

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-25 20:27:10

| | |
|--|---|
| Name of disease (or topic) for which you are a designated OIE Reference Laboratory: | Bovine spongiform encephalopathy |
| Address of laboratory: | P.O. Box 640 Township Road 9-1 Lethbridge Alberta T1J 3Z4 CANADA |
| Tel.: | +1-403 382 55 05 |
| Fax: | +1-403 381 8283 |
| E-mail address: | kingsley.amoako@inspection.gc.ca |
| Website: | https://www.inspection.gc.ca/eng/1297964599443/1297965645317 |
| 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 OIE Reference Expert: | Dr. Waqas Tahir (Acting) Research Scientist Head, Canadian National BSE Reference Laboratory CFIA-NCAD Lethbridge 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 | |
|--|----------------------------------|--|-----------------|
| | | Nationally | Internationally |
| Indirect diagnostic tests | | | |
| 0 | no | 0 | 0 |
| Direct diagnostic tests | | | |
| Prionics-Check PrioStrip | Yes | 3587 | 1 |
| BioRad TeSeE ELISA | Yes | 1 | 1 |
| Prionics Check Western/Hybrid Western Blot | Yes | 1 | 1 |
| OIE Immunoblot | Yes | 1 | |
| BSE IHC | Yes | 1 | 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 |
|--|-------------------------|-------------------|-------------------------------------|--|---------------------------------------|---|
| FFPE BSE positive bovine brain tissue blocks | Histology/IHC | 6 blocks | 0 | 6 blocks | 2 | <input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input 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 | Typing of a BSE positive cattle sample detected in Brazil | 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 yrs | risk assessment & improved understanding of pathogenesis | Friedrich-Loeffler Institute | GERMANY |
| Intracranial species transmission of 2 unusual BSE cases | 5 yrs | risk assessment | Vetsuisse, University of Berne | SWITZERLAND |
| Identifying genetic factors affecting BSE incubation and presentation in cattle | 3 yrs | improved understanding of pathogenesis | Friedrich-Loeffler Institute, Animal & Plant Health Agency UK | GERMANY 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: |
|---|
| This information is collected by the epidemiology division of the Canadian Food Inspection Agency |

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:

This information is disseminated by the epidemiology division of the Canadian Food Inspection Agency

**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.

Sandor Dudas, Renee Anderson, Antanas Staskevicius, Gordon Mitchell, James C Cross, Stefanie Czub
Prion. 2021 Dec;15(1):1-11. doi: 10.1080/19336896.2020.1869495.

b) International conferences: 0

Postponed due to COVID

c) National conferences: 0

Postponed due to COVID

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 | 2021 ASB_CTF_15366-CFIA-Certificate_v3_2021-07-22.pdf |

16. Is your quality management system accredited?

Yes

| Test for which your laboratory is accredited | Accreditation body |
|--|-----------------------------------|
| Prionic Check Priostrip | Standard Councils of Canada (SCC) |
| Bio Rad TeSeE ELISA | Standard Councils of Canada (SCC) |
| Prionic Check Western | 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 technicians and lab proficiency: BSE Rapid Tests | organizer | 8 | none other than the Canadian BSE Reference Laboratory |
| Verify technicians and lab proficiency: BSE IHC | organizer | 2 | none other than the Canadian BSE Reference Laboratory |
| Verify technicians and lab proficiency: BSE Rapid Tests | participant | unknown | unknown |
| Verify technicians and 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 unusual BSE cases | risk assessment and improved understanding of pathogenesis | Vetsuisse, University of Berne, Switzerland |
| Identifying genetic factors affecting BSE 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 laboratory proficiency and diagnostic assays for the detection of BSE | 10 | <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. Waqas Tahir has been hired to supervise the Canadian BSE Reference Laboratory and to act as the new reference laboratory lead.

COVID has resulted in the cancellation of conferences/meetings and limited opportunities for collaborations, training and other activities. We are hopeful that 2022 will bring opportunities to re-establish our reference laboratory activities.