World Organisation for Animal Health

Akbar Dastjerdi - - UNITED_KINGDOM

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:**	Infectious bovine rhinotracheitis
***Address of laboratory:**	Animal and Plant Health Agency, Addlestone, Surrey, KT15 3NB, United Kingdom
***Tel:**	+44-20 8026 9394
***E-mail address:**	akbar.dastjerdi@apha.gov.uk
Website:	apha.gov.uk
***Name (including Title) of Head of Laboratory (Responsible Official):**	Jenny Stewart, CEO
***Name (including Title and Position) of WOAH Reference Expert:**	Dr. Akbar DASTJERDI; Mammalian Virus Investigation Unit, Head.
***Which of the following defines your laboratory? Check all that apply:**	Governmental

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
iELISA	Yes	831	4
cELISA	Yes	7919	4
gE ELISA	Yes	578	4
SNT	Yes	214	0

Milk ELISA	Yes	91	0
Direct diagnostic tests		Nationally	Internationally
PCR	Yes	378	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?

No

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?

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
TRIplex BoHV-1/BPIV-3 I and PIV-3 II PCR and TRIplex BoCoV/BRSV/Beta actin For the investigation of bovine respiratory disease complex.	Following laboratory validation of this assay, we continued field validation of the assay investigating bovine respiratory disease submissions in the UK. In total, 378 respiratory disease submissions were investigated in 2023 from which 2% of the samples were positive for BoHV-1 DNA which further confirmed with whole genome sequencing. We are also validating a protocol to amplify the complete glycoprotein C gene for use in phylogenetic analysis of BoHV-1 isolates.

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

No

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?

Yes

Name of WOAH Member Country seeking assistance	Date	Which diagnostic test used	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses

INDIA	2024-03-13	Indirect, gB and gE ELISAs	0	4

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
INDIA	To update IBR diagnostic assays of the National Dairy Development Board (NDDB) R&D Laboratory in line with ISO17025 guidelines as part of an ongoing IBR twinning project between the two institutes.	Reviewed the IBR diagnostic test SOPs and provided advice for their update. The updates were also discussed at monthly online meetings (12 meetings in total).

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
Interpreting and optimising bulk milk testing for BVD and IBR considering numerical test outcomes	12 months	1) Develop a BLCM method to analyse numerical test outcomes from multiple diagnostic tests. 2) Compare the test performance of serological tests currently applied for routine bulk milk diagnostics of BVD and IBR in the partner institutes. 3) Develop tools to optimise test performance for country-specific requirements. 4) Develop a dashboard for test result interpretation that provides the probability of infection given the numerical test outcome.	ANSES, SSI, SVA, UCPH, WBVR	DENMARK FRANCE SWEDEN THE NETHERLANDS

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:
APHA collects and store all data from submissions received for IBR diagnosis for prevalence studies and international trade purposes.

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

No

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:

b) International conferences:

c) National conferences:

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Quarterly meetings organised by APHA cattle expert group and farming industry with representatives of bull studs and dairy farmers as well as Veterinary Investigation Officers (VIOs), laboratory diagnosticians and virologists.

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

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 : 12

c) Hands-on training courses: 0

d) Internships (>1 month) 0

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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
B	INDIA	8

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	ISO17025 Certificate.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
SNT, gB ELISA, Indirect ELISA, gE ELISA	United Kingdom Accreditation Service (UKAS)

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

Yes

APHA maintains a complete and functioning laboratory biological risk management system, which ensures that the laboratory is in compliance with applicable local, national (UK Health and Safety Executive), regional, and international standards and requirements for biosafety and laboratory biosecurity.

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	International workshop on diagnosis of Infectious Bovine Rhinotracheitis	National Dairy Development Board (NDDB) R&D Laboratory	2024-03-04	NDDB R & D laboratories, Hyderabad, India	14

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
International workshop on diagnosis of Infectious	2024-03-04	NDDB R & D laboratories,	Speaker	Making IBR eradication achievable. Overview of development and validation of diagnostic

Bovine Rhinotracheitis		Hyderabad, India		assays. Biorisk management in IBR research and diagnosis.

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?

No

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?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAH Ref. Labs/ organising WOAH Ref Lab
Ring trial	Participant	Not applicable	FLI-Germany

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
WOAH IBR reference sera	Discussion to generate WOAH IBR reference sera as previous batch of the sera is in short supply.	WOAH IBR reference laboratory at FLI, Germany
Test of NDDB R & D (India) laboratories national reference sera	Evaluating NDDB R & D laboratories national reference sera	WOAH IBR reference laboratory at FLI, Germany

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?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
To assess performance of IBR serology (ELISAs and SNT) assays of participating laboratories.	Organiser	33	ELISAs and SNT	AUSTRIA, CYPRUS, CZECH REPUBLIC, DENMARK, GREECE, INDIA, IRELAND, ITALY, MOROCCO, NEW ZEALAND, SERBIA, SLOVENIA, SOUTH AFRICA, SPAIN,

				UNITED KINGDOM,
To assess performance of IBR/PI3/BRSV serology (ELISA and SNT) assays of participating laboratories	Organiser	10	ELISAs and SNT	ESTONIA, IRELAND, LATVIA, MOROCCO, NEW ZEALAND, SPAIN, THE NETHERLANDS, UNITED KINGDOM,
To assess performance of IBR milk ELISAs of participating laboratories.	Organiser	19	ELISA	AUSTRIA, DENMARK, IRELAND, PORTUGAL, SWITZERLAND, TURKEY, UNITED KINGDOM,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

Question 2:

WOAH IBR reference sera are only held by ANSES, France, but these are in short supply. We are collaborating with WOAH IBR reference laboratory at FLI, Germany to produce fresh batches of WOAH IBR reference sera.

Questions 3:

A national reference serum and several virus isolates are available in this WOAH IBR reference laboratory and will be provided to member states if requested. However, in this reporting year there was no request.

Questions 17:

12 online seminars covering the subjects below.

- Writing SOP for diagnostic assays to comply with ISO17025.

- Diagnostic test validation according to the WOAH guidelines.

- Evaluation of measurement uncertainty (imprecision) in tests that produce quantitative results according to the WOAH guidelines.

- Thermal cyclers performance check, use and maintenance.

- IBR Biorisk management in diagnostic laboratories.