

# WOAH Reference Laboratory Reports Activities 2024

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## LABORATORY INFORMATION

<b>*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:</b>	Bovine viral diarrhoea
<b>*Address of laboratory:</b>	Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Südufer 10, 17493 Greifswald – Insel Riems
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<b>Website:</b>	<a href="https://www.fli.de/en/startpage/">https://www.fli.de/en/startpage/</a>
<b>*Name (including Title) of Head of Laboratory (Responsible Official):</b>	PD Dr. Kerstin Wernike (head of laboratory)
<b>*Name (including Title and Position) of WOAH Reference Expert:</b>	PD Dr. Kerstin Wernike (head of laboratory)
<b>*Which of the following defines your laboratory? Check all that apply:</b>	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	
		Nationally	Internationally
Indirect diagnostic tests			
Antibody ELISA	Yes	2147	0
Serum neutralisation (BVD)	Yes	39	0
Serum neutralisation (Border Disease)	No	2	0

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Direct diagnostic tests		Nationally	Internationally
Virus isolation	Yes	18	0
BVDV antigen ELISA	Yes	669	0
RT-PCR	Yes	1725	9

## TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?H?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H Members?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOA?H Member Countries	Country of recipients
Antibody positive and negative sera	Antibody ELISA, SNT	Produced and provided	0	3.5 ml	3	EGYPT, FRANCE, SWITZERLAND,
Virus isolate	SNT, virus isolation	Produced and provided	1ml	0	1	GERMANY,
BVDV positive tissue	RT-PCR, Antigen-ELISA, virus isolation	Provided	1mg	0	1	SPAIN,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA?H 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 WOA?H 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 WOA?H Standards for the designated pathogen or disease?

No

## TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOA?H Members?

No

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

Yes

Name of the WOA Member Country receiving a technical consultancy	Purpose	How the advice was provided
SPAIN	Proficiency testing schemes	Email
TURKEY	Proficiency testing schemes, PCR testing	Email
DENMARK	Virus propagation in cell culture	Email
PORTUGAL	PCR testing	Email
URUGUAY	Diagnostic testing, internal control for PCR testing	Email
CANADA	Diagnostic testing	Email
INDONESIA	Vaccines	Email
IRELAND	Requirements to PCR kits	Email
POLAND	Proficiency testing	Email

## TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA Members other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAH Member Countries involved other than your country
BETO - Better tools for diagnosis of infectious diseases	3 years	BETO is a project under EUP AH&W, the aims are to develop diagnostic procedures, methodologies and tools to support the surveillance of animal health.	ANSES, CIRAD, CSIC, DEFRA, DTU, EULS, FLI, IMR, INIAV, INRAE, ISS, IZSLER, IZSLT, IZS-Teramo, NVI, PIWET, RIVM, Ruokavirasto, Sciensano, SLA, SLU, SSI, SURREY, SVA, UAB, UCPH, UGent, UNIPD, UNITO, WR	BELGIUM DENMARK ESTONIA FINLAND FRANCE GEORGIA ITALY NORWAY POLAND PORTUGAL SPAIN SWEDEN THE NETHERLANDS UNITED KINGDOM

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

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

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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

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:

3

Wernike, K., Beer, M. Comparison of bovine viral diarrhea virus detection methods: Results of an international proficiency trial. *Vet Microbiol.* doi: 10.1016/j.vetmic.2024.109985

Köster, J., Schneider, K., Höper, D., Salditt, A., Beer, M., Miller, T., Wernike, K. Novel pestiviruses detected in cattle interfere with bovine viral diarrhea virus diagnostics. *Viruses.* doi: 10.3390/v16081301

Schulz, D., Aebischer, A., Wernike, K., Beer, M. No evidence of spread of *Linda pestivirus* in the wild boar population in Southern Germany. *Virol J.* doi: 10.1186/s12985-024-02476-x

b) International conferences:

0

c) National conferences:

2

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 WOA H Members?

Yes

- a) Technical visit : 0  
b) Seminars : 0  
c) Hands-on training courses: 2  
d) Internships (>1 month) 0

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
C	AUSTRIA	2

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025	Akkreditierungsurkunde_2024.pdf	Akkreditierungsurkunde_2024.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Flexible accreditation: antibody ELISA and neutralisation test	Deutsche Akkreditierungsstelle GmbH (DAkkS)
Flexible accreditation: virus isolation, antigen ELISA and RT-PCR	Deutsche Akkreditierungsstelle GmbH (DAkkS)

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 WOA?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA?

No

## TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOA Reference Laboratories designated for the same pathogen or disease?

Yes

24. Do you network (collaborate or share information) with other WOA Reference Laboratories designated for the same pathogen?

Yes

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NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
Bovine Viral Diarrhea	Participant	4	Australia, Canada, UK Germany

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

No

*Organisation and participation in inter-laboratory proficiency tests with laboratories other than WOAHP Reference Laboratories for the same pathogen*

26. Did your laboratory collaborate with other WOAHP 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 WOAHP Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons <sup>1</sup>	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAHP Member Countries
2024: Detection of BVDV using antigen ELISA and PCR test	Participant	53	BVDV antigen ELISA, RT-PCR	AUSTRALIA, AUSTRIA, AZERBAIJAN, BELGIUM, CANADA, CZECH REPUBLIC, DENMARK, FRANCE, GERMANY, HUNGARY, IRELAND, LUXEMBOURG, POLAND, PORTUGAL, SOUTH AFRICA, SPAIN, SWITZERLAND, THE NETHERLANDS, UNITED KINGDOM, UNITED STATES OF AMERICA,
2023: BVDV antigen/virus/genome detection, antibody detection	Organizer	41	Virus isolation, BVDV antigen ELISA , RT-PCR; antibody ELISA , serum neutralisation test	AUSTRIA, DENMARK, FINLAND, FRANCE, GERMANY, IRELAND, ITALY, LITHUANIA, SWITZERLAND, THE NETHERLANDS,

## TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Review of the comments from the Member Countries to the updated WOA Terrestrial Manual chapter on bovine viral diarrhoea	remote	Review of the comments

29. Additional comments regarding your report:

Yes

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