

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-25 19:36:14

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Equine influenza
Address of laboratory:	Johnstown Naas Co. Kildare IRELAND
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Name (including Title) of Head of Laboratory (Responsible Official):	Sarah McNicholas BBS MSc CEO
Name (including Title and Position) of OIE Reference Expert:	Professor Ann Cullinane, Head of Virology
Which of the following defines your laboratory? Check all that apply:	Other: Registered Charity

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
Single radial haemolysis	Yes	0	13
Haemagglutination Inhibition	Yes	174	21
Direct diagnostic tests		Nationally	Internationally
Real Time PCR	Yes	1168	110
Virus isolation	Yes	2	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?

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.

Supply imported OIE-approved SRR – Select where you import from list:

Disease	Test	Available from
Equine influenza	Antigens and antisera for in-vitro standardisation of vaccines	NIBSC (National Institute for Biological Standards and Control), P.O. Box 1193, Blanche Lane, South Mimms, Potters Bar, Hertfordshire EN6 3QH, United Kingdom Tel: (44-1707) 65.47.53 Fax: (44-1707) 64.67.30 standards@nibsc.ac.uk

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
Specific equine antisera against Clades 1 and 2 of the Florida lineage (H3N8) and against H7N7	HI	Supply Imported	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	GHANA
Specific equine antisera against Clades 1 and 2 of the Florida lineage (H3N8) and against H7N7	HI	Supply imported	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	GHANA
Antiserum against Clade 2	HI	Supply imported	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	GERMANY

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
H3N8 Clade 1 and 2 ether extracted virus	HI	Produced	0	25ml x 2	1	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
H7N7 virus	HI	Produced	0	25ml	1	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Negative serum control	HI	Produced	0	1ml	1	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
H3N8 Clade 1 and 2 ether extracted virus	HI	Produced	0	2ml x 2	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
H7N7 virus	HI	Produced	0	2ml	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Negative serum control	HI	Produced	0	5ml	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

H3N8 Clade 2 virus	HI	Produced	0	5ml	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
H3N8 Clade 1 and 2 viruses and H7N7 virus	SRH	Produced	0	48 ml x 3	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Positive serum control	SRH	Produced	0	1ml	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Negative serum control	SRH	Produced	0	10ml	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Clade 1 and 2 H3N8 viruses	SRH	Produced	0	50ml	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <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?

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
UNITED KINGDOM	January	8	0
UNITED KINGDOM	February	17	0
FRANCE	May	14	0
FRANCE	November	3	0
FRANCE	December	4	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
SOUTH AFRICA	Development and assessment of plant based equine influenza vaccines	E mail
JAPAN	Accreditation	E mail
UNITED KINGDOM	Environmental contamination - persistence of infectious virus	E mail
PORTUGAL	Vaccination	E mail
UNITED STATES OF AMERICA	Relevance of cell mediated immune response	E mail
UNITED KINGDOM	Validation of horse side kit	E mail and videoconferences
UNITED STATES OF AMERICA	Vaccination with modified live vaccines	E mail
UNITED KINGDOM	Vaccine trials; challenge experiments and wind borne virus	E-mail
TURKEY	Validation of pockit for rapid influenza detection	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?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Concurrent Vaccination Regimes for Young Sporthorses	2018-2022	Development of science based vaccination regimes for competition horses	Hanover University	GERMANY
Characterisation of Clade 1 virus responsible for 2019 epidemic in Europe	2019-2021	Genetic and antigenic characterisation to determine relatedness to current vaccine strains, elucidate epidemiology and determine basis for rapid spread and vaccination breakdown	Japanese Racing Association and GD Animal Health Deventer	JAPAN

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:

Epidemiological investigation of outbreaks and virus characterisation by whole genome sequencing.

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:

As above nationally and internationally. Please see publication list below as representative example.

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: 5

Nemoto M, Okita N, Kitahata M, Bannai H, Tsujimura K, Kinoshita Y, Kambayashi Y, Cullinane A, Yamanaka T, Ohta M. Evaluation of cobas Influenza A/B & RSV Test for Diagnosis of Equine Influenza. J Equine Vet Sci. 2020 Nov;94:103249. doi: 10.1016/j.jevs.2020.103249. Epub 2020 Sep 12. PMID: 33077083.

