

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-19 08:30:45

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Chronic wasting disease
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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	No	332	0
RT-QUIC	No	99	0
Direct diagnostic tests			
PrP ELISA	Yes	12,789	0
PrP Western blot	Yes	756	0
PrP immunohistochemistry	Yes	756	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
VIETNAM	Information of current TSE diagnostic methods	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 control measures 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: 2

1. Yong-Chan Kim · Kyung-Je Park · Ji-Yong Hwang · Hoo Chang Park · Hae-Eun Kang · Hyun-Joo Sohn · Byung-Hoon Jeong In-depth examination of PrP^{Sc} in Holstein cattle carrying the E211K somatic mutation of the bovine prion protein gene (PRNP). *Transboundary and Emerging Diseases* 2021 10.1111/tbed.14309.
2. In-Soon Roh, Yong-Chan Kim, Hyo-Jin Kim, Sae-Young Won, Min-Ju Jeong, Ji-Yong Hwang, Hae-Eun Kang, Hyun-Joo Sohn, Byung-Hoon Jeong Polymorphisms of the prion-related protein gene are strongly associated with cervids' susceptibility to chronic wasting Vet Record 2021 10.1002/vetr.940 2296

b) International conferences: 0

c) National conferences: 6

1. Sohn HJ, Park KJ, Park HC, Su-Bi Ahn, Kang HE The late pre-symptomatic detection of PrPCWD in ear skin from CWD affected Cervid, The Korean Society of Veterinary Science 61(1) 27 May 2021
2. Sohn HJ, Park KJ, Park HC, Hwang JY, Roh IS, Kang HE The Experimental transmission of chronic wasting disease agent from sika deer to Tg (Bov) mice by intracranial route, The Korean Society of Veterinary Science 61(1) 27 May 2021
3. Sohn HJ, Park KJ, Park HC, Lee YR, Kang HE, Seong Soo A. An, Jongsun Park Whole genome sequencing analysis of CWD affected elk The Korean Society of Veterinary Science 61(3) 28 Oct 2021
4. Park HC, Park KJ, Kang HE, Sohn HJ, RT-QuIC detection in urine of CWD infected gene-targeted (GtQ226) mice The Korean Society of Veterinary Science 61(3) 28 Oct 2021
5. Park KJ, Park HC, JY Hwang, Lee YR, Kang HE, Sohn HJ, W in vitro detection of chronic wasting disease in male reproductive tissues of VM/Dk. The Korean Society of Veterinary Science 61(3) 28 Oct 2021
6. Park HC, Park KJ, JY Hwang, Lee YR, Kang HE, Sohn HJ, R Biological characterization of Korean chronic wasting disease in genetic modification mice depending on residue 226 of cervid PrP The Korean Society of Veterinary Pathology 5 Nov 2021

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: 0
 b) Seminars: 35
 c) Hands-on training courses: 0
 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	Vietnam	9
b	Indonesia	8
b	Malaysia	9
b	Philippines	3
b	Sri Lanka	1
b	Kazakhstan	5

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	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 Accreditation Scheme
Rapid test	KOLAS-Korea Laboratory Accreditation 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
International Proficiency test of TSE rapid test	13	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
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: