

WOAH Reference Laboratory Reports Activities 2024

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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:	No. 369 Nanjing Road, Qingdao, P.R.China
*Tel:	+86-532 85.63.91.66
*E-mail address:	zlwang111@163.com
Website:	https://www.cahec.cn/
*Name (including Title) of Head of Laboratory (Responsible Official):	Zhiliang Wang, Prof. , PhD, DVM
*Name (including Title and Position) of WOAH Reference Expert:	Zhiliang Wang, Prof. , PhD, DVM, Deputy Director General of China Animal Health and Epidemiology Center
*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
C-ELISA	Yes	9685	0
Direct diagnostic tests		Nationally	Internationally
Real-time PCR	Yes	31634	0
Virus isolation	Yes	4	0

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA 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 Member Countries	Country of recipients
ASFV P30 antigen	b-ELISA	Produced	3mg	0	1	CHINA (PEOPLE'S REP. OF),
ASFV P30 mAb	b-ELISA	Produced	9ml	0	1	CHINA (PEOPLE'S REP. OF),

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOA Members?

Not applicable

TOR3: NEW PROCEDURES

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

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
Fluorescent recombinase mediated amplification of nucleic acid test for ASF	https://www.moa.gov.cn/govpublic/xmsyj/202409/t20240909_6462114.htm

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

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Yes

Name of the WOA Member Country receiving a technical consultancy	Purpose	How the advice was provided
KOREA (REP. OF) PHILIPPINES	Provide practice experience and measures of China for ASF prevention and control	Workshop
THAILAND	Efficacy test of disinfectant on inactivation of ASFV	Email

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

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:

Global Distribution and Genetic Characterization of African swine fever virus, sourced from WAHIS, EMPRES-i, Published research paper, international meetings, etc.

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:

Global Distribution and Genetic Characterization of African swine fever virus, disseminated by MARA website, CAHEC

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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[1]Ding L L, Wang Z G, Wang T P, et al. African swine fever virus in China: The diagnostic target gene (B646L) has acquired multi-point mutations [J]. J Infect, 2024, 89(6): 106351.

[2]Qi C, Lee J, Zhang Y, et al. Identification of cepharanthine as an effective inhibitor of African swine fever virus replication [J]. Emerg

Microbes Infect, 2024, 13(1): 2429624.

[3] Shi M, Zhou N, Xiu M, et al. Identification of host proteins that interact with African swine fever virus pE301R [J]. *Eng Microbiol*, 2024, 4(2): 100149.

b) International conferences:

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- [1] 2024-01 Closed-door discussion on ASF vaccines (virtual), 15 Jan
- [2] 2024-02 Closed-door discussion on ASF vaccines (virtual), 20 Feb
- [3] 2024-01 ASF Reference Laboratory Network meeting, 7 Feb
- [4] 2024-02 ASF Reference Laboratory Network meeting, 14 Feb
- [5] 2024-03 ASF Reference Laboratory Network meeting, 22 Feb
- [6] 2024-04 ASF Reference Laboratory Network meeting, 16 Apr
- [7] Regional technical consultation for African swine fever, Korea, 6 May
- [8] 2024-05 ASF Reference Laboratory Network meeting, 7 Jun
- [9] 9th Standing Group of Experts on African swine fever for Asia and the Pacific, Philippine, 25 Jun
- [10] 4th WOAHP Regional Meeting for Reference Centres in Asia Pacific, Japan, 19 Jul
- [11] 2024-06 ASF Reference Laboratory Network meeting, 19 Sep
- [12] 2024-07 ASF Reference Laboratory Network meeting, 3 Dec

c) National conferences:

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- [1] ASF NRL Network meeting (MARA, Jan, 2024)
- [2] ASF NRL Network meeting (MARA, Jun, 2024)
- [3] National meeting for ASF prevention and control (Mar, 2024)
- [4] National meeting for ASF prevention and control (Aug, 2024)

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

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHP 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/IEC 17025	17025.png	17025.png

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19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Real-time PCR	China National Accreditation Service for Conformity Assessment (ilac-MRA, APLAC-MRA)
ELISA	China National Accreditation Service for Conformity Assessment (ilac-MRA, APLAC-MRA)
virus isolation	China National Accreditation Service for Conformity Assessment (ilac-MRA, APLAC-MRA)

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

Yes

The experiments related to ASFV are conducted in ABSL-3 laboratory(CNAS BL0008,CNAS-CL 05:2009)

TOR9: SCIENTIFIC MEETINGS

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

Yes

National/ International	Title of event	Co-organiser	Date	location	No. Participants
National	National workshop for ASF laboratory network	CADC	2024-03-21	Guangxi, China	50
National	National workshop for ASF laboratory network	CADC	2024-08-13	Qinghai, China	50

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

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
9th Standing Group of Experts on African swine fever for Asia and the Pacific	2024-06-25	Philippine	speaker, presenting poster	ASF Risk Communication and Community Engagement
Regional technical consultation for African swine fever	2024-05-06	Korea	speaker	Biosafety and biosecurity management for ASF
4th WOA Regional Meeting for Reference Centres in Asia Pacific	2024-07-18	Japan	Speaker,PRESENTING POSTER	A duplex fluorescent quantitative PCR assay to distinguish the genotype I, II and III recombinant

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				strains of African swinefever virus in China
2024-01 Closed-door discussion on ASF vaccines	2024-01-14	Online	Communications	Comments on ASF vaccines
2024-02 Closed-door discussion on ASF vaccines	2024-02-19	Online	Communications	Comments on ASF vaccines

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. Do you network (collaborate or share information) with other WOAHP Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
African swine fever	PARTICIPANT	13	AAHL, Pirbright, ARC-OVI, CFIA, UCM, etc

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

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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
Addressing African swine fever Protocols	Developing new tests and review existing	ASF RL labs

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 ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAHP Member Countries
Validation of ASFV Real-time PCR	Participant	6	ASFV Real-time PCR	CHINA (PEOPLE'S REP. OF),

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
responding to specific technical queries from WOA	Online	WOAH manual

29. Additional comments regarding your report:

No