

WOAH Reference Laboratory Reports Activities 2024

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Bovine spongiform encephalopathy
*Address of laboratory:	
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*E-mail address:	torsten.seuberlich@unibe.ch
Website:	
*Name (including Title) of Head of Laboratory (Responsible Official):	Prof. Dr. med. vet. Torsten Seuberlich
*Name (including Title and Position) of WOAH Reference Expert:	Prof. Dr. med. vet. Torsten Seuberlich
*Which of the following defines your laboratory? Check all that apply:	Academic institution

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
Direct diagnostic tests		Nationally	Internationally
BSE rapid tests	Yes	1850	0
BSE Confirmatory testing (Western immunoblot)	Yes	19	0

TOR2: REFERENCE MATERIAL

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

No

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

No

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOA Members?

Not applicable

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 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 Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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
CHILE	Request for reference material	Email
URUGUAY	Request for reference material	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?

No

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

No

TOR6: EPIZOOLOGICAL DATA

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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:

Participation in active and passive surveillance schemes for BSE

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

No

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

Lethal Borna disease virus 1 infections of humans and animals - in-depth molecular epidemiology and phylogeography.

Ebinger A, Santos PD, Pfaff F, Dürrwald R, Kolodziejek J, Schlottau K, Ruf V, Liesche-Starnecker F, Ensser A, Korn K, Ulrich R, Fürstenau J, Matiassek K, Hansmann F, Seuberlich T, Nobach D, Müller M, Neubauer-Juric A, Suchowski M, Bauswein M, Niller HH, Schmidt B, Tappe D, Cadar D, Homeier-Bachmann T, Haring VC, Pörtner K, Frank C, Mundhenk L, Hoffmann B, Herms J, Baumgärtner W, Nowotny N, Schlegel J, Ulrich RG, Beer M, Rubbenstroth D.

Nat Commun. 2024 Sep 10;15(1):7908. doi: 10.1038/s41467-024-52192-x.

PMID: 39256401 Free PMC article.

Seroprevalence of Toxoplasma gondii and Neospora spp. in horse population of Tehran, Iran.

Shams F, Jokar M, Abdous A, Mohammadi P, Abbassioun A, Seuberlich T, Rahmanian V.

Sci Rep. 2024 Jul 24;14(1):17054. doi: 10.1038/s41598-024-61999-z.

PMID: 39048639 Free PMC article.

Landscape structure affects temporal dynamics in the bumble bee virome: Landscape heterogeneity supports colony resilience.

Bosco L, Yañez O, Schauer A, Maurer C, Cushman SA, Arlettaz R, Jacot A, Seuberlich T, Neumann P, Schläppi D.

Sci Total Environ. 2024 Oct 10;946:174280. doi: 10.1016/j.scitotenv.2024.174280. Epub 2024 Jun 26.

PMID: 38942311 Free article.

Astrovirus induced nonpurulent encephalomyelitis in sheep: First report from Türkiye by high-throughput sequencing.

Eroksuz Y, Timurkan MO, Shams F, Seuberlich T, Karabulut B, Incili CA, Kara E, Eroksuz H.

Vet Med Sci. 2024 Jul;10(4):e1499. doi: 10.1002/vms3.1499.

PMID: 38879881 Free PMC article.

Fatal tick-borne encephalitis virus infection in Dalmatian puppy-dogs after putative vector independent transmission.

Dawson KLD, Rosato G, Egloff S, Burgener C, Oevermann A, Grest P, Hilbe M, Seuberlich T.

Vet Q. 2024 Dec;44(1):1-7. doi: 10.1080/01652176.2024.2338385. Epub 2024 Apr 10.

PMID: 38596900 Free PMC article.

b) International conferences:

2

Annual TSE EURL Meeting, Roma (I)
EFSA TSE Network Meeting, Parma (i)

c) National conferences:

0

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

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA H 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)	
ISO17015	Final accreditation pending	

19. Is your quality management system accredited?

No

The laboratory is in the process of re-accreditation. The final audit is fixed for May 15th and 16th. Official accreditation will follow ~2 months thereafter.

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

Yes

We have guidelines for biosafety and waste-management in place. Moreover the laboratory is approved for BSL3** activities which include the work with BSE prions.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA H?

No

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

No

TOR10: NETWORK WITH WOA H REFERENCE LABORATORIES

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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

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA REF. LABS
EURL BSE Network Meeting	Participant	26	Italy, Spain
EFSA TSE Network	Participant	30	Italy, Spain, Canada, UK

25. Did you organise or participate in inter-laboratory proficiency tests with WOA 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 WOA Ref. Labs/ organising WOA Ref Lab
BSE rapid test	participant	25	2
BSE western immunoblot	participant	15	2
BSE discriminatory Western immunoblot	participant	10	2

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

Yes

Title of the project or contract	Scope	Name(s) of relevant WOA Reference Laboratories
Experimental transmission of atypical BSE suspicious samples from Switzerland in cattle	To determine if unusual BSE cases involve a transmissible prion in cattle	WOA Ref. Lab BSE CFIA, Lethbridge, Canada

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter- laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOA Member Countries
BSE rapid test	Participant	20	Idexx BSE/Scrapie	AUSTRIA, BELGIUM, BULGARIA, CROATIA, CZECH REPUBLIC, DENMARK, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY,

HeraChek ELISA

LATVIA, LITHUANIA, NORWAY,
POLAND, PORTUGAL, SLOVAKIA,
SLOVENIA, SPAIN, SWEDEN, THE
NETHERLANDS,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

As BSE diagnostics are well established across Europe, there is relatively little need for diagnostic support. Especially since the majority of tasks is covered by the European Union Reference Laboratory in Italy. Research activities are very limited, due to the lack of research funding in the BSE field. The lab is still awaiting accreditation, but this process is fully on track and will for sure be finalized in 2025.