

# WOAH Reference Laboratory Reports Activities 2025

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## LABORATORY INFORMATION

<b>*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:</b>	Rabies
<b>*Address of laboratory:</b>	3851 Fallowfield Road, Ottawa ON K2J 4S1
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<b>Website:</b>	<a href="https://www.inspection.gc.ca/en/animal-health/terrestrial-animals/diseases/reportable/rabies/canada">https://www.inspection.gc.ca/en/animal-health/terrestrial-animals/diseases/reportable/rabies/canada</a>
<b>*Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr. Charles Nfon, Animal Health Laboratory Network Director, Canadian Food Inspection Agency
<b>*Name (including Title and Position) of WOA Reference Expert:</b>	Christine Fehlner-Gardiner, PhD (Director, CFIA Ottawa Animal Health Laboratory)
<b>*Which of the following defines your laboratory? Check all that apply:</b>	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			
Fluorescent antibody test	Yes	3348	0
RT-PCR	Yes	8	0
Variant typing by discriminatory monoclonal antibody panel	Yes	165	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
polyclonal conjugates	fluorescent antibody test; direct, rapid immunohistochemical test (DRIT)	produced and provided	~4 mL (concentrate)	nil	1	CANADA,

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inactivated positive control	DRIT	produced and provided	1 cc	nil	1	CANADA,
raccoon brain tissue, uninfected and infected with rabies virus	research	provided	nil	307 samples, ~0.3 cc each	1	UNITED STATES OF AMERICA,
rabies virus monoclonal antibodies	research	produced and provided	nil	20 mL (hybridoma supernatant)	1	UNITED STATES OF AMERICA,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHA Members?

### 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 WOAHA 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 WOAHA Standards for the designated pathogen or disease?

### TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

No

### TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

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:

Rabies case and testing data for Canada

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:

Data are published monthly on the Canadian Food Inspection Agency website. Data are also disseminated by reporting to the Canadian Network for Public Health Intelligence (CNPHI) rabies module, WAHIS (data provided to Canada Focal Point for Reporting), and SIRVERA (Pan American Health Organization Rabies database), and through conference presentations, scientific publications and discussions at RABLAB meetings.

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:

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Cao L, Qu J, Zhang C, Chen R, Wang J, Fehlner-Gardiner C, Niezgodna M, Satheshkumar PS, Wang X, Tsao E. Structural basis for broad neutralization of rabies virus by an antibody cocktail SYN023. *Emerg Microbes Infect.* 2025 Dec;14(1):2547724. doi: 10.1080/22221751.2025.2547724. Epub 2025 Nov 30. PMID: 40827441; PMCID: PMC12667334.

Boutelle C, Bonaparte S, Orciari LA, Kirby JD, Chipman RB, Fehlner-Gardiner C, Thang C, Julien D, Hirose JAM, García BC, Wallace RM, Blanton JD. Rabies surveillance in the United States during 2023. *J Am Vet Med Assoc.* 2025 Jul 18;263(10):1310-1317. doi: 10.2460/javma.25.05.0344. PMID: 40683310.

Buchanan T, Brown L, Fehlner-Gardiner C, Hagey S, McGuire Sherritt A, Nituch L, Pollock P. Elimination of Arctic fox variant rabies from southern Ontario, Canada. *FACETS.* 2025. 10: 1-6. <https://doi.org/10.1139/facets-2025-0202>

Andrew CL, Henaff M, Fehlner-Gardiner C, Thang C, Knowles MK, Jung TS, Harms NJ. Where have all the rabies cases gone? Results of rabies virus surveillance in wildlife in the Yukon, Canada. *Arctic Science.* 2025. 11: 1-7. <https://doi.org/10.1139/as-2024-0034>

b) International conferences:

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Thang C, Snodgrass M, Iqbal Z, Gagnier M, Buchanan T, Nituch L, Fehlner-Gardiner C. Recent developments in rabies epidemiology in Canada. 36th International Conference on Rabies in the Americas, Lima, Peru, October 19-24 2025.

