

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-11 06:37:07

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Japanese encephalitis
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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	1323	0
Direct diagnostic tests		Nationally	Internationally
PCR	Yes	157	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
Negative control	HI	Provide	0	10	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?

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
CHINA (PEOPLE'S REP. OF)	Sharing recent information of Japanese encephalitis to HongKong	E-mail
MYANMAR	Sharing information related to serosurveillance of Japanese encephalitis in pigs	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:

To control Japanese encephalitis, the seroprevalence of horses was investigated every year in Korea. In 2020, we conducted virus neutralization test on 1,323 horse sera collected from 17 cities and provinces across the country. Considered that most of domestic horses housed for racing were regularly vaccinated with inactivated vaccine, the overall positive rate (82.4%, 1,090 of 1,323) was likely to be affected by vaccination. Of the 1,090 horses, 56 horses showed high neutralizing antibody titers (> 1:256), which were suspected of wild-type virus infection.

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:

In Korea, the dominant Japanese encephalitis virus genotype has shifted from G3 to G1 since 1990, but G3 strain (Anyang 300) has been used as inactivated vaccine in horses for almost 40 years. The mean titer of virus-neutralizing antibodies against G1 (KV1899) and G3 (Anyang 300) genotype were identified in horses immunized with G3 vaccine. Overall sero-positivity did not significantly differ between genotypes, but geometric mean titers of neutralizing antibody were significantly differed among genotypes. Additional information can be obtained from the following published paper: Genotype-specific neutralizing antibody titers against Japanese encephalitis virus genotypes 1 and 3 in horse immunized with a genotype 3 vaccine. CEVR, 2020, 9, 102-107

**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
Genotype-specific neutralizing antibody titers against Japanese encephalitis virus genotypes 1 and 3 in horse immunized with a genotype 3 vaccine. CEVR, 2020, 9, 102-107
- b) International conferences: 0
- c) National conferences: 0
- 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	3
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
VN test	KOLAS
HI test	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?

Not applicable (Only OIE Reference Lab. designated for disease)

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?

Not applicable (Only OIE Reference Lab. designated for disease)

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?

Not applicable (Only OIE Reference Lab. designated for disease)

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?

No

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

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 visit Agriculture, Fisheries and Conservation Department (AFCD) in Hong Kong in this year, but was inevitably canceled.