

WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 31 janvier 2025 18:11

LABORATORY INFORMATION

| | |
|--|---|
| *Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Scrapie |
| *Address of laboratory: | 3851 Fallowfield Road, Ottawa, Ontario, K2J 4S1, CANADA |
| *Tel: | +1-343 212 02 72 |
| *E-mail address: | gordon.mitchell@inspection.gc.ca |
| Website: | www.inspection.gc.ca |
| *Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Abed Harchaoui, Laboratory Network Director, Animal Health, CFIA |
| *Name (including Title and Position) of WOAH Reference Expert: | Dr. Gordon Mitchell, Head, National and WOAH Reference Laboratory for Scrapie and CWD |
| *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 | |
|---------------------------|-----------------------------------|--|-----------------|
| Indirect diagnostic tests | | Nationally | Internationally |
| Direct diagnostic tests | | Nationally | Internationally |
| PrP ELISA | Yes | 2869 | 0 |
| PrP Immunohistochemistry | Yes | 17 | 0 |
| PrP Western Blot | Yes | 4 | 0 |

Gordon Mitchell - - CANADA

| | | | |
|-----------------|-----|-----|---|
| PRNP Genotyping | Yes | 310 | 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?

Yes

| Type of reagent available | Related diagnostic test | Produced/ provide | Amount supplied nationally (ml, mg) | Amount supplied internationally (ml, mg) | No. of recipient WOA Member Countries | Country of recipients |
|---------------------------|-----------------------------|-------------------|-------------------------------------|--|---------------------------------------|---|
| Tissue Homogenates | PrP ELISA / PRNP Genotyping | Provide | Multiple | Multiple | 3 | BRAZIL, CANADA, UNITED STATES OF AMERICA, |

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA Members?

No

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 |
|--|-------------------------------------|-----------------------------|
| BRAZIL | TSE diagnostic testing | Email |
| ARGENTINA | TSE diagnostic testing | Email |
| UNITED STATES OF AMERICA | Diagnostic testing and transmission | Virtual meeting |

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA Member Countries other than the own?

Yes

| Title of the study | Duration | Purpose of the study | Partners (Institutions) | WOAH Member Countries involved other than your country |
|--|----------|---|-----------------------------------|--|
| Genetic approaches and tools to prevent, control, and eradicate TSEs | Ongoing | Developing genetic and diagnostic tools to manage scrapie | Washington State University, USDA | UNITED STATES OF AMERICA |

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

No

TOR6: EPIZOOLOGICAL DATA

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:

Data arising from all surveillance and disease investigation-associated diagnostic testing is collected.

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

Yes

If the answer is yes, please provide details of the data collected:

Case data from all disease positive herds or regions is collated and communicated to regulatory agencies.

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

Yilmaz G, Morrill T, Pilot W, Ward C, Mitchell G, Soutyrine A, Dan H, Lin M, Guan J. Optimization of RT-QuIC Assay Duration for Screening Chronic Wasting Disease in White-Tailed Deer. Vet. Sci. 2024; 11(2), 60.

b) International conferences:

2

Gordon Mitchell - - CANADA

Raihan T, Hemmerling KM, Galloway NL, Sargent GA, Wild MA, Schroeder GM, Powers JG, McCann BE, Ernest HB, Edwards W, Malmberg JL, Wright W, Mitchell GB, Dewey SR, Taus NS, Schnider DA, and Mousel MR. Genomic Cartography of the North American Elk Using Genotype-by-Sequencing Approach. International Plant and Animal Genome Conference, San Diego, CA, 2024.

Jerez-Garrido N, Fernández-Borges N, Canoyra S, Moreno AM, Benestad SL, Andreoletti O, Mitchell G, Balachandran A, Villa-Diaz A, Torres JM and Espinosa JC. Chronic wasting disease in bovine-PrP transgenic mice propagates with different prion strain features. 12th Iberian Prion Congress, Spain, 2024.

c) National conferences:

1

Arifin MI, Staskevicius A, Pilot W, Guan J, Mitchell G. An overview of genotyping for CWD and Scrapie resistance. Canadian Animal Health Laboratorians Network 22nd Annual Meeting, Ottawa, Canada, 2024

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

1

Information on Scrapie in Canada: <https://inspection.canada.ca/en/animal-health/terrestrial-animals/diseases/reportable/scrapie>

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) | |
|-----------------------------------|--|--|
| ISO/IEC 17025:2017 | ASB_CTF_15367-CFIA-Certificate_v2_2022-08-29.pdf | ASB_CTF_15367-CFIA-Certificate_v2_2022-08-29.pdf |

19. Is your quality management system accredited?

Yes

| Test for which your laboratory is accredited | Accreditation body |
|--|-----------------------------------|
| PrP Immunohistochemistry | Standards Council of Canada (SCC) |
| PrP ELISA | SCC |
| PrP Western blot | SCC |
| PRNP Genotyping | SCC |

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

Yes

Gordon Mitchell - - CANADA

The Ottawa Laboratory Fallowfield, Canadian Food Inspection Agency, has a dedicated Biosafety Officer who manages the biosafety, biocontainment, biosecurity, and health and safety portfolios for the laboratory. The OLF holds valid Human Pathogens and Toxins Act (HPTA) licences, administered by the Public Health Agency of Canada, for all of the facilities where work with regulated materials is performed. As a condition of the licences, OLF must ensure compliance with the Canadian Biosafety Standard, which details the physical and operational requirements for Containment Level 2 and 3 laboratories, including Prion facilities. As well, many of the activities at OLF are further regulated by the CFIA's Office of Biohazard Containment and Safety. In order to demonstrate compliance to both these regulatory bodies, the Biosafety Officer regularly submits performance and verification testing results for the recertification of the containment facilities, and participates in on-site inspections by the federal biosafety regulators.

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

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

Yes

24. Do you network (collaborate or share information) with other WOA?H Reference Laboratories designated for the same pathogen?

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOA?H Reference Laboratories designated for the same pathogen during the past 2 years?

No

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

No

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA?H 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 | WOAH Member Countries |
|--|---|--------------------------------|-----------------------------|-----------------------|
| PrP Immunohistochemistry | Organizer | 2 | PrP Immunohistochemistry | CANADA, UNITED |

Gordon Mitchell - - CANADA

| | | | | |
|-------------------------------------|-----------|---|-----------------|--------------------|
| proficiency testing | | | | STATES OF AMERICA, |
| PrP ELISA proficiency testing | Organizer | 6 | PrP ELISA | CANADA, |
| PRNP Genotyping proficiency testing | Organizer | 2 | PRNP Genotyping | CANADA, |

TOR12: EXPERT CONSULTANTS

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

Yes

| Kind of consultancy | Location | Subject (facultative) |
|---|-----------|---|
| Responding to specific technical queries from WOA | Via Email | Clarification sought on items related to a review of the Scrapie Terrestrial Code Chapter |

29. Additional comments regarding your report:

No