

OIE Reference Laboratory Reports Activities

Activities in 2019

This report has been submitted : 2019-12-30 02:37:38

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Newcastle disease
Address of laboratory:	369 Nanjing Road Qingdao 266032 CHINA (PEOPLES REP. OF)
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Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Zhiliang Wang
Name (including Title and Position) of OIE Reference Expert:	Zhiliang Wang
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
HI	Yes	1574	0
Direct diagnostic tests		Nationally	Internationally
Virus isolation(SPF eggs)	Yes	12130	0
RT-PCR	Yes	5664	0
Realtime RT-PCR (F gene)	Yes	2310	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
RNA	RT-PCR and Realtime RT-PCR	CAHEC	1	1	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Serum	HI	CAHEC	20	0	0	<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.)
Realtime RT-PCR for virulent NDVs	Detection of virulent NDV isolates and validation
RT-PCR	Detection of all genotypes of NDV isolates
Genotype VI NDV vaccine	Genotype-matched vaccine for genotype VI using reverse genetics

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
BANGLADESH	Vaccination efficiency	Communication during the 21st WVPA Congress
MOROCCO	Surveillance plan	Communication during the 21st WVPA Congress
THAILAND	Vaccine development	Communication during the 21st WVPA Congress

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?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Updated unified phylogenetic classification system and revised nomenclature for Newcastle disease virus	10 days	Build unified nomenclature system for NDVs	Southeast Poultry Research Institute	UNITED STATES OF AMERICA
A PCR-based method for rapid and simple on-site detection and pathotyping of Newcastle disease viruses	20 days	Develop PCR method for identification of NDVs	National Veterinary Institute	SWEDEN

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:
1. The current situation of Newcastle disease in China; 2. The Epidemiological Characteristics of Newcastle Disease Outbreak in the United States

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:
1. The current situation of Newcastle disease in China; 2. The Epidemiological Characteristics of Newcastle Disease Outbreak in the United States

**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: 4

1. Updated unified phylogenetic classification system and revised nomenclature for Newcastle disease virus. *Infect Genet Evol.* 2019 Oct;74:103917
2. Comparison between class I NDV and class II NDV in aerosol transmission under experimental condition. *Poult Sci.* 2019 Oct 1;98(10):5040-5044
3. Molecular characterization of new emerging sub-genotype VIIh Newcastle disease viruses in China. *Virus Genes.* 2019 Jun;55(3):314-321
4. Analysis on the Epidemiological Characteristics of Newcastle Disease Outbreak in the United States. *China Animal Health Inspection*, 2019 Vol 36(7):55-61

b) International conferences: 3

1. 21st World Veterinary Poultry Association Congress. Thailand, September 16-20, 2019: Presentation on Newcastle Disease-Global Situation and Effective Control Strategies;
2. OIE Regional Expert Group Meeting for the disease of poultry in Asia and the Pacific region. Japan, October 2-4, 2019. Presentation on Newcastle Disease-Global Situation and Effective Control Strategies
3. 31st Conference of the OIE Regional Commission for Asia, the Far East and Oceania. Japan, September 2-6, 2019. Poster on Prevention and Control of Newcastle Disease in China.

c) National conferences: 3

1. National Epidemiological Investigation Meeting. Qingdao, June 24-26, 2019
2. National Training on Emerging Avian Diseases. Qingdao, August 6-8, 2019
3. The Epidemic Analysis of Major Avian Diseases. Qingdao, September 27-29, 2019

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: 5
- c) Hands-on training courses: 5
- 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	Cambodia, Lao PDR, Myanmar, Vietnam	5
c	Cambodia, Lao PDR, Myanmar, Vietnam	5

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)
ISO/IEC 17025	17025-EN.jpg

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Virus isolation	China National Accreditation Service for Conformity Assessment
RT-PCR	China National Accreditation Service for Conformity Assessment
Realtime RT-PCR	China National Accreditation Service for Conformity Assessment

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?

Yes

National/ International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
International	Regional Training on Priority Transboundary Animal Disease Control	International Atomic Energy Agency	12/19	Qingdao	5

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
21st World Veterinary Poultry Association Congress	09/19	Bangkok,Thailand	Speaker	Newcastle Disease: Global Situation and Effective Control Strategies
OIE Regional Expert Group Meeting for the disease of poultry in Asia and the Pacific	10/19	Sapporo,Japan	Speaker	Newcastle disease in China
31st Conference of the OIE Regional Commission for Asia, the Far East and Oceania	09/19	Sendai,Japan	Poster	Prevention and Control of Newcastle Disease in China

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
Updated unified phylogenetic classification system and revised nomenclature for Newcastle disease virus	Update the unified nomenclature system for NDV	Southeast Poultry Research Laboratory, USDA

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?

Yes

Kind of consultancy	Location	Subject (facultative)
Regional Expert Group Meeting	Sapporo, Japan	OIE Regional Expert Group Meeting for the disease of poultry

25. Additional comments regarding your report: