

WOAH Reference Laboratory Reports Activities 2025

This report has been submitted: 30 janvier 2026 19:42

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA 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. Charles Nfon, Laboratory Network Director, Animal Health, CFIA
*Name (including Title and Position) of WOA Reference Expert:	Dr. Gordon Mitchell, Head, National and WOA 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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Direct diagnostic tests			
PrP ELISA	Yes	4341	0
PrP Immunohistochemistry	Yes	41	0
PRNP Genotyping	Yes	181	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?

No

5. Did your laboratory supply vaccines to WOA Members?

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

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7. Did your laboratory validate diagnostic methods according to WOAHP 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 WOAHP Standards for the designated pathogen or disease?

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOAHP Member Country receiving a technical consultancy	Purpose	How the advice was provided
UNITED STATES OF AMERICA	Diagnostics, genetics, transmission	Virtual meetings

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHP 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 WOAHP?

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:

4

Pilot W, Arifin MI, Staskevicius A, Haley NJ, Mitchell G, Guan J. White-Tailed Deer Prion Protein Gene Variability Suggests Selection Against Chronic Wasting Disease in Canada's Prairies. *Viruses*. 2025; 17(8):1121. <https://doi.org/10.3390/v17081121>

Myskiw J, Lamoureux L, Frost K, Fox R, Slota JA, Mitchell G, Bailey-Elkin BA, Booth SA. Transmission and Characterization of Creutzfeldt-Jakob Disease and Chronic Wasting Disease in the North American Deer Mouse. *Viruses*. 2025; 17(4):576. <https://doi.org/10.3390/v17040576>

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Park K, Park H, Lee Y, Mitchell G, Choi YP, Sohn H. 2025. Detection of chronic wasting disease prions in the farm soil of the Republic of Korea. *mSphere* 10: e00866-24. <https://doi.org/10.1128/msphere.00866-24>

Park, KJ, Park, HC, Lee, YR, Roh, IS, Mitchell, G, Choi, YP, & Sohn, HJ. (2025). Addressing chronic wasting disease in Korean farms: topsoil removal and 2N NaOH treatment before cervid restocking. *Prion*, 19(1), 20–27. <https://doi.org/10.1080/19336896.2025.2527588>

b) International conferences:

5

Gresch S, Morrill T, Ellis-Cramer M, Arifin M, Frank L, Bartz J, Schwabenlander M, Wolf T, Mitchell G, Guan J, Larsen P. Prion Seeding Activity in DNA Extractions: Implications for Laboratory Biosafety. *Prion 2025 Conference, Rio De Janeiro, Brazil, 2025.*

Ernst S, Mohamed FA, Keller M, Mitchell G, Gavier-Widen D, Benestad S, Houston EF, Groschup MH, Sharif M, Fast C. Animal prion strains around the globe. *Prion 2025 Conference, Rio De Janeiro, Brazil, 2025.*

Bruno R, Riccardi G, D'Agostino C, Giovannelli M, Batocchi V, Chiappini B, Pirisinu L, Vanni I, Marcon S, Richt J, Kunkle R, Mitchell G, Agrimi U, Nonno R, Di Bari MA. Evidence of a single vole-adapted strain from North American CWD isolates in vole carrying methionine at PrPC codon 109. *13th Iberian Congress on Prions, Porto, Portugal, 2025.*

Fernández-Borges N, Canoyra S, Benestad S, Andreoletti O, Mitchell G, Balachandran A, Villa-Díaz A, Prieto I, Torres JM, Espinosa JC. Strain Diversity and Cross-Species Transmission Potential of Chronic Wasting Disease Prions to Livestock-Species. *13th Iberian Congress on Prions, Porto, Portugal, 2025.*

Mousel M, Mitchell G, Raihan T, Schneider D, Chung C. Genomic regions outside of PRNP associate with Scrapie in domestic sheep. *International Plant and Animal Genome Conference, San Diego, CA, 2025.*

c) National conferences:

1

Renaud L, Morrill T, Arifin M, Ogunremi D, Adam B, Soutyrine A, Guan J, Mitchell G, Aider M, Zhang W, Huang H. Investigation of the effects of electro-activated liquid chemicals on the inactivation of abnormal prion protein. *Health Canada Science Forum, Ottawa, Canada, 2025.*

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 WOAHP 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

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

Yes

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 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?

No

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
Characterisation of Classical Scrapie Isolates	Comparing characteristics of classical scrapie field isolates from Canada and the United Kingdom	Animal and Plant Health Agency (APHA) Weybridge, UK

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
PrP Immunohistochemistry proficiency testing	Organizer	2	PrP Immunohistochemistry	CANADA, UNITED 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?H?

Yes

Kind of consultancy	Location	Subject (facultative)
Responding to specific technical queries from WOA?H	Via Email	Clarification provided in response to inquires made on WOA?H Scrapie Standards

29. Additional comments regarding your report:

No