

# WOAH Reference Laboratory Reports Activities 2025

This report has been submitted: 31 janvier 2026 18:30

## LABORATORY INFORMATION

<b>*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:</b>	Newcastle disease
<b>*Address of laboratory:</b>	"National Veterinary Services Laboratories USDA, APHIS, Veterinary Services 1920 Dayton Ave Ames, IA 50010 UNITED STATES OF AMERICA Office: 515.337.7301"
<b>*Tel:</b>	+15153377551
<b>*E-mail address:</b>	mia.kim.torchetti@usda.gov
<b>Website:</b>	www.aphis.usda.gov/nvsl
<b>*Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr. Suelee Robbe-Austerman, Director, NVSL
<b>*Name (including Title and Position) of WOAH Reference Expert:</b>	Mia Kim Torchetti, Director, Diagnostic Virology Laboratory, NVSL
<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 WOAH Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
<b>Indirect diagnostic tests</b>			
None; testing conducted at state level	Yes	0	0
<b>Direct diagnostic tests</b>			
Real-time RT-PCR (matrix, fusion)	Yes	796	0
Virus Isolation	Yes	4091	0
Molecular pathotype (Sanger)	Yes	169	0
In vivo pathotype (ICPI)	Yes	12	0
Whole genome sequencing	Yes	75	0

## 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

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Reference antigen	hemagglutination inhibition	both	21	1	2	PERU, UNITED STATES OF AMERICA,
Reference antisera	hemagglutination inhibition	both	10	2	2	COLOMBIA, UNITED STATES OF AMERICA,
Positive amplification controls	rRT-PCR (matrix, fusion)	both	14	1	2	PERU, UNITED STATES OF AMERICA,
Extraction controls	rRT-PCR	both	393	0	1	UNITED STATES OF AMERICA,
Proficiency panels	rRT-PCR	both	620	0	1	UNITED STATES OF AMERICA,

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAHA Members?

### TOR3: NEW PROCEDURES

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

No

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

No

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

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

### TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

No

### TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

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:

NVSL works with another unit within USDA for distribution of analyzed data.

[https://www.aphis.usda.gov/animal\\_health/downloads/animal\\_diseases/ai/epi-analy-vnd-poultry-calif.pdf](https://www.aphis.usda.gov/animal_health/downloads/animal_diseases/ai/epi-analy-vnd-poultry-calif.pdf)

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:

NVSL works with another unit within USDA for distribution of analyzed data.

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[https://www.aphis.usda.gov/animal\\_health/downloads/animal\\_diseases/ai/epi-analy-vnd-poultry-calif.pdf](https://www.aphis.usda.gov/animal_health/downloads/animal_diseases/ai/epi-analy-vnd-poultry-calif.pdf)

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:

2

Franzo G, et al. "Evaluation of Different Machine Learning Approaches to Predict Antigenic Distance Among Newcastle Disease Virus (NDV) Strains." 2025 Viruses: 17(4) 567.

b) International conferences:

4

During 2025, some testing and many activities continue to be impacted by the ongoing H5 2.3.4.4b HPAI outbreak affecting wild birds, wildlife, poultry, and dairy herds, as well as a prolonged lapse in federal funding.

c) National conferences:

1

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

3

GitHub - USDA-VS/vSNP3: vSNP -- validate SNPs

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

No

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
A2LA   provide A2LA Accreditation Certificate from <a href="http://www.a2la.org/scopepdf/2526-01.pdf?CFID=5617149&amp;CFTOKEN=1b4d665583b46798-ED19F46D-5056-A51D-2CE9AF7C7C613A63">http://www.a2la.org/scopepdf/2526-01.pdf?CFID=5617149&amp;CFTOKEN=1b4d665583b46798-ED19F46D-5056-A51D-2CE9AF7C7C613A63</a>	pdf	A2LA Scope for diagnostic testing 2526-01 (1).pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Hemagglutination-inhibition Real-Time RT-PCR Virus Isolation In vivo pathogenicity (ICPI)	A2LA

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

Yes

Biosafety, Security and Incident Response Plan and Biological Risk Assessments: NVSL-MAN-0018 and NVSL-WI-1207

## TOR9: SCIENTIFIC MEETINGS

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

No

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

No

## 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?

No

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

n/a

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant WOAHP Reference Laboratories
Data and coauthorship for Franzo G, et al. "Evaluation of Different Machine Learning Approaches to Predict Antigenic Distance Among Newcastle Disease Virus (NDV) Strains." 2025 Viruses: 17(4) 567.	Data sharing and manuscript editing and review	Effort led by Istituto Zooprofilattico Sperimentale delle Venezie, Viale dell'Università 10, 35020 Legnaro, Italy

## 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
Maintain APHIS-approval for the National Animal Health Laboratory Network	As the national reference laboratory NVSL produces and administers the proficiency round	59	PCR	

## TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

*During 2025, some testing and many activities continue to be impacted by the ongoing H5 2.3.4.4b HPAI outbreak affecting wild birds, wildlife, poultry, and dairy herds, as well as a prolonged lapse in federal funding. Additionally, our laboratory transitioned to a new laboratory information management system toward the end of 2025. APMV-1 detections in poultry are characterized by sequencing for monitoring.*