apply:</b>	Academic

**ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards**

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
HI (type A influenza, equine H3)	yes	540	0
Direct diagnostic tests		Nationally	Internationally
Virus isolation in embryonated eggs	yes	4,140 eggs	0

**ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards. To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.**

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
equine influenza virus strains	hemagglutination-inhibition	50 ml	50 ml	15 ml	2	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

***ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases***

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
2nd-generation modified live equine influenza virus vaccine, bivalent	Blanco-Lobo, P., Rodriguez, L., Reedy, S., Oladunni, F., Nogales, A., Murcia, P.R., Chambers, T.M., and Martinez-Sobrido, L. A bivalent live-attenuated vaccine for the prevention of equine influenza virus. <i>Viruses</i> 11, 2019, PMID: 31614538.

***ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries***

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

No

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
UNITED KINGDOM	joint efforts in disease surveillance and virus characterization	emails, meetings
PAKISTAN	disease surveillance	emails, visit by a scientist from Pakistan

***ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations***

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Expert Surveillance Panel for equine influenza	ongoing	Monitoring of incidence of equine influenza and characterization of viruses	Animal Health Trust, Irish Equine Centre, JRA, others	ARGENTINA CHINA (PEOPLE'S REP. OF) FRANCE GERMANY INDIA IRELAND JAPAN SWEDEN UNITED KINGDOM
2nd generation MLV equine influenza vaccine	2 years	testing a 2nd generation MLV equine influenza vaccine	Univ. Rochester, Univ. Glasgow	UNITED KINGDOM

***ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases***

11. Did your Laboratory collect epizootiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:
clinical disease information and vaccination histories of infected horses

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:
2019--collated 134 positive diagnoses from contacts in 20 states, made 51 virus isolations from PCR-positive swabs sent to us.

**13. What method of dissemination of information is most often used by your laboratory?  
(Indicate in the appropriate box the number by category)**

a) Articles published in peer-reviewed journals: 0

b) International conferences: 0

c) National conferences: 2

Zoetis Conferences Equines, Quebec City and Montreal, Canada, October 9-10, 2019

65th annual meeting of American Association of Equine Practitioners, Denver, Colorado December 8, 2019

d) Other:

(Provide website address or link to appropriate information) 1

OIE Expert Surveillance Panel on equine influenza vaccine composition: Conclusions and Recommendations of the April 2019 meeting.

OIE Bulletin 2019-2 [oiebulletin.com/index.php?official=08-4-1-2019-2-panel-en&edition=7913&pdf=official&article=11019](http://oiebulletin.com/index.php?official=08-4-1-2019-2-panel-en&edition=7913&pdf=official&article=11019)

***ToR 7: To provide scientific and technical training for personnel from OIE Member Countries***

***To recommend the prescribed and alternative tests or vaccines as OIE Standards***

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

Yes

a) Technical visits: 1

b) Seminars: 2

c) Hands-on training courses: 0

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	Pakistan	1
b	Canada	about 30 altogether

**ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned**

15. Does your laboratory have a Quality Management System?

No

Explain Quality Management System in adoption process or currently in place
See letter to Dr. Matthew Stone (cc Sara Linnane and others) sent by email 12 January 2017. Our Veterinary Diagnostic Laboratory, which does our primary diagnostic work, is accredited to ISO 17025 standard by the American Association of Veterinary Laboratory Diagnosticians.

16. Is your quality management system accredited?

No

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

Yes

(See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4*)

**ToR 9: To organise and participate in scientific meetings on behalf of the OIE**

18. Did your laboratory organise scientific meetings on behalf of the OIE?

Yes

National/ International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
International	5th ISIRV International Meeting on Neglected Influenza Viruses	Andrew Bowman, OSU	to be held 05/20	Columbus, Ohio, USA	expect 100

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Zoetis Conferences Equines	10/19	Quebec, Canada	speaker	Prevention and control of equine influenza

***ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results***

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

No

22. Did your laboratory collaborate with other OIE 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 OIE Reference Laboratories
Equine influenza surveillance and virus characterization	International surveillance of equine influenza viruses in circulation and their relation to vaccine strains	OIE reference labs for EIV in Ireland, United Kingdom, Germany, USA

***ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results***

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

No

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at:  
<http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

**ToR 12: To place expert consultants at the disposal of the OIE**

24. Did your laboratory place expert consultants at the disposal of the OIE?

Yes

Kind of consultancy	Location	Subject (facultative)
responding to specific queries from national representative to OIE	Kentucky	queries concerning revisions to the equine influenza chapter of Terrestrial Code

25. Additional comments regarding your report:

- 1) Sent my laboratory technician for 1 week hands-on training at my fellow OIE reference laboratory at Animal Health Trust, United Kingdom, to update and normalize some technical procedures.
- 2) carried out nucleotide sequencing of HA and NA genes of 12 equine influenza virus isolates to understand their relation to existing vaccine strains.