WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 11 juin 2024 08:06

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Newcastle disease
Address of laboratory:	Animal and Plant Quarantine Agency (APQA) Ministry of Agriculture, Food and Rural Affairs (MAFRA), 177, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, 39660 KOREA (REP. OF)
Tel.:	+82-54 912 0817
E-mail address:	jiyekim@korea.kr
Website:	http://www.qia.go.kr
Name (including Title) of Head of Laboratory (Responsible Official):	Jung-hee Kim, Commissioner, APQA
Name (including Title and Position) of WOAH Reference Expert:	Ji-Ye Kim, DVM, Ph.D Veterinary Researcher, Newcastle disease Laboratory, Avian Disease division, Animal and Plant Quarantine Agency (APQA)
Which of the following defines your laboratory? Check all that apply:	Governmental

TOR1: DIAGNOSTIC METHODS

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 WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Hemagglutination inhibition test		1076	0
Direct diagnostic tests		Nationally	Internationally
Virus detection and isolation (RT-PCR, egg inoculation)		2973	16

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOAH MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
control positive antigen and antiserum	Hemagglutination inhibition	test provide	117ml(11,700dose)	0	1	KOREA (REP. OF),

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAH Members?

Not applicable

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
LAMP	The Development of Novel Reverse Transcription Loop-Mediated Isothermal Amplification Assays for the Detection and Differentiation of Virulent Newcastle Disease Virus. Song et al., Int J Mol Sci. 2023 Sep 8;24(18):13847. doi: 10.3390/ijms241813847.
Primers for rRT-PCR based detection and quantitation of pathogenic and non-pathogenic Newcastle disease virus and its use	Patent application no. Kr-10-2023-0018740)

7. Did your laboratory validate diagnostic methods according to WOAH Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAH Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAH Members?

Yes

NAME OF WOAH MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
VIETNAM	2023-06-12	Real-time RT-PCR Conventional RT-PCR	16	16

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAH Member?

Yes

NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
VIETNAM	differentiation between avirulent and virulent strain (RT-PCR)	manual(paper) by e-mail

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAH Members other than the own?

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
The molecular epidemiology of Newcastle disease, infectious bronchitis and infectious bursal disease in Vietnam	2023-2025 (3 years)	To extend the understanding of epidemiology of the poultry diseases in Southeast Asia	Vietnam National Agriculture University (VNUA)	VIETNAM

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?

No

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

1. We have a system, Korea animal Health Integrated System(KAHIS). By this system, we collect the farm information including owner's name, the number of animal and so on. It also collects the movement of vehicles related to farms by GPS.

2. Molecular epidemiology of Newcastle disease in Vietnam

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:
1. Characterization of Newcastle disease viruses currently circulating in Vietnam

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

1
Song HS et al., The Development of Novel Reverse Transcription Loop-Mediated Isothermal Amplification Assays for the Detection and Differentiation of Virulent Newcastle Disease Virus. Int J Mol Sci(2023)

b) International conferences:

1
WOHA Regional Workshop on Avian Diseases Prevention and Control in Asian and the Pacific Region (2023.8.30, China)
"Surveillance program of Newcastle disease in Korea"

c) National conferences:

3
1. Development of a reverse transcription loop-mediated isothermal amplification assay for rapid detection of Newcastle disease virus (2023.10.31) Korean society for molecular and cellular biology
2. Molecular characteristics of Newcastle disease virus and infectious bronchitis virus in Asia (2023.10.31) Korean society for molecular and cellular biology
3. Characterization of Newcastle disease viruses currently circulating in Vietnam (2023.11.17) Korean poultry science

d) Other (Provide website address or link to appropriate information):

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?

Yes

a) Technical visit : 0

b) Seminars : 5

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	2
B	PHILIPPINES	3

B	SRI LANKA	2
B	KAZAKHSTAN	2
B	VIETNAM	3

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025	certificate(PDF)	20230316_KT1100_Animal_and_Plant_Quarantine_Agency_PM_Eng.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Identification of the agent(molecular techniques)	KOLAS-Korean laboratory accreditation scheme
serologic test(HA, HI)	KOLAS-Korean laboratory accreditation scheme

20. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?

Yes

A national bio-risk management is designated to prevent disease among personnel and to protect the community from harm by preventing the release of infectious pathogen.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAH?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
2nd Workshop for the WOAH avian disease network in east Asia	2023-06-08	online(zoom)	participants	
WOAH regional workshop for Avian disease prevention and control in Asia and the Pacific	2023-08-30	Qingdao(China)	Speaker	Introduction of surveillance program for Newcastle disease, Republic of Korea

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOAH Reference Laboratories designated for the same pathogen or disease?

Yes

24. Do you network (collaborate or share information) with other WOAH Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS
WOAH-RRAP	participant	50	CAHEC(China), CSIRO(Austrailia)

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.

AI/ND proficiency test program	participant	Information available IZSVe	IZSVe (Italia AI/ND reference laboratory)

26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen?

No

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAH?

No

29. Additional comments regarding your report:

No