WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 25 avril 2023 16:38

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Rabies
Address of laboratory:	3851 FALLOWFIELD ROAD
Tel.:	13432120304
E-mail address:	christine.fehlner-gardiner@inspection.gc.ca
Website:	https://inspection.canada.ca/
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Abed Harchaoui, DVM (Executive Director, Ontario Laboratories Network)
Name (including Title and Position) of WOAH Reference Expert:	Christine Fehlner-Gardiner, PhD (Head, Science Laboratory Services - Rabies)
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
nil	n/a	n/a	n/a
Direct diagnostic tests		Nationally	Internationally
Fluorescent Antibody Test	Yes	2529	0

Cell culture isolation	Yes	1	0
RT-PCR	Yes	1	0
Immunohistochemistry	Yes	1	0
Variant typing by monoclonal antibody panel	Yes	97	0
Variant typing by sequencing and phylogenetic analysis	Yes	1	0

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOAH MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
Monoclonal antibody (hybridoma supernatant)	Research	produced and provided	0	180 mL	2	America Asia and Pacific
Hybridoma cell line	Direct rapid immunohistochemical test for rabies (DRIT)	produced and provided	0	2 vials of cells	1	America
polyclonal antibody FITC conjugate (concentrated)	Fluorescent antibody test	produced and provided	2 mL	0	1	America
polyclonal antibody biotin conjugate (concentrated)	DRIT	produced and provided	2 mL	0	1	America
monoclonal antibody biotin conjugate (purified)	DRIT	produced and provided	0	0.4 mL	1	America

4. Did your laboratory produce vaccines?

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
UNITED STATES OF AMERICA	To provide advice for a project to develop tools for the direct rapid immunohistochemical test for rabies	Virtual meetings
VENEZUELA	To provide advice on RT-PCR tests for rabies to Departamento de Virología Instituto Nacional de Higiene "Rafael Rangel"	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?

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 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 on a monthly basis 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 reference lab network 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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1. Rabies Surveillance in the United States during 2020 - X Ma, S Bonaparte, M Toro, LA Orciari, CM Gigante, JD Kirby, RB Chipman, C Fehlner-Gardiner, V Gutiérrez Cedillo, N Arechiga Ceballos, AK Rao, RM Wallace. 2022. JAVMA 260(10) 1157-1165. https://doi.org/10.2460/javma.22.03.0112
2. Wilson AG, Fehlner-Gardiner C, Wilson S, Pierce KN, McGregor GF, González C, et al. (2022) Assessing the extent and public health impact of bat predation by domestic animals using data from a rabies passive surveillance program. PLOS Glob Public Health 2(5): e0000357. https://doi.org/10.1371/journal.pgph.0000357
3. Rebellato S, Choi M, Gitelman J, Ratiu F, Magnusson K, Armstrong B, Fehlner-Gardiner C, McClinchey H, Tataryn J, Anderson MEC, Di Salvo P, Gardner C. Rabies in an imported dog, Ontario, 2021. Can Commun Dis Rep 2022;48(6):238–42. https://doi.org/10.14745/ccdr.v48i06a01

b) International conferences:

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33rd International Conference on Rabies in the Americas, Queretaro, Mexico Oct 23-27 2022
1. Collaborative Approaches to Enhance Rabies Surveillance in Canada - Thang C, Snodgrass M, Buchanan T, Nituch L, Gagnier M, Massé A, Blackmore J, Tataryn J, Iqbal Z., Fehlner-Gardiner C.
2. Viral cross species transmission and shifts from bats into mesocarnivores: the "Flagstaff Phenomenon". Rupprecht CE, Van Pelt L, Hastings L, Fehlner-Gardiner C, Orciari LA, Davis AD, Gilbert AT, Chipman RB, Bergman DL.

c) National conferences:

1
Thang C and Fehlner-Gardiner C. Outbreaks, imports, and business as usual - Rabies in Canada since 2018. PHAC Webinar – Zoonoses and Adaptation in a Changing World, September 22 2022.

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

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1. CFIA website: https://inspection.canada.ca/animal-health/terrestrial-animals/diseases/reportable/rabies/rabies-in-canada/eng/1356156989919/1356157139999
2. SIRVERA portal https://sirvera.panaftosa.org.br/Site/Inicio/Index?idl=3
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 WOAH 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 17025:2005		CFIA_ACIA-#18721592-v1-ISO_Accreditation_Certificate.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

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

Yes

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.

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

No

26. Did your laboratory collaborate with other WOAH 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 WOAH Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOAH Member Countries
Pilot project for development of a PT for the fluorescent antibody test	Organizer	2	America
Competency assessment of laboratory staff - interlaboratory comparison with CFIA Lethbridge Laboratory (fluorescent antibody test)	Organizer	2	America
Proficiency testing of laboratory staff - Wisconsin State Laboratory of Hygiene proficiency panels for rabies fluorescent antibody test	Participant		America

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Participation in RABLAB network meetings.	Five virtual and one in-person meeting at WOAH Headquarters.	Various topics, including: new dog serum reference standard, lateral flow devices, vaccine potency, imported dog cases, capacity building activities, availability of reagents and how to improve access, proficiency testing, Twinning projects, disease card.
Revision of Terrestrial code chapter on Rabies	Remote	Review of proposed changes to chapter (e.g. inclusion of lateral flow devices, nucleic acid vaccines, sampling methods); revision of wording for section on occipital foramem sampling.

29. Additional comments regarding your report: