

# WOAH Reference Laboratory Reports Activities 2024

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## LABORATORY INFORMATION

<b>*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:</b>	Classical swine fever
<b>*Address of laboratory:</b>	China Institute of Veterinary Drug Control (IVDC)/Center for Veterinary Drug Evaluation (CVDE) Department of Swine Viral Biologics Inspection No.8 Zhongguancun South Street Haidian District Beijing 100081 CHINA (PEOPLES REP. OF)
<b>*Tel:</b>	+86-010 612 55 400
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<b>Website:</b>	<a href="http://www.ivdc.org.cn/">http://www.ivdc.org.cn/</a>
<b>*Name (including Title) of Head of Laboratory (Responsible Official):</b>	Prof. Weizhong Huang, General Director of IVDC and CVDE
<b>*Name (including Title and Position) of WOAH Reference Expert:</b>	Prof. Qin Wang, Designated expert
<b>*Which of the following defines your laboratory? Check all that apply:</b>	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
Blocking ELISA Kit to Detect the Antibody against Classical Swine Fever Virus	Yes	1022	0

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Fluorescent antibody virus neutralization test(CSFV)	Yes	9	0
Direct diagnostic tests		Nationally	Internationally
Reverse-transcription quantitative polymerase chain reaction (CSFV)	Yes	1026	0
Reverse-transcription nest polymerase chain reaction (CSFV)	Yes	15	0
Genetic Typing (CSFV phylogenetic analysis)	Yes	6	0
Virus isolation (CSFV)	Yes	0	0
Fluorescent antibody test (CSFV)	Yes	0	289

## 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
National reference positive Serum of C-strain vaccine (1ml/Ampoule)	C-strain vaccine test	Produced	313ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference negative serum of CSFV (1ml/Ampoule)	Neutralization test in vitro	Produced	3ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference positive serum of CSFV (1ml/Ampoule)	Neutralization test in vitro	Produced	52ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference negative serum of CSFV	Neutralization test in rabbit	Produced	1ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference positive serum of CSFV(1:(8.5±1.3))	Neutralization test in rabbit	Produced	16ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference negative serum of CSFV	ELISA/NPLA/ AVN for antibody detection, virus Isolation, FAT, IPT for antigen detection	Produced	12ml	0	1	CHINA (PEOPLE'S REP. OF),

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National reference positive serum of CSFV (weak 1)	ELISA/NPLA/ AVN for antibody	Produced	14ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference positive serum of CSFV (weak 2)	ELISA/NPLA/ AVN for antibody detection, virus Isolation, FAT, IPT for antigen detection	Produced	10ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference positive serum of CSFV (strong)	ELISA/NPLA/ AVN for antibody detection, virus Isolation, FAT, IPT for antigen detection	Produced	1ml	0	1	CHINA (PEOPLE'S REP. OF),
National reference negative swine serum (0.5ml/tube)	ELISA/NPLA/ AVN for antibody detection, virus Isolation, FAT, IPT for antigen detection	Produced	11ml	0	1	CHINA (PEOPLE'S REP. OF),
CSFV E2 monoclonal antibody (1C8) (0.5ml/tube)	ELISA/NPLA/ AVN for antibody detection, virus Isolation, FAT, IPT for antigen detection	Produced	33ml	0	1	CHINA (PEOPLE'S REP. OF),
Indirect immunofluorescence assay (IFA) kit for CSFV (50µl/well, 200 well/kit,)	IFA for CSFV antigen or antibody detection	Produced	150kits	0	1	CHINA (PEOPLE'S REP. OF),
Reference Positive Serum of PRV	Detection for extraneous agents of C- strain vaccine	Produced	330ml	0	1	CHINA (PEOPLE'S REP. OF),
Reference Positive Serum of PCV II	Detection for extraneous agents of Cstrain vaccine	Produced	14ml	0	1	CHINA (PEOPLE'S REP. OF),
Reference Positive Serum of PCV II (lyophilized)	Detection for extraneous agents of Cstrain vaccine	Produced	2ml	0	1	CHINA (PEOPLE'S REP. OF),
Reference vaccine strain of PRRSV	Detection for extraneous agents of C- strain vaccine	Produced	8ml	0	1	CHINA (PEOPLE'S REP. OF),
Reference Positive Serum of ASFV (lyophilized)	FAVN/NPLA/ELISA	Produced	82ml	0	1	CHINA (PEOPLE'S REP. OF),

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Indirect immunofluorescence assay (IFA) kit for CSFV (50µl/well, 200 well/kit,)	Detection for extraneous agents of swine vaccine	Produced	63 kits	0	1	CHINA (PEOPLE'S REP. OF),
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4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA Members?

No

## 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 WOA Standards for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
Comparison of blocking ELISA and neutralization test for CSFV antibody	Publication. Correlation Analysis of Neutralizing Antibody and E2 Antibody against Classical Swine Fever Virus. Acta Veterinaria et Zootechnica Sinica. 2024,55(10):4590-4596

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?

Yes

Name of the WOA Member Country receiving a technical consultancy	Purpose	How the advice was provided
RUSSIA VIETNAM	diagnostic techniques of CSF	Conference and online meeting

## 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:

The annual reports of the antigen and antibody surveillance and situation of CSFV from Key provinces in pig farms, slaughterhouses and CNAS certified laboratories in mainland China, update to CSFinfo database developed by CSFRL in IVDC.

