WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 28 mai 2024 09:47

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	classical swine fever
Address of laboratory:	No.376 Zhongzheng Rd., Tamsui Dist., New Taipei city, Taiwan 251018
Tel.:	+886226212111
E-mail address:	ylhuang@mail.nvri.gov.tw
Website:	http://eng.nvri.gov.tw/
Name (including Title) of Head of Laboratory (Responsible Official):	Yu-Linag Huang: Associate Researcher
Name (including Title and Position) of WOAH Reference Expert:	Dr. Yu-Liang Huang
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
CSF Virus neutralization test		10275	0
Direct diagnostic tests		Nationally	Internationally
CSF Virus isolation		414	0
CSF Real-time RT-PCR		28665	0

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?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

No

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?

No

9. Did your laboratory validate vaccines according to WOAH Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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
The collaboration of the development of the agriculture and food industry in Japan and Taiwan	2020-2025	To strategically cooperate for fostering the development of agricultural and food science and technology	National Institute of Animal Health, NARO	JAPAN

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:
The antigen and antibody surveillance of CSFV in domestic pigs and wild boars in Taiwan

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:
The antigen and antibody surveillance of CSFV in domestic pigs and wild boars in Taiwan

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. Liu HM, Deng MC, Huang YL, Tsai KJ, Chang HW, Chang CY. In vivo characterization of the superior fitness of classical swine fever virus genotype 2.1 to genotype 3.4. Vet Microbiol 285: 10854, 2023.

2. Huang YL, Meyer D, Postel A, Tsai KJ, Liu HM, Yang CH, Huang YC, Chang HW, Deng MC, Wang FI, Becher P, Crooke H, Chang CY. Identification of neutralizing epitopes on the D/A domain of the E2 glycoprotein of classical swine fever virus. Virus Res. 336:199-209, 2023.

3. Chen WT, Liu HM, Chang CY, Deng MC, Huang YL, Chang YC, Chang HW. Cross-reactivities and cross-neutralization of different envelope glycoproteins E2 antibodies against different genotypes of classical swine fever virus. Front Vet Sci. 10:1169766, 2023.
4. Chang CY, Tsai KJ, Deng MC, Wang FI, Liu HM, Tsai SH, Tu YC, Lin NN, Huang YL. Transmission of Classical Swine Fever Virus in Cohabitating Piglets with Various Immune Statuses Following Attenuated Live Vaccine. Animals (Basel). 21;13(3):368, 2023

b) International conferences:

7
38th World Veterinary Association Congress 2023. Taiwan. 26 Apr - 29 Apr 2023
1. Yu-Liang Huang. Classical swine fever surveillance in domestic pigs of Taiwan between 2021 and 2022(keynote speaker)

10th Asian Pig Veterinary Society (APVS) Congress. Taiwan. 30th July to 2nd Aug 2023
1. Yu-Liang Huang. Transmission of classical swine fever virus in cohabitation piglets of various immune statuses with attenuated live vaccine. (oral)
2. Hsin-Meng Liu, Ming-Chung Deng, Yu-Liang Huang, Kuo-Jung Tsai, Hui-Wen Chang, Chia-Yi Chang.The Competitive Fitness of Different Genotypes of Classical Swine Fever Virus under the Selective Pressure of Antibodies in Vitro. (oral)
3. Yu-Liang Huang, Ming-Chung Deng, Chwei-Jang Chiou, Chun Wang Genetic characterization of porcine circovirus 3 in Taiwan. (Poster)

The third Joint Meeting of Veterinary Science in East Asia. Taiwan. 2023 May 1-2.
1. Yu-Liang Huang, C Chang1, Ming-Chung Deng, Kuo-Jung Tsai. The molecular detection of atypical porcine pestivirus in weaned pigs in Taiwan. (keynote speaker)
2. Hui-Yu Chen, Cheng-Ju Pan, Chun Wang, Kuo-Jung Tsai, Yu-Liang Hung, Ming-Chung Deng. A survey on major swine viral diseases of wild animals in Taiwan. (oral)
3. Hsin-Meng Liu, Ming-Chung Deng, Yu-Liang Huang, Kuo-Jung Tsai, Hui-Wen Chang, Chia-Yi Chang. The Difference in Transmission between Genotype 2.1 and Genotype 3.4 of Classical Swine Fever Viruses by Serial Passage Infection in Pigs. (Poster)

c) National conferences:

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 WOAH 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	2023年新興傳染病組之TAF證書.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
CSF Virus neutralization test	ILAC-TAF
CSF Virus isolation	ILAC-TAF
CSF Real-time RT-PCR	ILAC-TAF

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

Yes

1. SOP of National exotic animal disease laboratory 2. Emergence plant of National exotic animal disease laboratory 3. Biosecurity of National exotic animal disease laboratory

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

Not applicable (Only WOAH Reference Laboratory designated for the disease)

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?

No

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?

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOAH REFERENCE LABORATORIES
Characterization of monoclonal antibodies against Pestiviruses	Testing of novel monoclonal antibodies against Classical Swine fever Virus using different pestivirus strains (including various genotypes of CSFV)	University of Veterinary Medicine Hannover, Institute of Virology EU and OIE Reference Laboratory for CSF
Epitope mapping of the structural protein E2 of pestiviruses	Target epitope characterization of monoclonals targeting pestiviruses E2 glycoprotein	Animal & Plant Health Agency, United Kingdom

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?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAH Member Countries
Asia-Pacific Terrestrial Proficiency Test Program 2023	PARTICIPANT	15	Swine diseases PCR	CHINESE TAIPEI,

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
To provide a consensus document of the WOAH Terrestrial Manual, chapter on classical swine fever	by email	Update the Terrestrial Manual, chapter on classical swine fever

29. Additional comments regarding your report:

No