WOAH Reference Laboratory Reports Activities 2023
Activities in 2023
This report has been submitted : 2 juin 2024 11:05

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:
Brucellosis (Brucella abortus, Brucella melitensis, Brucella suis)

Address of laboratory:
China Institute of Veterinary Drug Control (IVDC), No. 33 Qingfeng Street, Daxing District Beijing, 102600, CHINA (PEOPLE’S REPUBLIC OF CHINA)

Tel:
+86 01062103630 / +86 01061255326

E-mail address:
zhuliangquan2024@126.com

Website:
http://www.ivdc.org.cn/

Name (including Title) of Head of Laboratory (Responsible Official):
Prof. Weizhong Huang, General Director of IVDC

Name (including Title and Position) of WOAH Reference Expert:
Prof. Liangquan Zhu Designated expert, WOAH Reference Laboratory for Brucellosis (Brucella abortus, Brucella melitensis, Brucella suis) at IVDC

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

<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, iELISA</td>
<td>Yes</td>
<td>4673</td>
</tr>
<tr>
<td>Rt-qPCR</td>
<td></td>
<td>126</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isolation and identification of Brucella</td>
<td></td>
<td>18</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?
Yes

<table>
<thead>
<tr>
<th>TYPE OF REAGENT AVAILABLE</th>
<th>RELATED DIAGNOSTIC TEST</th>
<th>PRODUCED/ PROVIDE</th>
<th>AMOUNT SUPPLIED NATIONALLY (ML, MG)</th>
<th>AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)</th>
<th>NO. OF RECIPIENT WOAH MEMBER COUNTRIES</th>
<th>COUNTRY OF RECIPIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rose Bengal Plate Agglutination antigen</td>
<td>RBT</td>
<td>Produced</td>
<td>97500mL</td>
<td>150mL</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
<tr>
<td>Serum Agglutination antigen</td>
<td>SAT</td>
<td>Produced</td>
<td>15000mL</td>
<td>150mL</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
<tr>
<td>Milk Ring Test antigen</td>
<td>MRT</td>
<td>Produced</td>
<td>20mL</td>
<td>5mL</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
<tr>
<td>Brucellosis Positive Standard Serum</td>
<td>RBT, SAT, MRT, Colloidal Gold, FPA, ELISA</td>
<td>Produced</td>
<td>64mL</td>
<td>1mL</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td>----</td>
<td>----</td>
<td>-----------</td>
</tr>
<tr>
<td>Animal Brucella Competitive ELISA kit</td>
<td>ELISA</td>
<td>provided</td>
<td>0 dose</td>
<td>576 dose</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
<tr>
<td>Bovine Brucellosis Antibody Indirect ELISA Kit</td>
<td>ELISA</td>
<td>provided</td>
<td>0 dose</td>
<td>576 dose</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
<tr>
<td>Brucella Fluorescence Polarisation Assay Kit</td>
<td>FPA</td>
<td>provided</td>
<td>0 dose</td>
<td>1000 dose</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
<tr>
<td>Rt-qPCR kit</td>
<td>Rt-qPCR</td>
<td>provided</td>
<td>0 dose</td>
<td>100 dose</td>
<td>1</td>
<td>PAKISTAN,</td>
</tr>
</tbody>
</table>

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  

<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>Brucellosis Universal iELISA Antibody Detection Kit</td>
<td>Unpublished</td>
</tr>
</tbody>
</table>

7. Did your laboratory validate diagnostic methods according to WOAH Standards for the designated pathogen or disease?  
No  
8. Did your laboratory develop new vaccines for the designated pathogen or disease?  
Yes  

<table>
<thead>
<tr>
<th>NAME OF THE NEW VACCINE DEVELOPED</th>
<th>DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A non resistant rough type brucella strain</td>
<td>China National Intellectual Property Administration CN202311467356.1</td>
</tr>
</tbody>
</table>

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>PAKISTAN</td>
<td>Training on diagnostic techniques for brucellosis</td>
<td>in loco</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?  
No  
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
In 2023, a total of 4673 clinical samples of brucellosis were tested for antibody, with samples from 9 provinces (autonomous regions and municipalities) including Beijing, Shanxi, Guangdong, Hebei, Yunnan, Jilin, Inner Mongolia Autonomous Region, Gansu, and Heilongjiang. Among them, there were 3473 serum samples from cows, 400 serum samples from deer, 667 serum samples from horses, and 133 serum samples from camels.

In 2023, a total of 126 clinical samples of brucellosis were tested for pathogen, with samples from four provinces (cities, autonomous regions) including Hebei, Beijing, Gansu, and Inner Mongolia.

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:

1


b) International conferences:

1

The 3rd International Symposium on Brucellosis

c) National conferences:

5

1. Brucellosis Diagnosis Technology Training
2. Prevention and control of animal brucellosis in northwest China
3. Prevention and Control of Major Animal Diseases in Southwest China
4. Prevention and Control of Zoonozoonotic Diseases Academic Forum of Chinese Veterinary Medical Association
5. Biological Products Academic Forum of the Chinese Society of Animal Husbandry and Veterinary Medicine

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

1

http://www.ivdc.org.cn/bb/

**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: 8
c) Hands-on training courses: 7
d) 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>PAKISTAN</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>PAKISTAN</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>PAKISTAN</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>PAKISTAN</td>
<td>7</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)

<table>
<thead>
<tr>
<th>ISO 17025</th>
<th>CNAS</th>
</tr>
</thead>
</table>

19. Is your quality management system accredited?
   Yes
   - Test for which your laboratory is accredited
   - Accreditation body

<table>
<thead>
<tr>
<th>Rose Bengal Plate Agglutination Test</th>
<th>China National Accreditation Service for Conformity Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>China National Accreditation Service for Conformity Assessment</td>
<td>China National Accreditation Service for Conformity Assessment</td>
</tr>
<tr>
<td>Complement Fixation Test</td>
<td>China National Accreditation Service for Conformity Assessment</td>
</tr>
<tr>
<td>China National Accreditation Service for Conformity Assessment</td>
<td>China National Accreditation Service for Conformity Assessment</td>
</tr>
<tr>
<td>Serum Agglutination Test</td>
<td>China National Accreditation Service for Conformity Assessment</td>
</tr>
<tr>
<td>China National Accreditation Service for Conformity Assessment</td>
<td>China National Accreditation Service for Conformity Assessment</td>
</tr>
</tbody>
</table>

20. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?
   Yes
   The biosafety protection of our laboratory meets the international and national requirements for the management of highly pathogenic pathogens. We have BSL-3 and ABSL-3 laboratories, and developed biological risk management manuals such as “Safety Manual (AQSC-SWAQ-2019D)” and “Brucella Risk Assessment Report (FXPG01-SWAQ-2019D)”. Our laboratory has a strict biosafety prevention and control system, which can meet the various experimental operation requirements related to Brucella.

**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?
   No

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?
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?
Yes

<table>
<thead>
<tr>
<th>Purpose for inter-laboratory test comparisons1</th>
<th>Role of your reference laboratory (organizer/participant)</th>
<th>No. participating laboratories</th>
<th>Name of the Test</th>
<th>WOAH Member Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validation of a diagnostic protocol (specify the test)</td>
<td>Co-organizer</td>
<td>80</td>
<td></td>
<td>CHINA (PEOPLE’S REP. OF),</td>
</tr>
</tbody>
</table>

**TOR12: EXPERT CONSULTANTS**

28. Did your laboratory place expert consultants at the disposal of WOAH?
No

29. Additional comments regarding your report:
Yes

*Due to customs clearance difficulties, it is hard to organize/participate in international laboratory proficiency testing.*