World Organisation for Animal Health

Christiane Schnee - - GERMANY

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

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

Diagnostic Test	Indicated in WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Screening ELISA	Yes	4	0
C. abortus specific ELISA	Yes	4	0
Direct diagnostic tests		Nationally	Internationally
Real-Time PCR Family Chlamydiaceae	Yes	30	0
Real-Time PCR Chlamydia abortus	Yes	5	0
Real-Time PCR Chlamydia pecorum	No	7	0
PCR and sequencing of vaccine strain	No	1	0
Isolation (cell culture)	Yes	5	0

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

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAH Member Countries	Country of recipients

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Chromosomal DNA of Chlamydia reference strains	PCR, Real- Time PCR	produced	0	7x100 µl	3	SERBIA, SRI LANKA, UKRAINE,
Reference sera	ELISA	provide	0	42x 0,5 ml	2	AUSTRIA, ITALY,
Positive and negative reference samples	PCR, Real- Time PCR	produced	0	6 samples	1	AUSTRIA,
Isolate in cell culture	PCR, Real- Time PCR	produced	0	2x500 µl	1	AUSTRIA,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

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?

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

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

Name of the WOAH Member Country receiving a technical consultancy	Purpose	How the advice was provided
UNITED KINGDOM	Consultancy on effectiveness of disinfactants against Chlamydia abortus	Remote assistance by email
SRI LANKA	Advice on PCR-based diagnosis of ovine chlamydiosis	Remote assistance by email, Provision of protocols

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?

Yes

Research need : 1

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 Code or Manual 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:

Notes:

Answer:

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

No

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:

2

Schnee C, Laroucau K, Livingstone M, Aaziz R, Marti H, Longbottom D, Borel N.Cross-European laboratory evaluation of commercial and in-house real-time PCR assays for the detection of Chlamydia abortus in small ruminants. Res Vet Sci. 2025 Jun;188:105613. doi: 10.1016/j.rvsc.2025.105613

Unger N, Liebler-Tenorio EM, Guliev RR, Eiserloh S, Nietzsche S, Nowak F, Zuchantke S, Berens C, Schnee C, Neugebauer U. Insights into chlamydial infection at the sub-cellular level using label-free Raman spectroscopy in comparison to electron microscopy.
J Biol Chem. 2026 Jan;302(1):110940. doi: 10.1016/j.jbc.2025.110940

b) International conferences:

0

c) National conferences:

0

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?

No

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025	PDF	Akkreditierungsurkunde_2024 (4).pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
PCR and real-time PCR Chlamydiaceae	DAkkS Deutsche Akkreditierungsstelle
Real-time PCR Chlamydia abortus	DAkkS Deutsche Akkreditierungsstelle
Isolation and culture Chlamydia spp.	DAkkS Deutsche Akkreditierungsstelle
Screening and C. abortus ELISA	DAkkS Deutsche Akkreditierungsstelle

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

Yes

- Risk assesment 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. Are you a member of a network of WOAH Reference Laboratories designated for the same pathogen?

Yes

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

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen during the past 2 years?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAH Ref. Labs/ organising WOAH Ref Lab
Assessment of technical competence of laboratories in detection of Chlamydiaceae, Chlamydia abortus et al. genomic DNA in different matrices by Real-Time PCR	organizer	3	Anses Maisons-Alfort, IVPZ Zurich, FLI Jena
Assessment of technical competence of laboratories in detection of Chlamydia and C. abortus -specific antibodies in small ruminants	organizer	3	Anses Maisons-Alfort, IVPZ Zurich, FLI Jena

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 during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Assessment of technical competence of laboratories in detection of Chlamydiaceae, Chlamydia abortus et al. genomic DNA in different matrices by Real-Time PCR	organizer	33	LVU Chlamydien 2024	BELGIUM, FRANCE, GERMANY, POLAND, SWITZERLAND,
Assessment of technical competence of laboratories in detection of Chlamydia and C. abortus -specific antibodies in small ruminants	organizer	33	LVU Chlamydien-Serologie 2024	BELGIUM, FRANCE, GERMANY, POLAND,

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Preparing draft and discussing case definition	E-mail and online meeting	Development of the case definition for infection with Chlamydia abortus (enzootic abortion of ewes, ovine chlamydiosis)

29. Additional comments regarding your report: