

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-22 21:20:34

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Bovine spongiform encephalopathy
Address of laboratory:	Canadian Food Inspection Agency, National Center for Foreign Animal Diseases 225059, Township Road 9-1 P. O. Box 640 Lethbridge Alberta T1J 3Z4 CANADA
Tel.:	+1-403 382.55.00
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E-mail address:	sandor.dudas@canada.ca
Website:	https://www.inspection.gc.ca/eng/1297964599443/1297965645317
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. John Copps, Executive Director, CFIA-NCAD (Winnipeg and Lethbridge Laboratories) National Center for Foreign Animal Diseases (Winnipeg Laboratory-Arlington)
Name (including Title and Position) of OIE Reference Expert:	Dr. Stefanie Czub, DVM/PhD; Manager, Virology/Pathology/TSE section head; Head, National and OIE Reference Laboratories for BSE; Adjunct Professor, PAH/UCVM; CFIA-NCAD Lethbridge
Which of the following defines your laboratory? Check all that apply:	Governmental Research

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	
		Nationally	Internationally
Indirect diagnostic tests			
0	na	0	0
Direct diagnostic tests			
Prionics-Check Priostrip	no	4055	0
BSE IHC	yes	0	1

**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
BSE tissue sections (C-,H-,L-type BSE)	IHC and H&E	produced and provided	25 sections	100 sections	5	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
BSE brain homogenate(C-,H-,L-type BSE)	Rapid tests	produced and provided	250 ml	50 ml	4	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americ as <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
BSE fresh/frozen tissue from challenged bovines/ovines (C-,H-,L-type BSE)	Molecular assays and animal challenges	produced and provided	0 g	15.7 g	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> 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?

No

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
BRAZIL	Second opinion for BSE test results	Remotely
ARGENTINA	Second opinion for BSE test results	Remotely

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?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Peroral intraspecies transmission of atypical BSE	12 years	Risk assessment and improved understanding of pathogen	Friedrich-Loeffler-Institute	GERMANY
Intracranial intraspecies transmission of 2 unusual BSE cases	5 years	Risk assessment	Vetsuisse, University of Berne	SWITZERLAND
Identifying genetic factors affecting BSE incubation and presentation in cattle	3 years	improved understanding of pathogenesis	Friedrich-Loeffler-Institute, Animal and Plant Health Agency UK	UNITED KINGDOM

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?

No

If the answer is no, please provide a brief explanation of the situation:

The organization we belong to (CFIA) collects this data.

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

No

If the answer is no, please provide a brief explanation of the situation:

CFIA epidemiologists process, analyze and disseminate this data.

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: 1

Exploration of genetic factors resulting in abnormal disease in cattle experimentally challenged with bovine spongiform encephalopathy.

Dudas S, Anderson R, Staskevicius A, Mitchell G, Cross JC, Czub S.

Prion. 2021 Dec;15(1):1-11. doi: 10.1080/19336896.2020.1869495.

b) International conferences: 0

Postponed due to COVID

c) National conferences: 1

Alberta Prion Research Institute Scientific Meeting (virtual), Nov 30th, Dec 1st and Dec 7th

d) Other:

(Provide website address or link to appropriate information) 0

**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	2019 Annual QMS Review (Mar10.2020).pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Prionics-Check Priostrip	Standard Councils of Canada (SCC)
Prionics-Check Western	Standard Councils of Canada (SCC)
BioRad TeSeE ELISA	Standard Councils of Canada (SCC)
IDEXX Herd-Chek EIA	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)
Hybrid Western Blot	Standard Councils of Canada (SCC)

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?

Yes

Purpose of the proficiency tests: ¹	Role of your Reference Laboratory (organiser/participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.
Verify technician/lab proficiency: BSE rapid tests	organiser	8	none other than the Canadian BSE reference lab
Verify technician/lab proficiency: BSE IHC	organiser	6	none other than the Canadian BSE reference lab
Verify technician/lab proficiency: BSE rapid tests	participant	unknown	unknown
Verify technician/lab proficiency: BSE IHC	participant	unknown	unknown

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
Intraspecies transmission of 2 unusual BSE cases	risk assessment and improved understanding of pathogenesis	Vetsuisse, University of Berne, Switzerland
Identifying genetic factors affecting BSE incubation and presentation in cattle	risk assessment and improved understanding of pathogenesis	Animal and Plant Health Agency, Weybridge, UK

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
Validation of laboratories proficiency and diagnostic assays for the detection of BSE	14	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> 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?

No

25. Additional comments regarding your report:

Dr. Stefanie Czub retired from the Canadian and OIE Reference Laboratory for BSE in May 2020. The laboratory is currently being led by Dr. Rakhi Katoch and Sandor Dudas. A hiring process is underway to replace Dr. Czub. Once this position is filled (anticipated for April 2021), documents will be submitted to request OIE approval for the new reference laboratory lead.