

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-11 06:29:33

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Rabies
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Name (including Title) of Head of Laboratory (Responsible Official):	Bong-Kyun Park (commissioner of Animal and Plant Quarantine Agency: APQA)
Name (including Title and Position) of OIE Reference Expert:	Dong-Kun Yang (Senior scientist of Animal and Plant Quarantine Agency: APQA)
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		Nationally	Internationally
Virus neutralization test	Yes	160	0
Direct diagnostic tests		Nationally	Internationally
Direct fluorescence assay	Yes	4	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
Positive control	FAT	provide	0	50	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> 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?

Yes

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

No

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
Rabies differential multiplex RT-PCR	My lab established a multiplex RT-PCR for the differentiation between rabies virus with or without mutation at position 333 of glycoprotein and published it to Journal, JVS.(Establishment of multiplex RT-PCR for differentiation between rabies virus with and that without mutation at position 333 of glycoprotein. JVS, 2020, 21(2), e22)

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
MALAYSIA	Control of rabies	Sharing information with 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?

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:
We investigated seroprevalence of rabies in wild boars, which considered the main competitor against raccoon dog for the bait vaccine in Korea. While the 39 of 470 wild boars (8.3%) were seropositive in non-bait vaccine-distributed area, 20 of 109 wild boars (18.3%) were seropositive in bait vaccine-distributed area. Additional information can be obtained from the following published paper: Kim HH, Yang DK, Wang J, An DJ. The presence of rabies virus neutralizing antibody in wild boars (sus scrofa), a non-target bait vaccine animal in Korea. Vet Sci, 2020. 8.

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:
As mentioned above, we analyzed the collected sero-prevalence data of Korea and published as follows; Kim HH, Yang DK, Wang J, An DJ. The presence of rabies virus neutralizing antibody in wild boars (sus scrofa), a non-target bait vaccine animal in Korea. Vet Sci, 2020. 8.

**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

Establishment of multiplex RT-PCR for differentiation between rabies virus with and that without mutation at position 333 of glycoprotein. JVS, 2020, 21(2), e22

The Presence of Rabies Virus-Neutralizing Antibody in Wild Boars (*Sus scrofa*), a Non-Target Bait Vaccine Animal in Korea. Vet. Sci, 2020, 7, 90

Role of Oral Rabies Vaccines in the Elimination of Dog-mediated Human Rabies Deaths. Emerg Infect Dis, 2020, 26(12), e201266

b) International conferences: 0

c) National conferences: 2

Construction of recombinant rabies virus expressing green fluorescent protein, KSVP, 30 Oct 2020.

Establishment and evaluation of fluorescent antibody viral neutralization test with recombinant ERAGS expressing green fluorescent protein using dog sera, KSVS, 19-20 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?

Yes

a) Technical visits: 0

b) Seminars: 0

c) Hands-on training courses: 4

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
c	Malaysia	2
c	Kazakhstan	2
c	Philippines	2
c	Mongolia	2

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)
KOLAS ISO/IEC 17025	20201020 KOLAS □□□□.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
DFA	KOLAS
PCR	KOLAS
FAVN	KOLAS
ELISA	KOLAS

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
inter-laboratory proficiency test for quality control of fluorescent antibody virus neutralization (FAVN) test	4	<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:

In 2020, it was difficult to visit and invite personnel from OIE member countries due to pandemic situation of COVID-19. We actually planned to invite Dr. Satoshi Inoue (director of National Institute of Infectious Diseases from Japan) in this year, but was inevitably canceled.