WOAH Reference Laboratory Reports Activities 2022

Activities in 2022
This report has been submitted: 9 mars 2023 15:47

Laboratory Information

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Bovine viral diarrhoea |
| Address of laboratory: | Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Südufer 10, 17493 Greifswald – Insel Riems, GERMANY |
| Tel.: | +49-38351 7-1212 |
| E-mail address: | kerstin.wernike@fli.de |
| Website: | https://www.fli.de/en/startpage/ |
| Name (including Title) of Head of Laboratory (Responsible Official): | PD Dr. Kerstin Wernike (head of laboratory) |
| Name (including Title and Position) of WOAH Reference Expert: | PD Dr. Kerstin Wernike (head of laboratory) |
| 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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antibody ELISA</td>
<td>YES</td>
<td>10904</td>
<td></td>
</tr>
<tr>
<td>Serum neutralisation (BVD)</td>
<td>YES</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

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Direct diagnostic tests | Nationally | Internationally
---|---|---
Virus isolation | YES | 37
BVDV antigen ELISA | YES | 477
RT-PCR | YES | 1317

**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>Antibody positive and negative sera</td>
<td>Antibody ELISA, SNT</td>
<td>Produced and provided</td>
<td>13ml</td>
<td>4ml</td>
<td>2</td>
<td>Europe</td>
</tr>
<tr>
<td>Antibody positive and negative milk samples</td>
<td>Antibody ELISA</td>
<td>Provided</td>
<td>10ml</td>
<td></td>
<td>1</td>
<td>Europe</td>
</tr>
<tr>
<td>RNA</td>
<td>RT-PCR</td>
<td>Produced and provided</td>
<td>3.3ml</td>
<td>6.6ml</td>
<td>3</td>
<td>Europe</td>
</tr>
<tr>
<td>BVDV positive sera</td>
<td>RT-PCR, Antigen-ELISA, virus isolation</td>
<td>Provided</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BVDV positive tissue</td>
<td>RT-PCR, Antigen-ELISA</td>
<td>Provided</td>
<td>30mg</td>
<td>150mg</td>
<td>2</td>
<td>Europe</td>
</tr>
<tr>
<td>Reference virus</td>
<td>RT-PCR, virus isolation, SNT</td>
<td>Produced and provided</td>
<td>1ml</td>
<td></td>
<td>1</td>
<td>Europe</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?
No

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>
</table>
| Description: chimeric vaccine based on Bungowannah virus (BuPV, species Pestivirus F) as backbone, where glycoproteins E1 and E2 of BuPV were
Kerstin Wernike - Bovine viral diarrhoea - GERMANY

BuPV_dNpro_E1E2 CP7 (modified live or inactivated) substituted by the heterologous E1 and E2 of the BVDV-1 strain CP7
Reference: Koethe et al. 2022, Bungowannah pestivirus chimeras as novel double marker vaccine strategy against bovine viral diarrhea virus, doi: 10.3390/vaccines10010088

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>AUSTRIA</td>
<td>diagnostic testing, cell culture</td>
<td>Email, phone</td>
</tr>
<tr>
<td>JORDAN</td>
<td>diagnostic testing</td>
<td>Email</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>diagnostic testing</td>
<td>Email</td>
</tr>
<tr>
<td>SPAIN</td>
<td>diagnostic testing, test validation</td>
<td>Email, material transfer</td>
</tr>
<tr>
<td>FINLAND</td>
<td>proficiency testing schemes</td>
<td>Email</td>
</tr>
<tr>
<td>POLAND</td>
<td>proficiency testing schemes</td>
<td>Email</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

**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:**

Institute of Epidemiology at the Friedrich-Loeffler-Institut is hosting the TSN disease notification system; annual statistics about BVD/MD cases in Germany based on data obtained from the cattle trade database (HI-Tier); genotyping of BVDV strains

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:**

Annual statistics about BVD/MD cases in Germany is provided
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:

5


b) International conferences:

0

c) National conferences:

1

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

1

https://www.fli.de/en/publications/annual-animal-health-reports/

**TOR7: SCIENTIFIC AND TECHNICAL TRAINING**

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?

No

**TOR8: QUALITY ASSURANCE**

18. Does your laboratory have a Quality Management System?

Yes
19. Is your quality management system accredited?

Yes

<table>
<thead>
<tr>
<th>Test for which your laboratory is accredited</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>flexible accreditation: antibody ELISA and neutralisation test</td>
<td>Deutsche Akkreditierungsstelle GmbH (DAkkS)</td>
</tr>
<tr>
<td>flexible accreditation: virus isolation, antigen ELISA and RT-PCR</td>
<td>Deutsche Akkreditierungsstelle GmbH (DAkkS)</td>
</tr>
</tbody>
</table>

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

Yes

A management system that ensures safe and secure handling, storage, and transport of biological materials is in place. The specifications are laid down in operating instructions. The designated Biorisk Officer oversees the biorisk management of the institute and the observance of biosafety and -security regulations.

**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. Are you a member of a network of 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

<table>
<thead>
<tr>
<th>KIND OF CONSULTANCY</th>
<th>Location</th>
<th>SUBJECT (FACULTATIVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>review of the chapter on Bunyaviral diseases of animals (excluding Rift Valley fever and Crimean-Congo haemorrhagic fever)</td>
<td>remote</td>
<td>updating of the chapter</td>
</tr>
</tbody>
</table>

29. Additional comments regarding your report:

Yes

*The WOAH reference laboratory is acting as test laboratory for test authorisation and batch release testing in Germany.*

*Meetings were cancelled or postponed due to the SARS-CoV-2 pandemic.*