

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:	Bovine spongiform encephalopathy
*Address of laboratory:	P.O. Box 640 Township Road 9-1 Lethbridge Alberta T1J 3Z4 CANADA
*Tel:	+1-403 3596830
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Website:	https://inspection.canada.ca/en/about-cfia/science-and-research-cfia/our-laboratories/ncad-lethbridge/bse
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Kingsley Amoako, Director, Canadian Food Inspection Agency National Centre for Animal Diseases, Lethbridge Laboratory
*Name (including Title and Position) of WOAH Reference Expert:	Dr. Waqas Tahir, Research Scientist and Head, Canadian National BSE Reference Laboratory CFIA-NCAD Lethbridge 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	
		Nationally	Internationally
Indirect diagnostic tests			
0	No	0	0
Direct diagnostic tests			
BioRad TeSeE ELISA	Yes	1143	0
OIE Immunoblot	Yes	0	0
BSE IHC	Yes	0	0
BioRad Confirmatory Western Blot	Yes	0	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
				2 Formalin Fixed		

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Formalin Fixed Paraffin Embedded Blocks	BSE Immunohistochemistry	provide	none	Paraffin Embedded Classical BSE positive Blocks	1	URUGUAY,
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4. Did your laboratory produce vaccines?

No

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

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOAHA Member Country receiving a technical consultancy	Purpose	How the advice was provided
PERU	Question about differentiating between BSE types and exploring the possibility of supporting BSE surveillance	Canadian BSE reference lab responded by email, explained about the steps of BSE surveillance testing (including confirmation and typing) in Canada, shared the SOP of Bio-Rad Western blot to differentiate between BSE types and other TSEs, and provided technical information related to supporting BSE surveillance testing in Peru

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHA Member Countries involved other than your country
Peroral intraspecies transmission of atypical BSE	16	Risk assessment & improved understanding of pathogenesis	Friedrich-Loeffler Institute	GERMANY
Intracranial species transmission of 2 unusual BSE cases	10	Risk assessment	Vetsuisse, University of Berne	SWITZERLAND

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

No

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?

No

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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:

1

Article Published: *Canadian 2021 H-type Bovine Spongiform Encephalopathy case associated with a novel E211K polymorphism in prion protein gene*

Authors: *Waqas Tahir, Sandor Dudas, Renee Anderson, Jianmin Yang, Sarah Bogart, Kristina Santiago-Mateo, Yuanmu Fang, Roberta Quaghebeur*

Journal: *Prion*

b) International conferences:

c) National conferences:

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 WOAHA Members?

Yes

a) Technical visit : 1

b) Seminars : 0

c) Hands-on training courses: 1

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
A	GERMANY	1
C	GERMANY	1

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	pdf	2025.08.28 Scope of Accreditation (15366).pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Bio Rad TeSeE ELISA	Standard Councils of Canada (SCC)
SAF/OIE Immunoblot	Standard Councils of Canada (SCC)
BSE Immunohistochemistry	Standard Councils of Canada (SCC)
BSE hemotoxylin and eosin (H&E)	Standard Councils of Canada (SCC)

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Hybrid Western Blot	Standard Councils of Canada (SCC)
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20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

Our lab is certified under License # L-R2-51780-25-HY-00 from Public Health Agency of Canada (PHAC), to work with the pathogen and the disease concerned.

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOAHP Reference Laboratories designated for the same pathogen?

No

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?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAHP Ref. Labs/ organising WOAHP Ref Lab
Verify technicians and lab proficiency: BSE IHC	ORGANISER	2	Canadian BSE Reference Laboratory
Verify technicians and lab proficiency: BioRad TeSeE ELISA	PARTICIPANT	unknown	Friedrich-Loeffler Institute, Germany
Verify technicians and lab proficiency: BSE IHC	PARTICIPANT	unknown	Friedrich-Loeffler Institute, Germany
Verify technicians and lab proficiency: SAF Immunoblot and Hyb-WB	PARTICIPANT	unknown	Friedrich-Loeffler Institute, Germany

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant WOAHP Reference Laboratories
Intraspecies transmission of unusual BSE cases	risk assessment and improved understanding of pathogenesis	Vetsuisse, University of Berne, Switzerland

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 ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAHP Member Countries
Verify technicians and lab proficiency: BSE Rapid Tests	ORGANIZER and PARTICIPANT	7	Bio Rad TeSeE ELISA	AUSTRALIA, BRAZIL, CANADA,
Validation of laboratory proficiency and diagnostic assays for the detection of BSE (IHC)	ORGANIZER and PARTICIPANT	5	BSE IHC	BRAZIL, CANADA, GERMANY, URUGUAY,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No