

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:	Foot and mouth disease
*Address of laboratory:	40550 NY-25, Orient Point, NY 11957
*Tel:	+ 16313233300
*E-mail address:	vivian.odonnell@usda.gov
Website:	https://www.aphis.usda.gov/
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Robin Holland, Director, NVSL-FADDL
*Name (including Title and Position) of WOAH Reference Expert:	Dr. Vivian O'Donnell, Biological Scientist, RVSS, NVSL, FADDL
*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			
3ABC ELISA	Yes	42	0
VIAA AGID	Yes	5	0
Direct diagnostic tests			
Virus Isolation	Yes	241	0
PCR (FADDL)	Yes	336	0
PCR (NALHN)	Yes	2225	0
Sequencing	Yes	0	65

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
PCR Controls	FMDV rRT-PCR	FMD qPCR PT (Annual	74	0	1	UNITED STATES OF

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		proficiency test)				AMERICA, UNITED STATES OF AMERICA,
PCR Controls	FMDV / SVA	FMDV / SVA qPCR	21	0	1	

4. Did your laboratory produce vaccines?

No

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?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHA Member Countries involved other than your country
PD50	May - July 2025	Vaccine Potency test	NAFMDVB Study	CANADA
Investigation of Foot-and-mouth disease virus during an outbreak in Ghana. Next generation sequencing and Genomic surveillance	2025	Characterization of different isolates during an outbreak investigation by rRT-PCR and NGS. Out of 56 samples tested, 55 were interpreted as positive by rRT-PCR and characterize by Illumina and Nanopore sequencing.	Accra Veterinary Laboratory Veterinary Services Directorate, Ghana.	GHANA
Outbreak investigation FMDV in Nigeria	2025	Use next-generation sequencing to characterize FMDV samples from an outbreak investigation in Nigeria	National Veterinary Research Institute, Nigeria.	NIGERIA

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?

No

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

No

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:

1

"Near Complete Genome Sequences of twelve Foot-and-Mouth Disease Viruses of Serotype O, Isolated from Cattle in Eastern and Northern Uganda between 2014 and 2017". *Microbiology Resource Announcement* 6/30/2025. DOI:10.1128/mra.00819-24

b) International conferences:

2

WOAH/FMD Reference Laboratory Network Meeting, Istanbul 2025.
EuFMD, Rome 2025.

c) National conferences:

1

Symposium on Foot and Mouth Disease, Manhattan, Kansas March 2025

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

1

Kansas Department of Agriculture: Annual Multi-day Functional Exercise Simulation of FMDV, Manhattan, Kansas.

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 0

b) Seminars : 0

c) Hands-on training courses: 1

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
C	UNITED STATES OF AMERICA	24

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	Touchstone:Accreditation & Assessment Management System - Customer Portal (a2la.org)
ISO/IEC 17043: 2010	Touchstone:Accreditation & Assessment Management System - Customer Portal (a2la.org)

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Real-time reverse transcription PCR for the detection of Foot-and-mouth disease virus	American Association for Laboratory Accreditation (A2LA)
ELISA for detection of antibodies against nonstructural 2ABC protein of foot and	American Association for Laboratory Accreditation (A2LA)

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mouth disease virus	
The vesicular antigen ELISA for the detection of FMDV in epithelial tissue samples, vesicular fluid, and cell culture isolates	American Association for Laboratory Accreditation (A2LA)
Virus isolation (VI) procedure for vesicular suspect samples	American Association for Laboratory Accreditation (A2LA)
The foot and mouth disease (FMD) virus infection associated antigen (VIAA) agar gel immunodiffusion (AGID) assay	American Association for Laboratory Accreditation (A2LA)

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

Yes

Biocontainment management, including BSL2 and BSL3 laboratories, Biosafety and Biosecurity management including risk assessment, risk mitigation. Federal Select Agent Program

TOR9: SCIENTIFIC MEETINGS

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

No

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
FMD Reference Lab Network Meeting	2025-10-23	Istanbul, Türkiye	Virtual Attendee and Presenter	NVSL-FADDL Activities as a WOA?H Reference Lab for FMDV

TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

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

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS
WOA?H/FAO FMD Reference Laboratory Network	Participant	1	FMDV Reference Lab

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

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOA?H Ref. Labs/ organising WOA?H Ref Lab
FMD / VS Virus Neutralization	Participant	NA	PANAFTOSA, Brazil
FMDV LPBE	Participant	NA	PANAFTOSA, Brazil
FMDV, 3ABC	Participant	NA	PANAFTOSA, Brazil
FMDV / VS, Vesicular Antigen ELISA	Participant	NA	PANAFTOSA, Brazil
FMDV Virus Isolation and Antigen ELISA	Participant	NA	The Pirbright Institute, World Reference Laboratory, UK
FMDV RT-PCR and Sequencing	Participant	NA	The Pirbright Institute, World Reference Laboratory, UK
FMDV Serology NSP, LPBE and VNT	Participant	NA	The Pirbright Institute, World Reference Laboratory, UK

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

No

NA

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Scientific advice	FADDL, USA	Updates to Terrestrial Manual (FMD chapter)

29. Additional comments regarding your report:

No