

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Swine influenza
*Address of laboratory:	"National Veterinary Services Laboratories USDA, APHIS, Veterinary Services 1920 Dayton Ave Ames, IA 50010 UNITED STATES OF AMERICA Office: 515.337.7301"
*Tel:	+15153377551
*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 WOAH 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 WOAH Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
None; conducted at state level	Yes	0	0
Direct diagnostic tests			
Real-time RT-PCR; Surveillance and diagnostics are conducted at state level	Yes	79	0
Virus Isolation; conducted at state level	Yes	20	0
Whole genome sequencing	Yes	905	0
Repository propagation	No	310	0

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 WOAH 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 WOAH 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:

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:

USDA Swine Surveillance: NVSL works with another unit within USDA for distribution of analyzed data. <https://www.aphis.usda.gov/livestock-poultry-disease/swine/influenza-a-virus>

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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Janzen GM, et al. "Sources and sinks of influenza A virus genomic diversity in swine from 2009 to 2022 in the United States." 2025 Journal of Virology 99(9), e00541-25.

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:

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

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BioProject PRJNA1367166 National Surveillance Plan for Influenza A Virus (IAV) in Swine "U.S. Influenza A from Domestic Swine Species Genome sequencing and assembly

Sequences in this BioProject represent passive surveillance from the National Surveillance Plan for Influenza A Virus (IAV) in Swine (the objectives of this plan are listed below). This repository is specifically for IAV of low virulence. Please refer to BioProject PRJNA1102327 for HPAI in livestock.

Monitor genetic evolution of IAV from swine to better understand circulating influenza virus ecology;

Make available IAV isolates from swine for research and to establish an objective database for genetic analysis of these isolates and related information; and

Select appropriate isolates for developing relevant diagnostic reagents, and for updating diagnostic assays and vaccines."

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHO 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)	
ISO 17025	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 Neuraminidase-inhibition Real-Time RT-PCR Virus Isolation	A2LA Accreditation Certificate from http://www.a2la.org/scopepdf/2526-01.pdf?CFID=5617149&CFTOKEN=1b4d665583b46798-ED19F46D-5056-A51D-2CE9AF7C7C613A63

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 WOAHO?

No

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

No

TOR10: NETWORK WITH WOAHO REFERENCE LABORATORIES

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

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHO REF. LABS
OFFLU	Participant	1	https://offlu.org/

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

No

n/a

26. Did your laboratory collaborate with other WOA 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 WOA Reference Laboratories
OFFLU	Biannual collation of data across network to improve the understanding of influenza A circulating among animals	https://offlu.org/

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Administered by NVSL and required for program participation, shipped internationally by request	Administered by NVSL and required to conduct official testing in the U.S.	46	PCR	

TOR12: EXPERT CONSULTANTS

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

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.

The recent updates to the national swine surveillance program should enhance the programs ability to better understand circulating virus and to continue to build a reference virus repository to serve our stakeholders.