

# WOAH Reference Laboratory Reports Activities 2025

This report has been submitted: 9 mars 2026 09:45

## LABORATORY INFORMATION

<b>*Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:</b>	Newcastle disease
<b>*Address of laboratory:</b>	No.369 Nanjing Road, Qingdao, P.R. China
<b>*Tel:</b>	+8653285623396
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<b>Website:</b>	www.cahec.cn
<b>*Name (including Title) of Head of Laboratory (Responsible Official):</b>	Hualei Liu, Prof., Director of Avian Disease Surveillance Laboratory, China Animal Health and Epidemiology Center
<b>*Name (including Title and Position) of WOAHO Reference Expert:</b>	Hualei Liu, Prof., Director of Avian Disease Surveillance Laboratory, China Animal Health and Epidemiology Center
<b>*Which of the following defines your laboratory? Check all that apply:</b>	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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
HI	Yes	246	0
Direct diagnostic tests			
Virus isolation	Yes	16102	0
RT-PCR	Yes	16102	0
ICPI	Yes	6	0
Real-time RT-PCR	Yes	270	0
NDV genetic analysis by sequencing	Yes	638	0

## TOR2: REFERENCE MATERIAL

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

No

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

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAHO Member Countries	Country of recipients
NDV RNA	Real-time RT-PCR	Provide	1 mL	0	1	CHINA (PEOPLE'S REP.

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NDV F gene plasmid	Real-time RT-PCR	Provide	2mL	0	1	OF), CHINA (PEOPLE'S REP. OF),
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4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAHO Members?

## TOR3: NEW PROCEDURES

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

Yes

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

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
Real-time RT-PCR for virulent NDV	Validation of real-time RT-PCR method using NDVs isolated in 2025 (unpublished)
RT-RAA-LFD for genotype VI NDV	Detection of genotype VI NDV (unpublished)
Quadruple real-time RT-PCR for virulent and avirulent NDVs	A multiplex RT-PCR assay for differentiation of virulent and avirulent NDVs (Patent application number: 202510279449.4)
Triple real-time RT-PCR for NDV, AIV and IBV	A triplex real-time RT-PCR assay for detection of avian respiratory viruses (Patent application number: 202511307659.6)

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

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

## TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOAHO Member Country receiving a technical consultancy	Purpose	How the advice was provided
CHINA (PEOPLE'S REP. OF)	Consultation on real-time RT-PCR method for NDVs	Wechat
SRI LANKA	Consultation on HI test	WOAHO Regional Hands-on Trainings on ND held in Qingdao
TAJIKISTAN	Response on detection on infectious diseases in birds	E-mail

## TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

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:

Collection and analysis of Newcastle disease global distribution and the prevalent genotypes (WAHIS, GenBank, Published research papers).

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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:

Epidemiological data had been disseminated via international/national meetings and peer-reviewed papers.

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:

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- [1] Ding Y, Wang H, Chen L, et al. Genomic characterization of Newcastle disease virus genotype XII in China. *China animal health inspection*, 2025, 42(4): 1-7.
- [2] Guo T, Wang H, Wang J, et al. Research progress on virus-like particles-based vaccines and their application in the prevention and control of avian diseases. *China animal health inspection*, 2025, 42(8): 86-93.
- [3] Wang J, Ke J, Wang H, et al. Development of a universal fluorescent RT-PCR assay for Newcastle disease virus. *China animal health inspection*, 2025, 42(11): 83-88.

b) International conferences:

3

- [1] 4th Online meeting for the WOAHA avian disease network in East Asia, May 19, 2025.
- [2] Regional workshop on avian disease prevention and control for Asia and the Pacific, August 26-28, 2025.
- [3] Poster on 34th WOAHA regional conference for Asia and the Pacific, September 22-25, 2025

c) National conferences:

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- [1] National Epidemiological Investigation Meeting. Qingdao, March 11-12, 2025.
- [2] National Training on Prevention and Control of Avian Disease. Wuhan, June 25-27, 2025.
- [3] The Epidemic Analysis Meeting for Major Avian Disease. Guangzhou, September 18-19, 2025.

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 WOAHA Members?

Yes

a) Technical visit : 0

b) Seminars : 7

c) Hands-on training courses: 7

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	BANGLADESH	1
B	INDONESIA	1
B	MALAYSIA	1
B	MONGOLIA	1

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B	PAPUA NEW GUINEA	1
B	SRI LANKA	1
B	VANUATU	1
C	BANGLADESH	1
C	INDONESIA	1
C	MALAYSIA	1
C	MONGOLIA	1
C	PAPUA NEW GUINEA	1
C	SRI LANKA	1
C	VANUATU	1

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025	JPG	17025 2022-2028.jpg

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
HA and HI	China National Accreditation Service for Conformity Assessment (ilac-MRA, APLAC-MRA)
RT-PCR	China National Accreditation Service for Conformity Assessment (ilac-MRA, APLAC-MRA)
Real-time RT-PCR	China National Accreditation Service for Conformity Assessment (ilac-MRA, APLAC-MRA)

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

Yes

The experiments related to virulent NDVs are carried out in ABSL-3 laboratory (CNAS BL0008,CNAS-CL 05:2009)

## TOR9: SCIENTIFIC MEETINGS

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

Yes

National/ International	Title of event	Co-organiser	Date	location	No. Participants
National	National Training on Prevention and Control of Avian Disease	None	2025-06-25	Wuhan	60
National	The Epidemic Analysis Meeting for Major Avian Disease	None	2025-09-17	Guangzhou	40

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

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
National Epidemiological Investigation Meeting	2025-03-10	Qingdao	speaker	Current situation of avian disease in China

## TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOAHP Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
Regional expert network for avian disease in Asia and the Pacific	Participant	3	QIA (Korea)

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen during the past 2 years?

No

No

26. Did your laboratory collaborate with other WOAHP 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 WOAHP Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons <sup>1</sup>	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAHP Member Countries
Validation of ND HI test	participant	6	China	
Validation of NDV RT-PCR	participant	6	China	
Validation of NDV real-time RT-PCR	participant	6	China	

## TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Attendance at WOAHP regional workshop	Japan	Regional Workshop for Avian Disease prevention and control in Asia and the Pacific
WOAHP regional hands-on training on Newcastle disease (ND) in Asia and the Pacific	China	Hands-on training on RNA extraction, RT-PCR, real-time RT-PCR, HA and HI tests

29. Additional comments regarding your report:

Yes

As ND diagnostics and vaccine are relatively matured, technical demands from members are becoming less.