Julien D, Blackmore J, Thang C, Fehlner-Gardiner C, Vachon J. Rabies in Canada, 2013 – 2022: A Decade in Review. 36th International Conference on Rabies in the Americas, Lima, Peru, October 19-24 2025.

c) National conferences:

3

Thang C, Fehlner-Gardiner C. Diagnosis of the recent Human Rabies case- Laboratory analysis aspects. Public Health Agency of Canada Zoonoses and Adaptation Webinar. February 27, 2025

Thang C. A sneak peak into rabies laboratory practices. Presentation to Environmental Public Health Officers, First Nations and Inuit Health Branch, Indigenous Services Canada. April 25, 2025

Coutu C. CFIA rabies diagnostic and research laboratory. Ontario Association of Veterinary Technologists "Let's Talk Rabies" Webinar Series. March 20 2025

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

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CFIA website: <https://inspection.canada.ca/en/animal-health/terrestrial-animals/diseases/reportable/rabies>

SIRVERA portal: <https://sirvera.panaftosa.org.br/Site/Inicio/Index?idl=3>

CNPHI portal: <https://www.cnphi-rcrsp.ca/cnphi/index.jsp>

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHA Members?

No

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

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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

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Fluorescent antibody test	Standards Council of Canada

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 (OLF-CFIA), has a dedicated Biosafety Officer who manages the biosafety, biocontainment, biosecurity, and health and safety portfolios for the laboratory. The OLF-CFIA holds valid Human Pathogens and Toxins Act (HPTA) licenses, 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 licenses, OLF-CFIA 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-CFIA 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. Are you a member of a network of WOA?H Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS
RABLAB/Rabies	Participant	14	Chinese Taipei, France, Germany, India, Israel, Italy, Korea (Rep. of), Mexico, People's Republic of China, Romania, South Africa, UK, USA

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

*nil*

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant WOA?H Reference Laboratories
FLI-OMNRF-CEVA collaboration for evaluation of ONRAB oral vaccine for rabies in wildlife	Further study of ONRAB oral vaccine for rabies and development of assays for regulatory use	Friedrich Loeffler Institut (WOA?H Reference Laboratory for Rabies); other collaborators - Ontario (Canada) Ministry of Natural Resources and Forestry, CEVA Animal Health (Germany and Canada). CFIA participation: provision of serum samples and scientific advice.

## TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHO Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons <sup>1</sup>	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Competency assessment of laboratory staff - interlaboratory comparison with CFIA Lethbridge Laboratory (fluorescent antibody test)	Organizer and participant	2	Fluorescent antibody test	CANADA,
Proficiency testing of laboratory staff - Wisconsin State Laboratory of Hygiene proficiency panels for rabies fluorescent antibody test	Participant; number of participating laboratories is unknown, country that organizes the panel is listed	0	Fluorescent antibody test	UNITED STATES OF AMERICA,
Proficiency testing of laboratory staff - VETQAS (UK) Rabies RT-PCR Panel	Participant; number of participating laboratories is unknown, country that organizes the panel is listed	0	Rabies RT-PCR	UNITED KINGDOM,

## TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Participation in RABLAB network meetings	Remote	Various topics, including: member lab summaries, lateral flow devices, oral vaccination for dogs, proficiency testing, risk mapping, country support
Guidance document writing/review	Remote	WOAH Rabies Reference Laboratory Network (RABLAB) guidance: "Overview of Lateral Flow Device (LFD) Tests for Field Application", highlighting what is known about LFD performance, their potential role in surveillance, and the conditions under which they may be applied appropriately.
Webinar participation	Remote	United Against Rabies/WOAH webinar "Strengthening Rabies Surveillance: Where Do Lateral Flow Devices Fit?"

29. Additional comments regarding your report:

No