Diallo AA, Souley MM, Issa Ibrahim A, Alassane A, Issa R, Gagara H, Yaou B, Issiakou A, Diop M, Ba Diouf RO, Lo FT, Lo MM, Bakhoun T, Sylla M, Seck MT, Meseko C, Shittu I, Cullinane A, Settypalli TBK, Lamien CE, Dundon WG, Cattoli G. Transboundary spread of equine influenza viruses (H3N8) in West and Central Africa: Molecular characterization of identified viruses during outbreaks in Niger and Senegal, in 2019. Transbound Emerg Dis.

2020 Aug 8. doi: 10.1111/tbed.13779. Epub ahead of print. PMID: 32770642.

Entenfellner J, Gahan J, Garvey M, Walsh C, Venner M, Cullinane A. Response of Sport Horses to Different Formulations of Equine Influenza Vaccine. *Vaccines (Basel)*. 2020 Jul 10;8(3):372. doi: 10.3390/vaccines8030372. PMID: 32664411; PMCID: PMC7563521.

Cullinane A, Gahan J, Walsh C, Nemoto M, Entenfellner J, Olguin-Perglione C, Garvey M, Huang Fu TQ, Venner M, Yamanaka T, Barrandeguy M, Fernandez CJ. Evaluation of Current Equine Influenza Vaccination Protocols Prior to Shipment, Guided by OIE Standards. *Vaccines (Basel)*. 2020 Feb 29;8(1):107. doi: 10.3390/vaccines8010107. PMID: 32121419; PMCID: PMC7157717.

Gildea S, Lyons P, Lyons R, Gahan J, Garvey M, Cullinane A. Annual booster vaccination and the risk of equine influenza to Thoroughbred racehorses. *Equine Vet J*. 2020 Jul;52(4):509-515. doi: 10.1111/evj.13210. Epub 2020 Feb 12. PMID: 31750956.

b) International conferences: 1

Federation of European Equine Veterinary Associations (FEEVA) Disease Surveillance V Summit - "Update on Activities of OIE Expert Surveillance Panel for Equine Influenza" by Videoconference

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 1

<https://www.oie.int/en/our-scientific-expertise/specific-information-and-recommendations/equine-influenza/>

**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?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO17025	-The-Irish-Equine-Foundation-Ltd-151T-Cert.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Single radial haemolysis	INAB
Haemagglutination Inhibition	INAB
Real Time RT-PCR	INAB

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	OIE Expert Surveillance Panel	Gounalan Pavade	April 2020	By Videoconference	15

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
OFFLU	September 2020	By videoconference	Speaker	Equine Influenza Update

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
Expert Surveillance Panel	Global surveillance, assessment of vaccine efficacy and virus characterisation.	Gluck Equine Research Centre, University of Kentucky

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
Quality Assurance for SRH, HI and RT-PCR	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Assessing competency for HI and RT-PCR	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Assessing competency for RT-PCR	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> 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)
Member of Biological Standards Commission	OIE Headquarters and by Videoconferences	International Standards for Diagnostic Tests and Vaccines
Case Definition for presentation to the Scientific Commission	Videoconference	Equine Influenza
Electronic consultation on OIE Biobank project	Remote	Metadata Schema
Representative of BSC on Ad hoc Group	Remote	The revision of Terrestrial Code chapters regarding the collection and processing of semen of animals
Compilation of ESP recommendations for publication in OIE Bulletin	Remote	Composition of Equine Influenza vaccines
Chair of OIE COVID-19 Advisory Group on Animal Health Laboratory Support	Remote	Preparation of Guidance for Animal Health Laboratory Support to the Public Health Response for COVID-19
OIE briefing to Delegates on COVID-19 activities	Remote	Update on OIE COVID-19 Advisory Group on Animal Health Laboratory Support
Chair of FAO-OIE Advisory Group on viral evolution of SARS-CoV-2 in animals	Remote	Monitoring key mutations and their implications for animals and humans
OIE representative on WHO Advisory Group on viral evolution of SARS-CoV-2	Remote	Monitoring key mutations and their implications for public health
Chair of OIE Webinar The Impact of COVID-19 on Veterinary Laboratories: Challenges, Innovation and Opportunities	Remote	Follow up to Guidance for Animal Health Laboratories engaged in assisting the public health efforts during the COVID pandemic

25. Additional comments regarding your report:

Due to the COVID 19 pandemic, several international conferences that I am involved in organising were cancelled or postponed, training activities were curtailed and foreign travel prohibited.