World Organisation for Animal Health

Ping Wu - - UNITED_STATES_OF_AMERICA

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:**	African swine fever
***Address of laboratory:**	Foreign Animal Disease Diagnostic Laboratory, PIADC, 40550 Rt 25, Orient Point, NY11957, USA
***Tel:**	+16313233287
***E-mail address:**	ping.wu@usda.gov
Website:	www.aphis.usda.gov/aphis/ourfocus/animalhealth/lab-info-services
***Name (including Title) of Head of Laboratory (Responsible Official):**	Dr. Robin Holland, FADDL Director
***Name (including Title and Position) of WOAH Reference Expert:**	Dr. Ping Wu, Veterinary Medical Officer
***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	
Indirect diagnostic tests		Nationally	Internationally
ASF ELISA	Yes	17951	0
ASF IPT	Yes	12	0
ASF IFA	Yes	1	0
Direct diagnostic tests		Nationally	Internationally
ASF PCR	Yes	38351	0
ASF VI	Yes	6	0
ASF NGS Sequencing	No	0	120

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

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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
ASF IPT Kit	IPT	13	1	0	1	UNITED STATES OF AMERICA,
ASF PCR control	PCR	500	182	0	1	UNITED STATES OF AMERICA,
ASF PCR PT Panel	PCR	431	182	0	1	UNITED STATES OF AMERICA,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

TOR3: NEW PROCEDURES

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

Yes

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

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
In-Cell ELISA to detect anti-ASFV IgM & IgG	Wu P, McDaniel AJ, Rodríguez YY, O'Donnell V, Jia W. A Novel In-Cell ELISA with Superior Sensitivity and Specificity for the Detection of African Swine Fever Virus-Specific IgM and IgG Antibodies. Transboundary Emerg Dis. 2026 Jan Annual reports of WOAH Reference Laboratories, 2023 3 5;2026:6272844. doi: 10.1155/tbed/6272844. PMID: 41498110; PMCID: PMC12766277.
Aggregated oral fluid sample type for ASFV detection	Faburay, B., O'Hara, K., Remmenga, M., Odoom, T., Johnson, S., Tasiame, W., Ayim-Akonor, M., Anderson, B., Kwabena Amoako, K., Holder, D., Ping, W., Zajac, M., O'Donnell, V., Xu, L., Holland, R., Brown, C., Levings, R., & Robbe-Austerman, S. (2025). Evaluation of Aggregate Oral Fluid Sampling for Early Detection of African Swine Fever Virus Infection. Viruses, 17(8), 1089. https://doi.org/10.3390/v17081089

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 WOAH Members?

Yes

Name of WOAH Member Country seeking assistance	Date	Which diagnostic test used	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
SAINT LUCIA	2025-04-01	PCR	70	0
GHANA	2025-01-13	PCR	51	0
DOMINICAN (REP.)	2025-01-01	NGS sequencing	1280	0
SURINAME	2025-09-01	PCR	70	0
CURACAO	2025-08-01	PCR	70	0
GHANA	2025-01-13	NGS sequencing	29	0

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

Yes

Name of the WOAH Member Country receiving a technical consultancy	Purpose	How the advice was provided
DOMINICAN (REP.)	Provide technical and logistical support	In person

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAH Member Countries involved other than your country
Use NGS sequencing to characterize ASFV samples	December 6, 2024 – to-present	Use NGS sequencing to characterize ASFV samples from Ghana	Accra Veterinary Laboratory of Veterinary Services Directorate, Accra, Ghana	GHANA

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

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:
Sequencing pathogen genomes in partnership with our collaborators revealed the circulation of African swine fever virus genotype II in West Africa and genotype IX in Uganda/East Africa. PPRV virus genotypes IV and II were detected in The Gambia, Nigeria and Cameroon LSDV lineage 1.2 is circulating in West Africa (Nigeria, Benin and Cameroon)

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:
107,228 samples were collected from ASF outbreak in Dominican Republic. 2,270 were ASFV DNA positive. 210 were sequenced completely, and 1066 samples were partially sequenced. Data analyses are ongoing.

