WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted: 25 juin 2024 17:15

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:
Enzootic abortion of ewes (Ovine chlamydiosis)

Address of laboratory:
Naumburger Str. 96a 07743 Jena

Tel:
+49-3641 804 2435

E-mail address:
christiane.schnee@fli.de

Website:
www.fli.de

Name (including Title) of Head of Laboratory (Responsible Official):
Prof. Christian Menge (Head of Institute)

Name (including Title and Position) of WOAH Reference Expert:
Dr. Christiane Schnee (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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nationally</td>
<td>Internationally</td>
</tr>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening ELISA</td>
<td>144</td>
<td>0</td>
</tr>
<tr>
<td>C. abortus specific ELISA</td>
<td>120</td>
<td>0</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real-Time PCR Family Chlamydiaceae</td>
<td>208</td>
<td>0</td>
</tr>
<tr>
<td>Real-Time PCR Chlamydia abortus</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Real-Time PCR Chlamydia suis</td>
<td>54</td>
<td>0</td>
</tr>
<tr>
<td>Isolation (cell culture)</td>
<td>5</td>
<td>0</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 (non-WOAH-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>Chromosomal DNA of Chlamydia reference</td>
<td>PCR, Real- Time PCR</td>
<td>produced</td>
<td>1x50 µl</td>
<td>4x100 µl</td>
<td>2</td>
<td>ARGENTINA, ITALY,</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?
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>PORTUGAL</td>
<td>Use of WOAH methods for diagnosis of Enzootic abortion of ewes, serology, serum standards</td>
<td>Remote assistance by 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?
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>PCR comparison for the detection of Chlamydia abortus</td>
<td>2 years</td>
<td>Testing different commercial and in house PCR assay to give recommendations for a sensitive and specific molecular detection of the agent</td>
<td>ANSES Maisons-Alfort; University of Zurich; Moredun Research Institute</td>
<td>FRANCE SWITZERLAND UNITED KINGDOM</td>
</tr>
</tbody>
</table>

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

**Research need : 1**

*Please type the Research need:* The question has arisen as to whether Chlamydia abortus is also shed in ewe's and goat's milk, or whether milk can be contaminated by the agent, so that raw milk products could pose a risk to the consumer. Further, it would be interesting to investigate whether the pathogens can multiply in this matrix.

Relevance for WOAH Disease Control, Relevance for the Codes or Manual Manual, Field Epidemiology and Surveillance, Animal Category Terrestrial,
Research need: 2

Please type the Research need: Serology for EAE is a well-established tool, particularly for monitoring and controlling the introduction of new animals into a herd or country. However, the different specificities of the available ELISA tests are sometimes not known or are not taken into account. For example, import regulations in various countries require the freedom from chlamydia antibodies without differentiation of the chlamydia species. Because other chlamydiae, which are not clinically relevant in small ruminants, are endemic in many countries, this often leads to unnecessary exclusions. Further, serological DIVA tests do not exist but are needed to distinguish vaccinated and infected animals.

Relevance for WOAH Disease Control, Relevance for the Codes or Manual, Field Epidemiology and Surveillance, Diagnostics, Animal Category Terrestrial, Disease: Enzootic abortion of ewes (ovine chlamydiosis) Kind of disease (Zoonosis, Transboundary diseases) Transboundary diseases, If any, please specify relevance for Codes or Manual, chapter and title (e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture) Answer: Terrestrial Manual Chapter 3.8.5 Enzootic abortion of ewes Notes: Answer:

**TOR6: EPIZOODLOGICAL 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:**

South american camels in European flocks often suffer from abortions and birth of weak offspring. Chlamydia are assumed to be a possible etiological agent. Therefore the screening of alpaca and llama flocks for the presence of Chlamydia spp. and Chlamydia abortus in fecal samples, vaginal swabs, placenta tissue and blood was continued.

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:**

Our reference laboratory receives samples for confirmatory or differential diagnosis of sheep and goat abortions from regional state laboratories. Results are reported to the regional authorities and also to the central German Animal Disease Information System (TSN).

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:

2

Schnee, C., Ulrich, K., Bartl, E.M., Menge, C., Wagner, H. The occurrence of chlamydiae in German holdings of South American camelids. 19. Deutscher Chlamydiengenworkshop, Düsseldorf, Germany, 2023 (poster and flash talk)


c) National conferences:

1

Schnee, C., Ulrich, K., Bartl, E.M., Menge, C., Wagner, H. The occurrence of chlamydiae in German holdings of South American camelids. Meeting of the German Veterinary Society, Berlin, Germany, 2023 (poster and flash talk)

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 WOAH Members?

Yes

a) Technical visit: 1

b) Seminars: 0

c) Hands-on training courses: 0

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>A</td>
<td>GREECE</td>
<td>1</td>
</tr>
</tbody>
</table>

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

<table>
<thead>
<tr>
<th>Quality management system adopted</th>
<th>Certificate scan (PDF, JPG, PNG format)</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO17025</td>
<td>PDF</td>
<td>DAkkS Deutsche Akkreditierungsstelle</td>
</tr>
</tbody>
</table>

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>PCR and real-time PCR Chlamydiaceae</td>
<td>DAkkS Deutsche Akkreditierungsstelle</td>
</tr>
<tr>
<td>Real-time PCR Chlamydia spp.</td>
<td>DAkkS Deutsche Akkreditierungsstelle</td>
</tr>
<tr>
<td>Isolation and culture Chlamydia spp.</td>
<td>DAkkS Deutsche Akkreditierungsstelle</td>
</tr>
<tr>
<td>Screening and C. abortus ELISA</td>
<td>DAkkS Deutsche Akkreditierungsstelle</td>
</tr>
</tbody>
</table>

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

Yes

- Risk assessment for Chlamydia agents with regular updates - Appropriate risk control measures (biosafety and biosecurity) are installed - A biological safety officer is
appointed - Regular inspection of the laboratories by national authorities

**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?
   Yes

<table>
<thead>
<tr>
<th>NETWORK/DISEASE</th>
<th>ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)</th>
<th>NO. PARTICIPANTS</th>
<th>PARTICIPATING WOAH REF. LABS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enzootic abortion of ewes</td>
<td>participant</td>
<td>3</td>
<td>Anses Maisons-Alfort, IVPZ Zurich, FLI Jena</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PURPOSE OF THE PROFICIENCY TESTS:</th>
<th>ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)</th>
<th>NO. PARTICIPANTS</th>
<th>PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency of Real-time PCR for Chlamydiaceae, C. abortus, C. pecorum</td>
<td>participant</td>
<td>17</td>
<td>ANSES, France</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>TITLE OF THE PROJECT OR CONTRACT</th>
<th>SCOPE</th>
<th>NAME(S) OF RELEVANT WOAH REFERENCE LABORATORIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR comparison for the detection of Chlamydia abortus</td>
<td>Testing different commercial and in house PCR assay to give recommendations for a sensitive and specific molecular detection of the agent</td>
<td>Anses Maisons-Alfort, IVPZ Zurich, FLI Jena</td>
</tr>
</tbody>
</table>

**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?
   No

29. Additional comments regarding your report:
   No