OIE Reference Laboratory Reports Activities

Activities in 2021

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Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Bovine viral diarrhoea
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Name (including Title) of Head of Laboratory (Responsible Official):	PD Dr. Kerstin Wernike (head of laboratory)
Name (including Title and Position) of OIE Reference Expert:	PD Dr. Kerstin Wernike (head of laboratory)
Which of the following defines your laboratory? Check all that apply:	Governmental

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

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 OIE Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Antibody ELISA	Yes	2719	0
Serum neutralisation (BVD)	Yes	206	0
Direct diagnostic tests		Nationally	Internationally
Virus isolation	Yes	4	0
BVD antigen ELISA	Yes	166	0
RT-PCR	Yes	1479	23

ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards.
To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
Antibody positive and negative sera	Antibody ELISA, SNT	Produced and provided	3ml	6ml	2	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
Antibody positive and negative milk samples	Antibody ELISA	Provided		4ml	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
RNA	RT-PCR	Produced and provided	100µl		1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
BVDV positive sera	RT-PCR, virus isolation	Provided	2ml		2	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
Reference virus	RT-PCR, virus isolation, SNT	Produced and provided	1ml		1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
DENMARK	various	23	0

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
FRANCE	diagnostic testing	Email, material transfer
ITALY	serological tests	Email, online meeting
LATVIA	serological tests	Email
IRELAND	diagnostic testing	Email
POLAND	diagnostic testing	Email, material transfer

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries

other than the own?

No

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological 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)

12. Did your laboratory disseminate epizootiological 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 (Homepage of the NRL).

13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)

a) Articles published in peer-reviewed journals: 3
Albrecht K., Linder M., Heinrich A., Höche J., Beer M., Gaede W., Wernike K. Re-introduction of bovine viral diarrhea virus in a disease-free region: Impact on the affected cattle herd and diagnostic implications. Pathogens (Basel, Switzerland) 2021, 10, doi:10.3390/pathogens10030360

Golender N., Bumbarov V., Kovtunenko A., David D., Guini-Rubinstein M., Sol A., Beer M., Eldar A., Wernike K. Identification and genetic characterization of viral pathogens in ruminant gestation abnormalities, Israel, 2015-2019. Viruses 2021, 13, 2136, doi:10.3390/v13112136

King J., Pohlmann A., Dziadek K., Beer M., Wernike, K. Cattle connection: molecular epidemiology of BVDV outbreaks via rapid nanopore whole-genome sequencing of clinical samples. BMC Vet Res 2021, 17, 242, doi:10.1186/s12917-021-02945-3.

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/

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries
To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

No

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO 17025	20_12_02_Akkreditierungsurkunde_2019.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
flexible accreditation: antibody ELISA and neutralisation test	ILAC MRA
flexible accreditation: virus isolation, antigen ELISA and RT-PCR	ILAC MRA

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

Yes

(See Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

No

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

No

22. Did your laboratory collaborate with other OIE Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing see point 1.3

Purpose for inter-laboratory test comparisons[1]	No. participating laboratories	Region(s) of participating OIE Member Countries
Organisation: BVDV antigen/virus/genome detection, antibody detection	57	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☒Middle East
Participation: virus and antigen detection	about 50	☒Africa ☒Americas ☐Asia and Pacific ☒Europe ☐Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

Yes

Kind of consultancy	Location	Subject (facultative)
Expert Group to discuss the case definition for bovine viral diarrhoea	remote	Development of the case definition for infection with bovine viral diarrhoea viruses (bovine viral diarrhoea)

25. Additional comments regarding your report:

The OIE laboratory is acting as test laboratory for test authorisation and batch release testing in Germany.

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