

WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 25 avril 2023 15:22

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Chronic wasting disease
Address of laboratory:	3851 Fallowfield Road P.O. Box 11300 Station H, Nepean, Ontario K2H 8P9 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, Executive Director, Ontario Laboratories Network, Canadian Food Inspection Agency
Name (including Title and Position) of WOAH Reference Expert:	Dr. Gordon Mitchell, Head, National and OIE 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	No	4181	0
PrP Immunohistochemistry			

	No	2101	0
PrP Western Blot	No	336	0
PRNP Genotyping	No	3626	0

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?H?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H 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?H MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
Tissue Homogenates	PrP ELISA/Western Blot	Provide	Multiple	Multiple	2	America

4. Did your laboratory produce vaccines?

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

NAME OF THE WOA?H MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
UNITED STATES OF AMERICA	Genetics and surveillance testing	Email

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
Investigating cross-species transmission of CWD	Ongoing	Characterizing transmission of Korean and Canadian CWD Isolates	Animal and Plant Quarantine Agency	KOREA (REP. OF)
Characterization of CWD Isolates	Ongoing	Investigating variability between CWD isolates in Europe and North America	Norwegian Veterinary Institute, Colorado State University	FRANCE GERMANY ITALY NORWAY SPAIN UNITED KINGDOM UNITED STATES OF AMERICA
Genetic approaches and tools to prevent, control, and eradicate TSEs	Ongoing	Developing genetic and diagnostic tools to manage CWD	Washington State University, USDA	UNITED STATES OF AMERICA

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 resulting 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

Xu S, Abeysekara S, Dudas S, Czub S, Staskevicius A, Mitchell G, Amoako KK, McAllister TA. Biodegradation of bovine spongiform encephalopathy prions in compost. Sci Rep. 2022;12(1).

b) International conferences:

1

Sohn HJ, Park KJ, Lee YR, Park HC, Mitchell G. Distribution of PrPCWD in tissues of CWD affected sika deer with experimental oral transmission using RT-QuIC. Annual Prion Conference, Gottingen, Germany, 2022. *Prion*, 16:1, 226.

Arifin MI, Zeng D, Hannaoui S, Beekes M, Mitchell G, Benestad S, Kacmarczyk L, Jackson W, Gilch S. Heterozygosity at cervid Prnp codon 138 progressively blocks prion conversion in vitro and partly confines prion propagation to the periphery in knock-in mice. Annual Prion Conference, Gottingen, Germany, 2022. *Prion*, 16:1, 99

c) National conferences:

0

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

1

Information on CWD in Canada: <https://inspection.canada.ca/animal-health/terrestrial-animals/diseases/reportable/cwd/eng/1330143462380/1330143991594>

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 17025		Accreditation Certificate.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

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

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

Yes

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

No

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

No

26. Did your laboratory collaborate with other WOA 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 WOA REFERENCE LABORATORIES
Investigating cross-species transmission of CWD	Characterizing transmission of Korean and Canadian CWD Isolates	Animal and Plant Quarantine Agency, Republic of Korea
Collaborative framework concerning CWD reference laboratories	Advancing strategies to detect, control and characterize CWD	Norwegian Veterinary Institute

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOA Member Countries
PrP Immunohistochemistry proficiency	Organizer	3	America
PrP ELISA proficiency	Organizer	6	America
PRNP Genotyping proficiency	Organizer	2	America

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No