

# OIE Reference Laboratory Reports Activities

## *Activities in 2019*

**This report has been submitted : 2020-01-14 07:33:54**

|  |  |
|--|--|
| <b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b> | Chronic wasting disease  |
| <b>Address of laboratory:</b>  | 177, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, 39660 KOREA (REP. OF) |
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| <b>Website:</b>  |  |
| <b>Name (including Title) of Head of Laboratory (Responsible Official):</b>                | Park, BongKyun, commissioner, Animal and Plant Quarantine Agency         |
| <b>Name (including Title and Position) of OIE Reference Expert:</b>                        | Hyun-Joo Sohn, Head of CWD OIE Reference Laboratory                      |
| <b>Which of the following defines your laboratory? Check all that apply:</b>               | 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 |                                  | Nationally                               | Internationally |
| PRNP Genotype             | No                               | 100                                      | 0               |
| Direct diagnostic tests   |                                  | Nationally                               | Internationally |
| PrP ELISA                 | Yes                              | 14784                                    | 0               |
| PrP Western blotting      | Yes                              | 457                                      | 0               |
| PrP Immunohistochemistry  | Yes                              | 457                                      | 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 on decontamination methods of CWD | E-mail                      |
| JAPAN  | Control measures of CWD                       | in loco                     |

**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 |
|---|----------|--|---|---|
| Investigation cross-species transmission of CWD | on going | Charaterized transmission of Korean and Canadian CWD isolates                          | Canadian Food Inspection Agency                 | CANADA  |
| Charaterizinf CWD agents                        | on going | 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: |
|---|
| No of CWD cases in Canada   |

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:                   |
|---|
| Surveillance activity has been continued since 2001. so far we had 161 CWD positive animals |

**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: 1

Sohn HJ, Park KJ, Roh IS, Kim HJ, Park HC, Kang HE Sodium hydroxide treatment effectively inhibits PrPCWD replication in farm soil. Prion 13:1, 137-140

b) International conferences: 4

1. Park KJ, Park HC, Roh IS, Kim HJ, Kang HE, Sohn HJ Establishment of PrPCWD extraction and detection methods in the farm soil. Prion 2019, 18 May 2019

2. Sohn HJ, Park KJ, Roh IS, Kim HJ, Kang HE PrPCWD detection in CWD-infected Tg ELK mice model using RT-QUIC. Prion 2019, 18 May 2019

3. Ahn SB, Kim HJ, Bian Jifeng, Roh IS, Kang HE, Sohn HJ Cell assay detection of chronic wasting disease (CWD) prion infectivity. Prion 2019, 18 May 2019

4. Kim HJ, Ahn SB, Roh IS, Park KJ, Kang HE, Sohn HJ Application of the TSE-infected cell anf RT-QUIC assay to discover novel natural products. Prion 2019, 18 May 2019

c) National conferences: 9

1. Sohn HJ, Park KJ, Roh IS, Kim HJ, Ahn SB, Park HC, Kang HE RT-QUIC detection in brain of TSE infected animal. The Korean society of Veterinary Science 25 April 2019
2. Sohn HJ, Roh IS, Kim HJ, Park KJ, Park HC, Ahn SB, Kang HE Distribution of PrPCWD in obex and RPLN from CWD affected cervid. The Korean society of Veterinary Science 25 April 2019
3. Roh IS, Kim HJ, Kang HE, Sohn HJ Surveillance for CWD in Korean wild deer. The Korean society of Veterinary Science 25 April 2019
4. Sohn HJ, Park KJ, Roh IS, Kim HJ, Park HC, Kang HE RT-QUIC detection of PrPCWD in CSF of CWD infected cervid. The Korean preventive society of Veterinary Science 25 April 2019
5. Park KJ, Roh IS, Kim HJ, Hwang JY, Ahn SB, Park HC, Telling Glenn, Kang HE, In vitro Amplification of CWD prions in PrPC substrate with differences at residue 226 The Korean society for biomedical Laboratory science 25 Oct 2019
6. Ahn SB, Kim HJ, Park KJ, Park HC, Hwang JY, Kang HE, Sohn HJ Experimental transmission of L-type BSE and M2LB to bovinized transgenic mice and VM mice The Korean society for biomedical Laboratory science 25 Oct 2019
7. Ahn SB, Kim HJ, Park KJ, Park HC, Hwang JY, Kang HE, Sohn HJ Inhibition of CWD in prion persistent cell using RT-QUIC The Korean society for biomedical Laboratory science 25 Oct 2019
8. Sohn HJ, Roh IS, Kim HJ, Park KJ, Hwang JY, Park HC, Kang HE Evaluation of RT-QUIC for diagnosis of CWD Asia Pacific Consortium of Gene and Cell Therapy 2019 7 Nov 2019
9. Kim HJ, Ahn SB, Park KJ, Kang HE, Sohn HJ Hematological analysis of farmed elk(*Cervus elaphus nelson*) in Korea The Korean society for biomedical Laboratory science 25 Oct 2019

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?

Yes

- a) Technical visits: 3  
 b) Seminars: 8  
 c) Hands-on training courses: 8  
 d) Internships (>1 month): 0

| Type of technical training provided (a, b, c or d) | Country of origin of the expert(s) provided with training | No. participants from the corresponding country |
|--|---|---|
| b, c   | Philippines   | 2   |
| b,c  | Malaysia  | 2   |
| b,c  | Mongolia  | 2   |
| b,c  | Kazakhstan  | 2   |
| a  | Japan   | 3   |

**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 Sceme  |
| 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?

Yes

| Purpose of the proficiency tests: <sup>1</sup> | Role of your Reference Laboratory (organiser/participant) | No. participants | Participating OIE Ref. Labs/organising OIE Ref. Lab. |
|--|---|------------------|--|
| Scrapie Rapid Tissue Test                      | participant   | 12               | UK APAH VETQAS                                       |

<sup>1</sup> validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

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 Canadain 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 <sup>1</sup> | No. participating laboratories | Region(s) of participating OIE Member Countries   |
|--|--------------------------------|---|
| National Proficiency test of TSE rapid test                | 19                             | <input type="checkbox"/> Africa<br><input type="checkbox"/> Americas<br><input checked="" type="checkbox"/> Asia and Pacific<br><input type="checkbox"/> Europe<br><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: