OIE Reference Laboratory Reports Activities

Activities in 2019

This report has been submitted : 2020-01-14 14:55:01

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Equine viral arteritis
Address of laboratory:	108 Gluck Equine Research Center Lexington, Kentucky 40546-0099 UNITED STATES OF AMERICA
Tel.:	+1-859 218-1094
Fax:	+1-859 257 8542
E-mail address:	ptimoney@uky.edu
Website:	
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. David Horohov
Name (including Title and Position) of OIE Reference Expert:	Dr. Peter Timoney
Which of the following defines your laboratory? Check all that apply:	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	
Indirect diagnostic tests		Nationally	Internationally
VNT	Yes	15,938	19
Direct diagnostic tests		Nationally	Internationally
VI (RK-13 & equine endothelial cell lines)	Yes	268	--
Real-time RT-PCR	Yes	3	--

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?

Yes

NOTE: Currently, there are 22 laboratories that produce Standard Reference Reagents officially recognised by the OIE for 19 diseases/pathogens. Please click the following link to the list of OIE-approved International Standard Sera: http://www.oie.int/en/our-scientific-expertise/veterinary-products/reference-reagents/. If the reagent is not listed on this page, it is NOT considered OIE-approved. The next two questions allow you to indicate non-OIE-approved diagnostic reagents.

Disease	Test	Available from
Equine viral arteritis	Virus neutralisation	Dr Peter J. Timoney Maxwell H. Gluck Equine Research Center, Dept of Veterinary Science, University of Kentucky, Lexington, Kentucky 40546-0099, United States of America Tel: (1-859) 47 57 ext. 81094 Fax: (1-859) 257.85.42 ptimoney@uky.edu

Type of reagent available	Related diagnostic test	Produced/ Supply imported	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	Name of recipient OIE Member Countries
Equine viral arteritis Reference positive sera (OIE approved)	VNT	Produced	◉<10mL ○10-100mL ○100-500mL ○>500mL	◉<10mL ○10-100mL ○100-500mL ○>500mL	CANADA
Equine viral arteritis Reference negative sera (OIE approved)	VNT	Produced	◉<10mL ○10-100mL ○100-500mL ○>500mL	◉<10mL ○10-100mL ○100-500mL ○>500mL	CANADA

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
Control positive sera	VNT	Produced	--	8 ml	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
Control negative sera	VNT	Produced	--	2 ml	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
Control positive semen	VI	Provided	--	8 ml	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
Control negative semen	VI	Provided	--	6 ml	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐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?

No

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?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
GERMANY	October-November	19	0

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 STATES OF AMERICA	Technical queries over carrier status of stallions.	Remote assistance (e-mail)
UNITED STATES OF AMERICA	Scientific query over prevention and eradication of EVA.	Remote assistance (e-mail)
UNITED STATES OF AMERICA	Technical query over serological testing for EVA.	Remote assistance (e-mail)
CANADA	Technical query over serological testing for EVA.	Remote assistance (e-mail)

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?

No

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:
Monitored reports of equine arteritis virus infection posted as WAHID reports or in ProMed or in scientific publications throughout 2019.

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

No

If the answer is no, please provide a brief explanation of the situation:
Infrequency of reported equine arteritis virus events in the literature during 2019 did not merit publishing a commentary on the status of this disease in the scientific press.

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: 2
Carossino M, Dini P, Kalbfleisch TS, Loynachan AT, Canisso IF, Cook RF, Timoney PJ, Balasuriya UBR. 2019. Equine arteritis virus long-term persistence is orchestrated by CD8+ T lymphocyte transcription factors, inhibitory receptors, and the CXCL16/CXCR6 axis PLOS Pathogens, published: July 29, 2019, https://doi.org/10.1371/journal.ppat.1007950

Nam B, Mekuria Z, Carossino M, Li G, Zheng Y, Zhang J, Cook RF, Shuck KM, Campos JR, Squires EL, Troedsson MHT, Timoney PJ and Balasuriya, UBR. 2019. Intrahost Selection Pressure Drives Equine Arteritis Virus Evolution during Persistent Infection in the Stallion Reproductive Tract, J Virology, 93(21):1-30, https://jvi.asm.org/content/93/12/e00045-19/article-info

b) International conferences: 0

c) National conferences: 0

d) Other:
(Provide website address or link to appropriate information) 1
Revision of chapter on equine viral arteritis in the 12th Edition of the Merck Veterinary Manual (in press).

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?

No

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
While the Quality Management System in the OIE Reference Laboratory is not externally accredited, it has measured up to the requirements for accreditation according to ISO 17025 for several years. As stated in previous annual reports to the OIE, the laboratory is not in a financial position to afford the cost of certification by an external accreditation company. It should be emphasised that any agent detection / antibody determination test that was undertaken in 2018 was carried out at the University of Kentucky Veterinary Diagnostic Laboratory (UKVDL), the primary service arm of the Department of Veterinary Science. The UKVDL has a Quality Management program in place that is annually accredited by the AmericanAssociation of Veterinary Laboratory Diagnosticians and meets the standards of ISO 17025.

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?

No

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
Equine Committee Meeting, Annual USAHA Meeting	10/19	Providence, RI, USA	Speaker	Review and revision of USDA's Uniform Methods and Rules for Equine Viral Arteritis.

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?

No

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?

Yes

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

Purpose for inter-laboratory test comparisons[1]	No. participating laboratories	Region(s) of participating OIE Member Countries
Harmonisation of VN test and virus detection (VI and rRT-PCR) tests.	2	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East

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)
Chair, ad hoc group of experts tasked with re-drafting Code Chapters	Remote consultation (e-mail & phone)	Revision of Chapter on Equine Piroplasmosis
Chair, ad hoc group of experts tasked with re-drafting Code Chapters	Remote consultation (e-mail & phone)	Revision of Chapter on Contagious Equine Metritis
International Movement of Horses Committee of IFHA	Hong Kong	Participation in discussion on African horse sickness and glanders for which certification required under HHP initiative, as well as other equine infectious diseases with special reference to equine herpesvirus 1 myeloencephalopathy, equine influenza and vesicular stomatitis.
Revision of Manual Chapter on Equine Viral Arteritis	Remote assistance (e-mail)	Manual Chapter on Equine Viral Arteritis
Review and edit selected Code Chapters	Remote assistance (e-mail)	Revision of selection of Code chapters on Biotechnology in the diagnosis of infectious diseases, Leishmaniosis, Animal trypanosomes of African origin, Equine piroplasmosis.

25. Additional comments regarding your report: