

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-18 06:37:40

| | |
|--|---|
| Name of disease (or topic) for which you are a designated OIE Reference Laboratory: | Chronic wasting disease |
| Address of laboratory: | 177, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, 39660 KOREA (REP. OF) |
| Tel.: | +82-54 912 0862 |
| Fax: | +82-54 912 0884 |
| E-mail address: | shonhj@korea.kr |
| Website: | |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Bong Kyun Park Commissioner, Animal and Plant Quarantine Agency |
| Name (including Title and Position) of OIE Reference Expert: | Hyun-Joo Sohn |
| 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 | |
|---------------------------|----------------------------------|--|-----------------|
| | | Nationally | Internationally |
| Indirect diagnostic tests | | | |
| PRNP genotype | No | 100 | 0 |
| RT-QUIC | No | 39 | 0 |
| Direct diagnostic tests | | | |
| PrP ELISA | Yes | 14,327 | 0 |
| PrP Western blotting | Yes | 312 | 0 |
| PrP Immunohistochemistry | Yes | 312 | 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?

No

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 | Information of control measures of CWD in Korea | E-mail |

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?

Yes

| Title of the study | Duration | Purpose of the study | Partners (Institutions) | OIE Member Countries involved other than your country |
|--|----------|---|--|---|
| Interspecies transmission of CWD | on going | Characterized Transmission studies include sika deer inoculation studies | Canadian food Inspection Agency | CANADA |
| Characterizing CWD agents of Korea, Norway and North America using mouse model | on going | To compare the pathogenesis and transmission of Korea, Norway and North America CWD cases | Colorado state University, Prion Research Center | UNITED STATES OF AMERICA |

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: |
| canada outbreak situation |

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

No

| |
|---|
| If the answer is no, please provide a brief explanation of the situation: |
| Canadian outbreaks and quarantine countermeasures are posted on the website. This is a matter that can be shared at any time and does not need to be distributed in our laboratory. |

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: 4

1. In-Soon Roh · Yong-Chan Kim · Hyo-Jin Kim · Sae-Young Won · Min-Ju Jeong · Hae-Eun Kang · Hyun-Joo Sohn · Byung-Hoon Jeong Identification of the prion-related protein gene (PRNT) sequences in various species of the Cervidae family Molecular Biology Reports. 2020 47:6155-6164.
2. Hyo-Jin Kim, Ji-Yong Hwang, Kyung-Je Park, Hoo-Chang Park, Hae-Eun Kang, Jongsun Park & Hyun-Joo Sohn The first complete mitogenome of Cervus canadensis nannodes (Merriam, 1905) MITOCHONDRIAL DNA PART B 2020, VOL. 5, NO. 3, 2294-2296
3. Hyo-Jin Kim, Ji-Yong Hwang, Kyung-Je Park, Hoo-Chang Park, Hae-Eun Kang, Jongsun Park & Hyun-Joo Sohn The complete mitochondrial genome of Cervus canadensis (Erxleben, 1777), as a model species of Chronic Wasting Disease (CWD) MITOCHONDRIAL DNA PART B 2020, VOL. 5, NO. 3, 2621-2623

4. Hyun-Joo Sohn , Gordon Mitchell , Yoon Hee Lee , Hyo Jin Kim , KyungJe Park , Antanas Staskevicius , Ines Walther , Andrei Soutyrine & Aru Balachandran, Experimental oral transmission of CWD to sika deer(Cervus nippon) PRION 2020, VOL. 14, NO. 1, 271-277

b) International conferences: 4

1. Kim HJ, Ahn SB, Park KJ, Hwang JY, Park HC, Kang HE, Sohn HJ, The biological characteristics of L-BSE persistently cell line in Tg (BoPrP) mice, International Union of Microbiological Societies 2020 16-20 Nov 2020, Daejeon, Korea

2. Park KJ, Ahn SB, Hwang JY, Park HC, Kang HE, Sohn HJ, In vitro amplification of TSE Prions in Tg (BoPrP) mice substrate, International Union of Microbiological Societies 2020 16-20 Nov 2020, Daejeon, Korea

3. Sohn HJ, Park KJ, Gordon Mitchell, Hwang JY, Park HC, Kang HE Distribution of PrPCWD in tissues of CWD infected sika deer analyzed by RT-QUIC International Union of Microbiological Societies 2020 16-20 Nov 2020, Daejeon, Korea

4. Park KJ, Kim HJ, Hwang JY, Park HC, Kang HE, Sohn HJ, The monitoring of cervid farm soil for controlling the risk of CWD using PMCAb, International Union of Microbiological Societies 2020 16-20 Nov 2020, Daejeon, Korea

c) National conferences: 2

1. Park KJ, Kim HJ, JY Hwang, Park HC, Glenn Telling, Kang HE, Sohn HJ, Infection of CWD Prions in CWD susceptible cell line(Elk21-), The Korean Society of Veterinary Science 25 Nov 2020

2. Park HC, Park KJ, Kim HJ, JY Hwang, Kang HE, Sohn HJ, Hematological and biochemical values of farmed elk(Cervus canadensis) The Korean Society of Veterinary Science 25 Nov 2020

d) Other:

(Provide website address or link to appropriate information) 0

**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/IEC17025 | KOLAS ISOIEC 17025.pdf |

16. Is your quality management system accredited?

Yes

| Test for which your laboratory is accredited | Accreditation body |
|--|--|
| PrP Western blot | KOLAS-Korea Laboratory Accrediation Scheme |
| Rapid test | KOLAS-KOrea Laboratory Accrediation Scheme |

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?

Yes

| Title of the project or contract | Scope | Name(s) of relevant OIE Reference Laboratories |
|---|---|--|
| Investigating cross-species transmission of CWD | Charaterizing transmission of Korean and Canadian CWD isolate | CFIA, Canada |

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 |
|--|--------------------------------|---|
| National Proficiency test of TSE rapid test | 18 | <input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> 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?

No

25. Additional comments regarding your report: