

WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 25 avril 2023 16:24

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Newcastle disease
Address of laboratory:	National Veterinary Services Laboratories USDA, APHIS, Veterinary Services 1920 Dayton Ave Ames, IA 50010 UNITED STATES OF AMERICA
Tel.:	+1 515.337.7301
E-mail address:	mia.kim.torchetti@usda.gov
Website:	www.aphis.usda.gov/nvsl
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Suelee Robbe-Austerman, Director, NVSL
Name (including Title and Position) of WOA Reference Expert:	Mia Kim Torchetti, Director, Diagnostic Virology Laboratory, NVSL
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 WOA Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Hemagglutination-inhibition (HI) antibody identification (APMV-1)	YES	0 - TESTING IS CONDUCTED AT THE STATE LEVEL	0

Direct diagnostic tests		Nationally	Internationally
Real-time RT-PCR (matrix, fusion)	YES	678	2
Virus Isolation (positive/total samples)	YES	306/4238	19/141
Molecular pathotype (Sanger)	YES	146	0
In vivo pathotype (ICPI)	YES	18	0
Whole genome sequencing	YES	290	19

TOR2: REFERENCE MATERIAL

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

No

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

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOA?H MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
Reference antigen	HI	BOTH	28	0		
Reference antisera	HI	BOTH	4	10	0	America
Positive amplification controls	rRT-PCR (matrix, fusion)	BOTH	1 (20 aliquots)	0		
Extraction controls	rRT-PCR	BOTH	209	0		
Proficiency panels	rRT-PCR	BOTH	500	10	1	America

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOA?H Members?

Not applicable

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 WOA?H 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 WOA?H Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

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

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.

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

b) International conferences:

4

c) National conferences:

1

October 2022: United States Animal Health Association and American Association of Veterinary Laboratory Diagnosticians Annual Meeting

Aug 2022: NPIP Diagnostic Workshop in Georgia

June 2022: National Poultry Improvement Program Biennial General Conference Committee Meeting

Aug 2022: AVMA American Association of Avian Pathologist Conference

February 2022: VIRTUAL Live Bird Market Working Group Meeting

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

3

Participated with international regionalization evaluations for avian influenza and Newcastle disease in two countries

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)	
American Association for Laboratory Accreditation (A2LA)	yes	2526-01.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 (IVPI)	American Association for Laboratory Accreditation (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 WOA?

No

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

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?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
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25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen?

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?

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOAHP REFERENCE LABORATORIES
Studies in Poultry Transmission, Airborne Spread and Mitigation Tools for Avian Influenza and Newcastle Disease in the USA	Interagency agreement	USDA ARS National Poultry Center Southeast Poultry Research Laboratory

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?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOAHP Member Countries
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Administered by NVSL and required to conduct official testing in the U.S.; shipped internationally by request

Official PT not offered in 2022

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TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

Some testing and activities have been impacted by the ongoing H5 2.3.4.4 HPAI outbreak affecting wild birds and poultry with sporadic

spillovers into mammals; and the ongoing vigilance for SARS-CoV-2 in animals.

All APMV-1 are routinely characterized for monitoring.