# OIE Reference Laboratory Reports Activities

## *Activities in 2021*

### This report has been submitted : 2022-01-19 23:10:32

| | |
|---|---|
| **Name of disease (or topic) for which you are a designated OIE Reference Laboratory:** | Rabies |
| **Address of laboratory:** | 3851 Fallowfield Road P.O. Box 11300 Station H Nepean, Ontario K2H 8P9 CANADA |
| **Tel.:** | +1-343 212 03 04 |
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| **E-mail address:** | christine.fehlner-gardiner@inspection.gc.ca |
| **Website:** | https://merlin.cfia-acia.inspection.gc.ca/eng/1461783104818/1461783214246 |
| **Name (including Title) of Head of Laboratory (Responsible Official):** | Dr. Abed Harchaoui, DVM Executive Director, Ontario Laboratories Network |
| **Name (including Title and Position) of OIE Reference Expert:** | Christine Fehlner-Gardiner, PhD Head, Centre of Expertise for Rabies |
| **Which of the following defines your laboratory? Check all that apply:** | Governmental |

### *ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards*

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 OIE 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 |
| Fluorecent antibody test | Yes | 2446 | 0 |
| Cell culture isolation | Yes | 1 | 0 |
| RT-PCR | Yes | 1 | 0 |
| Variant typing by monoclonal antibody panel | Yes | 73 | 0 |
| Variant typing by genetic sequencing and phylogenetic analysis | Yes | 1 | 0 |

### *ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards.*
### *To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.*

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

| Type of reagent available | Related diagnostic test | Produced/ provide | Amount supplied nationally (ml, mg) | Amount supplied internationally (ml, mg) | No. of recipient OIE Member Countries | Region of recipients |
|---|---|---|---|---|---|---|
| polyclonal antibody - fluorescein conjugate (concentrate) | fluorescent antibody test; cell culture isolation | Produced and provided | 2 ml | 0 | 1 | ☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East |
| Inactivated positive control, for research | Direct, rapid immunohistochemical test | Produced and provided | 10 cc | 0 | 1 | ☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East |
| biotinylated monoclonal antibody, for research | Direct, rapid immunohistochemical test | Produced and provided | 0 | 1 ml | 1 | ☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East |
| monoclonal antibodies, hybridoma supernatant, for research | indirect, rapid immunohistochemical test | Produced and provided | 0 | 30 mL | 1 | ☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East |

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

## *ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases*

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

## *ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries*

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

No

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

| Name of the OIE Member Country receiving a technical consultancy | Purpose | How the advice was provided |
|---|---|---|
| UNITED STATES OF AMERICA | To consult on USDA-APHIS Wildlife Services National Rabies Management Plan | Review of planning documents and remote participation in online workshop |
| UNITED STATES OF AMERICA | To consult on USDA National Wildlife Research Center's (NWRC) Rabies Research Project Review | Review of research project report and remote participation in online workshop |
| COSTA RICA | To provide technical advice on the fluorescent antibody test | Provision of Spanish translation of the CFIA Standard Operating Procedure for FAT. |
| SIERRA LEONE | To provide technical advice on virus variant typing by discriminatory monoclonal antibody panels. | Provision of CFIA Standard Operating Procedure for antigenic variant typing by indirect immunofluorescence. |

## *ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations*

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries

other than the own?

No

## *ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases*

11. Did your Laboratory collect epizootiological data relevant to international disease control?

Yes

| If the answer is yes, please provide details of the data collected: |
| --- |
| Rabies case data for animals in Canada. These data were collected and provided to the OIE, WHO/PAHO, and to CFIA official veterinarians for the purpose of preparation of export documentation. Data also provided to Public Health Agency of Canada for purpose of International Health Regulations notices. |

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

| If the answer is yes, please provide details of the data collected: |
| --- |
| Rabies case data for animals in Canada. |

**13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)**

a) Articles published in peer-reviewed journals: 3
Elmore SA, Fehlner-Gardiner C, Bouchard É, Samelius G, Alisauskas RT, Huyvaert KP, Chipman RB, Jenkins EJ, Gilbert AT. Evidence of Arctic Fox Survival following Exposure to Rabies Virus. J Wildl Dis. 2021 Nov 23. doi: 10.7589/JWD-D-21-00071. Epub ahead of print. PMID: 34814183.

