

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 16 juillet 2024 16:55

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Equine infectious anaemia
Address of laboratory:	427 Maduan Street, Harbin 150001, P. R. CHINA
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Website:	
Name (including Title) of Head of Laboratory (Responsible Official):	Xiaojun Wang
Name (including Title and Position) of WOA Reference Expert:	Xiaojun Wang
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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
cELISA for EIAV		3912	0
AGID for EIAV		20	0
Colloidal gold strip test for EIAV		200	0
Direct diagnostic tests			
qRT-PCR for EIAV		1	0

TOR2: REFERENCE MATERIAL

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

No

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

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA Members?

No

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

7. Did your laboratory validate diagnostic methods according to WOAAH Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
Development and evaluation of a real-time quantitative PCR for the detection of equine infectious anemia virus	Currently, most of the available real-time PCR assays, including the qPCR of recommended by WOAAH, are developed according to the sequences of European or American EIAV strains; however, the primers and probe sequences have low homology with Asian EIAV strains. This new test has better inclusivity and can detect not only Asian EIAV strains but also almost all the representative EIAV strains from other continents. Reference: 8. Li S#, Guo K#, Wang X#, Lin Y, Wang J, Wang Y, Du C, Hu Z*, Wang X*. Development and evaluation of a real-time quantitative PCR for the detection of equine infectious anemia virus. Microbiol Spectr. 2023 Dec 12;11(6):e0259923. doi: 10.1128/spectrum.02599-23. Epub 2023 Oct 9. PMID: 37811976; PMCID: PMC10715080. https://pubmed.ncbi.nlm.nih.gov/37811976/
Development and evaluation of a blocking ELISA for serological diagnosis of equine infectious anemia	In this study, a B-cell common epitope-based blocking ELISA (bELISA) was developed using a monoclonal antibody together with the EIAV p26 protein labelled with HRP. The test has been evaluated against the standard and with field serum samples globally. This bELISA test can be completed within 75 min, and the sensitivity is higher than those of either the AGID or one commercial cELISA kit. Reference: 12. Hu Z, Guo K, Du C, Sun J, Naletoski I, Chu X, Lin Y, Wang X*, Barrandeguy M, Samuel M, Wang W, Lau PI, Wernery U, Raghavan R, Wang X. Development and evaluation of a blocking ELISA for serological diagnosis of equine infectious anemia. Appl Microbiol Biotechnol. 2023 May;107(10):3305-3317

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

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

NAME OF THE WOAAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
NEW ZEALAND	An EIA PCR is needed for a case of an acutely sick horse with clinical signs that could fit EIA	Recommend our article "Development and evaluation of a real-time quantitative PCR for the detection of equine infectious anemia virus"

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAAH 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
Development of a blocking ELISA	2019-2023	Evaluation of a blocking ELISA	Instituto Nacional de Tecnología Agropecuaria (INTA)	ARGENTINA
Development of a blocking ELISA	2020-2023	Evaluation of a blocking ELISA	Central Veterinary Research Laboratory	UNITED ARAB EMIRATES
Development of a blocking ELISA	2019-2023	Development of a blocking ELISA	International Atomic Energy Agency	AUSTRIA

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

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:

There was no case reported on EIA worldwide in the year 2023.

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:

Data collected from WOAHA website and the papers published in peer reviewed journals.

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:

2

1. Li S#, Guo K#, Wang X#, Lin Y, Wang J, Wang Y, Du C, Hu Z*, Wang X*. Development and evaluation of a real-time quantitative PCR for the detection of equine infectious anemia virus. *Microbiol Spectr.* 2023 Dec 12;11(6):e0259923. doi: 10.1128/spectrum.02599-23. Epub 2023 Oct 9. PMID: 37811976; PMCID: PMC10715080.

2. Hu Z, Guo K, Du C, Sun J, Naletoski I, Chu X, Lin Y, Wang X*, Barrandeguy M, Samuel M, Wang W, Lau PI, Wernery U, Raghavan R, Wang X. Development and evaluation of a blocking ELISA for serological diagnosis of equine infectious anemia. *Appl Microbiol Biotechnol.* 2023 May;107(10):3305-3317 IF:5.43

b) International conferences:

0

c) National conferences:

1

Conference on Biological Products

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 WOAHA Members?

Yes

a) Technical visit : 0

b) Seminars : 1

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
B	KAZAKHSTAN	4

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
17025	CNAS	CNAS-2023.pdf
17025	CNAS	CNAS-2029.jpg

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
AGID	China National Accreditation Service for Conformity Assessment
ELISA	China National Accreditation Service for Conformity Assessment

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

Yes

We maintain a BSL2 laboratory for EIA

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

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

Yes

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

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOA?H Reference Laboratories designated for the same pathogen?

No

26. Did your laboratory collaborate with other WOA?H Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA?H Reference Laboratories for the same pathogen?

No

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
review of WOA?H Standards	remote	EIA manual update

29. Additional comments regarding your report:

No