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:

5

1. Faburay, B., O'Hara, K., Remmenga, M., Odoom, T., Johnson, S., Tasiame, W., Ayim-Akonor, M., Anderson, B., Kwabena Amoako, K., Holder, D., Ping, W., Zajac, M., O'Donnell, V., Xu, L., Holland, R., Brown, C., Levings, R., & Robbe-Austerman, S. (2025). Evaluation of Aggregate Oral Fluid Sampling for Early Detection of African Swine Fever Virus Infection. Viruses, 17(8), 1089. https://doi.org/10.3390/v17081089

2. Faburay B, Fondzenyuy YA, Ndip LM, Acha JK, Masalla TN, Keneh N, Esemu SN, Ndip RN, Spinard E, Borca MV, Xu L, Berninger A, O'Donnell V, Gladue DP.2025.Complete African swine fever virus genome isolated from the 2023 outbreak in Cameroon. Microbiol Resour Announc14:e00651-24.https://doi.org/10.1128/mra.00651-24

3. Ramirez-Medina, E., Azzinaro, P. A., Valladares, A., Silva, E., Burton, L., Sastre, L., O'Donnell, V., Zhu, J. J., Gladue, D. P., & Borca, M. V. (2025). Deletion of the African Swine Fever Virus Gen I196L in the Georgia2010 Isolate Genome Does Not Affect Virus Replication or Virulence in Domestic Pigs. Viruses, 17(5), 603. https://doi.org/10.3390/v17050603

4. Spinard E, O'Donnell VK, Rai A, Meyers A, Valladares A, Ramirez-Medina E, Faburay B, Borca MV, Gladue DP.2025.Near complete genome sequence of the historic African swine fever isolate Uganda-898. Microbiol Resour Announc14:e00513-24.https://doi.org/10.1128/mra.00513-24

5. Wu P, McDaniel AJ, Rodríguez YY, O'Donnell V, Jia W. A Novel In-Cell ELISA With Superior Sensitivity and Specificity for the Detection of African Swine Fever Virus-Specific IgM and IgG Antibodies. Transbound Emerg Dis. 2026 Jan 5;2026:6272844. doi: 10.1155/tbed/6272844. PMID: 41498110; PMCID: PMC12766277.

b) International conferences:

0

c) National conferences:

3

1. Comparison of Library Preparation Methods for Sequencing of African Swine Fever using the Illumina Platform. Posters at CRAWD Meeting 2025
2. First report of Genotype II for the African swine fever virus outbreak in Benin Republic in 2023. Posters at CRAWD Meeting 2025
3. Comparative study in domestic pigs between the recently emerged ASFV hybrid Vietnamese field strain rASFV I//II and the ASFV field strain Georgia 2010. Posters at CRAWD Meeting, 2025

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

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH 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	30

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, ISO 17043, ISO 9001	pdf	FADDL_17025_2025certificate.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
ASF Ab-ELISA, IP, PCR, VI	American Association for Laboratory Accreditation (A2LA)

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

Yes

Biosafety and biosecurity management program

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

Yes

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

Yes

	ROLE OF YOUR LABORATORY		

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NETWORK/DISEASE	(PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS
WOAH RL-ASF Network/ASF	Participant	7	USDA , APHIS, VS, NVSL, Foreign Animal Disease Diagnostic Laboratory, National Centre for Foreign Animal Disease, Canadian Food Inspection Agency, The Pirbright Institute, Centro de Vigilancia Sanitaria Veterinaria (VISAVET), Facultad de VeterinariaHCV Planta sótanoUniversidad Complutense de Madrid (UCM) CSIRO Australian Centre for Disease Preparedness Onderstepoort Veterinary Institute National Surveillance and Research Center for Exotic Animal Diseases China Animal Health and Epidemiology Center

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH 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 WOAH Ref. Labs/ organising WOAH Ref Lab
ASF Interlaboratory Comparison Test, CISA-INIA	Participant	1	CISA-INIA

26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

Not applicable (only WOAH Reference Laboratory designated for the disease

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

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

Yes

Purpose for inter-laboratory test comparisons1	**Role of your reference laboratory (organizer/participant)**	**No. participating laboratories**	**Name of the test**	**WOAH Member Countries**
ASF qPCR	Organizer	43	ASF PCR	UNITED STATES OF AMERICA,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No