Simon A, Beauchamp G, Bélanger D, Bouchard C, Fehlner-Gardiner C, Lecomte N, Rees E, Leighton PA. Ecology of Arctic rabies: 60 years of disease surveillance in the warming climate of northern Canada. Zoonoses Public Health. 2021 Sep;68(6):601-608. doi: 10.1111/zph.12848. Epub 2021 May 13. PMID: 33987941.

Ma X, Monroe BP, Wallace RM, Orciari LA, Gigante CM, Kirby JD, Chipman RB, Fehlner-Gardiner C, Cedillo VG, Petersen BW, Olson V, Bonwitt J. Rabies surveillance in the United States during 2019. J Am Vet Med Assoc. 2021 Jun 1;258(11):1205-1220. doi: 10.2460/javma.258.11.1205. PMID: 33978439.

b) International conferences: 0

c) National conferences: 0

d) Other:
(Provide website address or link to appropriate information) 3
https://inspection.canada.ca/animal-health/terrestrial-animals/diseases/reportable/rabies/rabies-cases-in-canada-

2021/eng/1613407237949/1613407238418

https://search.open.canada.ca/en/od/?sort=last_modified_tdt%20desc&page=1&search_text=&od-search-orgs=Canadian%20Food%20Inspection%20Agency&od-search-portal=Open%20Data

https://sirvera.panaftosa.org.br/Site/Inicio/Index?idl=3

## *ToR 7: To provide scientific and technical training for personnel from OIE Member Countries*
## *To recommend the prescribed and alternative tests or vaccines as OIE Standards*

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

No

## *ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned*

15. Does your laboratory have a Quality Management System?

Yes

| Quality management system adopted | Certificate scan (PDF, JPG, PNG format) |
|---|---|
| ISO/IEC 17025 | Accreditation Certificate.pdf |

16. Is your quality management system accredited?

Yes

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

17. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?

Yes

*(See Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4)*

### *ToR 9: To organise and participate in scientific meetings on behalf of the OIE*

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

No

### *ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results*

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

No

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

No

### *ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results*

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

*Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing see point 1.3*

| Purpose for inter-laboratory test comparisons[1] | No. participating laboratories | Region(s) of participating OIE Member Countries |
|---|---|---|
| Proficiency testing of laboratory staff - panel exchange with CFIA Lethbridge Laboratory (fluorescent antibody test) | 2 | ☐Africa<br>☒Americas<br>☐Asia and Pacific<br>☐Europe<br>☐Middle East |
| Participated in Wisconsin State Laboratory of Hygiene proficiency panels for rabies fluorescent antibody test | unknown | ☐Africa<br>☒Americas<br>☐Asia and Pacific<br>☐Europe<br>☐Middle East |

## *ToR 12: To place expert consultants at the disposal of the OIE*

24. Did your laboratory place expert consultants at the disposal of the OIE?

Yes

| Kind of consultancy | Location | Subject (facultative) |
|---|---|---|
| Participation in three meetings of the newly launched OIE rabies reference laboratory network (RABLB) | Remote | Discussion of aims and objectives for the network, identification of main activities, co-ordination and administrative issues, research needs, contributions to the United Against Rabies (UAR) forum; Critical review of proposed changes to Terrestrial Code Rabies Chapter re. reduction of import waiting periods. |
| Critical review of draft of new section for rabies chapter of Terrestrial Code | Remote | Review and comment on proposed addition to Rabies (Chapter 8.14): Control of wildlife-mediated rabies. |

25. Additional comments regarding your report:

Explanation for certain activities that were not carried out this year: ToR4 - The laboratory is willing and able to perform diagnostic testing for Member Countries but no requests were received in 2021. Similarly, no requests were received from the OIE to organize scientific meetings or attend meetings on behalf of the OIE (ToR9).