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 WOAH Reference Laboratory: Equine infectious anaemia

Address of laboratory: 427 Maduan Street, Harbin 150001, P. R. CHINA

Tel: +86-451-1051749

E-mail address: wangxiaojun@caas.cn

Website:

Name (including Title) of Head of Laboratory (Responsible Official): Xiaojun Wang

Name (including Title and Position) of WOAH 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

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in WOAH Manual (Yes/No)</th>
<th>Total number of test performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cELISA for EIAV</td>
<td>Yes</td>
<td>3912</td>
</tr>
<tr>
<td>AGID for EIAV</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Colloidal gold strip test for EIAV</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>qRT-PCR for EIAV</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

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?
Yes

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

<table>
<thead>
<tr>
<th>NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED</th>
<th>DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development and evaluation of a real-time quantitative PCR for the detection of equine infectious anemia virus</td>
<td>Currently, most of the available real-time PCR assays, including the qPCR of recommended by WOAH, 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: B. Li SF, 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. <a href="https://pubmed.ncbi.nlm.nih.gov/37811976/">https://pubmed.ncbi.nlm.nih.gov/37811976/</a></td>
</tr>
<tr>
<td>Development and evaluation of a blocking ELISA for serological diagnosis of equine infectious anemia</td>
<td>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</td>
</tr>
</tbody>
</table>

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?
No

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

<table>
<thead>
<tr>
<th>NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY</th>
<th>PURPOSE</th>
<th>HOW THE ADVICE WAS PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW ZEALAND</td>
<td>An EIA PCR is needed for a case of an acutely sick horse with clinical signs that could fit EIA</td>
<td>Recommend our article “Development and evaluation of a real-time quantitative PCR for the detection of equine infectious anemia virus”</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Title of the study</th>
<th>Duration</th>
<th>PURPOSE OF THE STUDY</th>
<th>PARTNERS (INSTITUTIONS)</th>
<th>WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of a blocking ELISA</td>
<td>2019-2023</td>
<td>Evaluation of a blocking ELISA</td>
<td>Instituto Nacional de Tecnología Agropecuaria (INTA)</td>
<td>ARGENTINA</td>
</tr>
<tr>
<td>Development of a blocking ELISA</td>
<td>2020-2023</td>
<td>Evaluation of a blocking ELISA</td>
<td>Central Veterinary Research Laboratory</td>
<td>UNITED ARAB EMIRATES</td>
</tr>
<tr>
<td>Development of a blocking ELISA</td>
<td>2019-2023</td>
<td>Development of a blocking ELISA</td>
<td>International Atomic Energy Agency</td>
<td>AUSTRIA</td>
</tr>
</tbody>
</table>

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:**
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 WOAH 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)

- Articles published in peer-reviewed journals:
  2

- International conferences: 0

- National conferences: 1
  Conference on Biological Products

- 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 WOAH Members?
Yes

- Technical visit: 0
- Seminars: 1
- Hands-on training courses: 0
- Internships (>1 month): 0

<table>
<thead>
<tr>
<th>Type of technical training provided (a, b, c or d)</th>
<th>Country of origin of the expert(s) provided with training</th>
<th>No. participants from the corresponding country</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>KAZAKHSTAN</td>
<td>4</td>
</tr>
</tbody>
</table>

**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 WOAH?
No
22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAH?
No

**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?
No
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?
No

**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?
No

**TOR12: EXPERT CONSULTANTS**

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

| KIND OF CONSULTANCY | Location | SUBJECT (FACULTATIVE) |
--- | --- | ---
review of WOAH Standards | remote | EIA manual update |

29. Additional comments regarding your report:
No