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:

- 1.The annual surveillance report was submitted to Ministry of Agriculture and Rural Affairs with CSFV epidemiologic data was processed and analysed.
- 2.Peer-reviewed research papers were published in academic journals.
- 3.Organize national CSFV prevention and control training program and present our data in the conference
- 4.Attend academic meetings and give presentations.

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. Xia, Y. Li Y et al. Correlation Analysis of Neutralizing Antibody and E2 Antibody against Classical Swine Fever Virus. *Acta Veterinaria et Zootechnica Sinica*. 2024,55(10):4590-4596
2. Wu Y, Wang MW, Xia YJ, et al. Advances in the Research and Application of Monoclonal Antibodies against Classical Swine Fever Virus. *Chinese Journal of Veterinary Drug*. 2024, 58(10): 60-67.
3. Guan FH, Wang J, Song YF et al. Construction and rescue of infectious cDNA clone of classical swine fever virus based on eukaryotic CMV promoter. *Chinese Journal of Preventive Veterinary Medicine*. 2024, 46(6): 561-565.

b) International conferences:

1

Research progress on new diagnostic reagents for important animal diseases in China. Speaker : Qin Wang. XIII International Scientific and Practical Conference and Exhibition, Novosibirsk Russia (online), June 4-6, 2024

c) National conferences:

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1. Application of Chemiluminescence Immunoassay in disease diagnosis. swine disease Elimination Forum. The 11th Veterinary Congress.

Speaker: Qin Wang. Wuhan China. 25th August 2024.

2. Application of Chemiluminescence Immunoassay in disease diagnosis. The 40th anniversary celebration of the establishment of the Animal Infectious Diseases Branch of the Chinese Society of Animal Husbandry and Veterinary Medicine and the 21st National Academic Symposium. Speaker: Qin Wang. Nanjing, China. October 2024.

3. History of Research on Chinese C-strain Vaccines. 2024 Symposium on Production Technology of Animal Biological Products. Speaker: Qin Wang. Zaozhuang Shandong, China. 26-28th August 2024

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

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1. Submitted 2023 annual report of CSF Research Achievements of WOA/NCSEFL at IVDC to the Animal Husbandry and Veterinary Bureau of the Ministry of Agriculture and Rural Affairs of China (MARA).

2. Submitted 2023 annual surveillance report of CSF in key areas in China to the Animal Husbandry and Veterinary Bureau of MARA.

## 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 : 1

c) Hands-on training courses: 0

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
B	RUSSIA	50

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ABSL-3 CNAS certificates-2027	JPG	ABSL-3 CNAS certificates-2027.jpg
ISO17025 certificates-2030	JPG	ISO17025 certificates-2030.jpg

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Sampling, storage and transportation of CSFV samples CNAS	CNAS

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Handling CSFV tissue samples	CNAS
CSF viral RNA extraction	CNAS
Isolation of CSFV in cell culture	CNAS
CSFV TCID50 test	CNAS
Fluorescent antibody test for CSFV antigen detection	CNAS
Immunoperoxidase test for CSFV antigen detection	CNAS
Reverse-transcription nest polymerase chain reaction (CSFV)	CNAS
Reverse-transcription quantitative polymerase chain reaction (CSFV)	CNAS
Indirect ELISA Kit to Detect Antibody against Classical Swine Fever	CNAS
Blocking ELISA Kit to Detect the Antibody against Classical Swine Fever Virus	CNAS
Antibody virus neutralization test (rabbit)	CNAS
Florescent antibody virus neutralization test	CNAS
ASFV virus isolation viral isolation in porcine leukocytes and hemadsorption	CNAS

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

Yes

We have biosafety and biosecurity risk management systems which are in compliance with Chinese and international regulations and continually reviewed and improved through application. In addition, we have established Risk Assessment Report for Classical Swine Fever and Risk Assessment Report for African Swine Fever, which are also reviewed and updated regularly.

## 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?

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
4th Regional Meeting for Reference Centres in Asia and the Pacific, Tokyo, Japan 19th Jul, 2024	2024-07-18	Tokyo, Japan / Virtual	participant	Introduction of CSF ref laboratory at IVDC in China.
5th Regional Training on Swine Disease Diagnosis in Asia, Beijing, China, 30 Jul-2 Aug, 2024	2024-07-29	Beijing, China	short communications	Introduction of CSF ref laboratory at IVDC in China.
The 40th anniversary celebration of the establishment of the				

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Animal Infectious Diseases Branch of the Chinese Society of Animal Husbandry and Veterinary Medicine and the 21st National Academic Symposium.	2024-10-19	Nanjing, China	Speaker(Qin Wang)	Application of Chemiluminescence Immunoassay in disease diagnosis.
2024 Symposium on Production Technology of Animal Biological Products..	2024-08-26	Zaozhuang Shandong,China	Speaker( Qin Wang)	History of Research on Chinese C-strain Vaccines

## TOR10: NETWORK WITH WOAHA REFERENCE LABORATORIES

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

No

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

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHA 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 WOAHA Ref. Labs/ organising WOAHA Ref Lab
Participant determining laboratory's capability to conduct diagnostic tests for CSF. My lab is participating CSF inter laboratory proficiency tests 2024-2025 organised by WOAHA/EU Ref Lab for CSF from TiHo Hannover Germany.	participant	1	CSF ref lab in Beijing, CHINA

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

No

no

## TOR12: EXPERT CONSULTANTS



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

Yes

Kind of consultancy	Location	Subject (facultative)
Review and advice	China	Review the chapter on classical swine fever (3.09.03) the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals - updated vaccines and diagnostic table

29. Additional comments regarding your report:

No

NO