

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-11 01:05:54

| | |
|--|--|
| Name of disease (or topic) for which you are a designated OIE Reference Laboratory: | Rabies |
| Address of laboratory: | 177 Hyeoksin 8-ro Gimcheong-si Gyeongsangbuk-do 39660 KOREA (REP. OF) |
| Tel.: | +82 54 912 0785 |
| Fax: | +82 54 912 0812 |
| E-mail address: | yangdk@korea.kr |
| Website: | |
| Name (including Title) of Head of Laboratory (Responsible Official): | BongKyun 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 | 32 | 0 |
| Direct diagnostic tests | | Nationally | Internationally |
| Directed fluorescence assay | Yes | 2 | 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 | 45 | 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?

Yes

| Name of the new test or diagnostic method or vaccine developed | Description and References (Publication, website, etc.) |
|--|---|
| Improve FAVN test with ERAGS-GFP virus by replacng CVS11 | J Vet Sci. 2021; Jul 22(4):e56. |
| Inactivated rabies vaccine using ERAGS strain | Clin Exp Vaccine Res. 2021; 10; 141-147. |

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 |
|--|----------------------|--|
| JAPAN | prevention of rabies | sharing my published paper related to rabies vaccine 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?

No

| If the answer is no, please provide a brief explanation of the situation: |
|---|
| Mass vaccination including parental inoculation and oral bait vaccine has led to the elimination of rabies since 2014 in South Korea. |

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: |
|---|
| When it comes to serological data, my lab has been accumulated and analyzed. So, the data are going to release in 2022. |

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

Generation of a recombinant rabies virus expressing green fluorescent protein for a virus neutralization antibody assay. J Vet Sci. 2021, 22(4), e56.

Immunogenicity of an inactivated rabies vaccine for animals derived from the recombinant ERAGS strain. Clin Exp Vaccine Res. 2021. 10, 141-147

Rabies virus glycoprotein produced in *Nicotiana benthamiana* is an immunogenic antigen in mice. Czech J Genetics and plant breeding. 2021(1), 57, 26-35.

b) International conferences: 0

c) National conferences: 4

Development of inactivated rabies vaccine (Daesung Ltd company)

Diagnostic tools of rabies and prevention (Chungnam University)

Serological test of rabies (Greencross)

Development of oral rabies bait vaccine for wild animals (ChoongAng Ltd company)

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: 1

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 | Malaysia | 9 |
| b | Kazakhstan | 5 |
| b | Philippines | 3 |
| b | Sri Lanka | 1 |
| b | Viet Nam | 9 |
| b | Indonesia | 8 |

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 |
| RT-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?

Yes

| Title of event | Date (mm/yy) | Location | Role (speaker, presenting poster, short communications) | Title of the work presented |
|---|--------------|----------|---|------------------------------------|
| The 3rd OIE regional meeting for OIE reference center in Asia and thd pacific | 02/21 | Japan | Short communicatin | introduction of rabies lab On line |

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 |
|----------------------------------|-------------------------------|--|
| RABLAB zoom meeting | Eradicate dog-mediated rabies | whole reference labs for rabies worldwide |

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 |
|--|--------------------------------|---|
| preparation for serological proficiency 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:

As you may know, it was hard to visit or invite personnel from OIE member countries due to pandemic situation of COVID-19 in 2021. We actually had plans to take part in international conference, RITA conference, but we did not involved in it.

When it comes to rabies vaccine, 5 Korean biologic companies have been produced rabies vaccines and provided it to vet clinic. So, my lab has focused on development of new rabies vaccine.