WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 27 avril 2023 09:56

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	spring viraemia of carp
Address of laboratory:	1011 of Fuqiang Road, Futianqu, Shenzhen, Guangdong Province, 518045, P. R. China
Tel.:	86 755 25592980
E-mail address:	709274714@qq.com
Website:	
Name (including Title) of Head of Laboratory (Responsible Official):	Tikang Lu
Name (including Title and Position) of WOAH Reference Expert:	Hong Liu
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
Direct diagnostic tests		Nationally	Internationally
Cell culture (EPC, GCO, FHM)	yes	67	0
Conventional RT-PCR	yes	67	0
Real-time RT-PCR	no	67	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?

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
cell lines	cell culture	provide	50 mL	0	1	Europe
positive samples (control)	conventional RT-PCR and real-time RT-PCR	produced and provide	27 mg	0	1	Europe

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?

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.)
recombinase-aid amplification (RAA) assay combined with lateral flow dipstick (LFD)	in review (Chinese Journal of Preventive Veterinary Medicine)
recombinase-aid amplification (RAA) assay	in writing
validation on the cell culture, conventional RT-PCR and real-time RT-PCR	in writing

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?

Yes

NAME OF WOAH			NO. SAMPLES RECEIVED	NO. SAMPLES RECEIVED

MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	FOR PROVISION OF DIAGNOSTIC SUPPORT	FOR PROVISION OF CONFIRMATORY DIAGNOSES
CHINA (PEOPLE'S REP. OF)	2022-12-01	cell culture and conventional RT-PCR	67	5

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
CHINA (PEOPLE'S REP. OF)	update the domestic surveillence program, improve the ability of the test on the fry populations free from SVC, draft the biosecurity in the cyprinid hatchery farms	by on line meeting, e-mail, letter and we-chat

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
Comparative virulence of spring viremia of carp virus (SVCV) genotypes in two koi varieties	2018-2022	To determine the susceptibility of the 2 koi varieties to each virus strain and compare inter-genotype and intra-la geno - type relative virulence of SVCV in both koi types	USGS Western Fisheries research center, USA	UNITED STATES OF AMERICA
Validation of CEV PCR Methods and Phylogenetic Analysis of CEV in China	2021-2023	We will analyse the epidemiological data of CEV; The 5 CEV PCR diagnostic methods will be validated using the samples collected from China.	Centre for Envirument & Aquaculture Science	UNITED KINGDOM
Carp edema virus, a great threat for carp and koi farming in Henan, China	2018-2022	To provide evidence for the causative agent of virus-associated CAGR in Henan (China) since 2013.	Centre for Envirument & Aquaculture Science	UNITED KINGDOM
The whole genome analysis of SVCV isolates collected from worldwide	2022-2024	Describe the relation between the viral virulence and gene	USGS Western Fisheries research center, USA	UNITED STATES OF AMERICA

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:

1. P. R. China carried the domestic surveillance in 2021 with 205 samples collected from the national to local hatchery farms and growing-up farms, and ornamental fish farms. Only 1 sample was positive, showing that the infection of SVCV only distributed in very limited zones which is benefit from the fruitful prevention and control measures of aquatic animal health in China. (cited from the status analyzing report of important aquatic animal diseases in P. R. China, published by China Agriculture Press, 2022)

2. The status of the infection of SVCV is as follows (WOAH WAHIS):
1) in limited zone in P. R. China in 2021 and 2022;
2) present in Czech Republic in 2021 and 2022;
3) in limited zone in Romania in 2021 and 2022;

3. Only one information about the occurrence of the infection with SVCV in the world based on scientific literatures from 2020-2021 is as follows:
1) In July of 2018 and 2019, wild fish health surveys were conducted along the Wisconsin and Minnesota portions of the upper Mississippi River. Spring viremia of carp virus (SVCV) was isolated from Common Carp Cyprinus carpio as well as a newly identified host species, the Quillback Carpiodes cyprinus. (Katona R, Standish I, McCann R, Dziki S, Bailey J, Puzach C, Warg J, Leis E, Phillips K. Isolations of the Spring Viremia of Carp Virus in the Upper Mississippi River (USA), Including a New Host, the Quillback. J Aquat Anim Health. 2022 Jun;34(2):92-97. doi: 10.1002/aah.10153. Epub 2022 May 8. PMID: 35527365.)

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

Yes

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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
Spring viraemia of carp. The status analyzing report of important aquatic animal diseases in P. R. China, published by China Agriculture Press, 2022

b) International conferences:

0

c) National conferences:

2
1. Annual meeting on domestic aquatic animal health prevention and control, on line, Nov 8th, 2022
2. Training on improve the detection ability on important aquatic animal diseases, Nov. 22th, 2022

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 : 2

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	P. R. China	20000

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	centificate-2.pdf
CNAS-CL05:2009	pdf	centificate-1.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
cell culture, conventional RT-PCR, Real-tiime RT-PCR	China National Accreditation Service for Conformity Assessment (CNAS)

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

Yes

For sampling, preparing tissue homogenate, inoculate the homogenate onto cell lines and cell culture, we applied the accreditation of BSL-2 biorisk management system.

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

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.
ASIA-PACIFIC LABORATORY PROFICIENCY TESTING PROGRAM FOR AQUATIC ANIMAL DISEASES	participant	20	CSIRO AUSTRALIAN CENTRE FOR DISEASE PREPAREDNESS AUSTRALIAN ANIMAL HEALTH LABORATORY

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.

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

Comparative virulence of spring viremia of carp virus (SVCV) genotypes in two koi varieties	Study on the virulence	USGS Western Fisheries research center, USA
Validation of CEV PCR Methods and Phylogenetic Analysis of CEV in China	Study on the test and phylogenetic ananlysis	Centre for Envirument & Aquaculture Science, UK
Carp edema virus, a great threat for carp and koi farming in Henan, China	study on the pathogen and epidemiology	Centre for Envirument & Aquaculture Science, UK

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?

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
WOAH Commission meeting in Feb. 2022	on line	review of WOAH Standards
WOAH Commission meeting in Sep. 2022	on line	review of WOAH Standards
WOAH Ad hoc group meeting of fish susceptible species	on line	Assessment on the susceptible species of RSIV

29. Additional comments regarding your report:

No