World Organisation for Animal Health

Qingli Zhang - - CHINA_(PEOPLE'S_REP_OF)

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:**	White spot syndrome
***Address of laboratory:**	Chinese Academy of Fishery Sciences 106 Nanjing Road, Qingdao Shandong 266071
***Tel:**	+86 532 858 230 62 ext 812
***E-mail address:**	zhangql@ysfri.ac.cn
Website:	
***Name (including Title) of Head of Laboratory (Responsible Official):**	Dr. Qingli Zhang, Senior Researcher
***Name (including Title and Position) of WOAH Reference Expert:**	Dr. Qingli Zhang, Senior Researcher
***Which of the following defines your laboratory? Check all that apply:**	Academic institution

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
PCR	Yes	107	0
Real-time PCR	Yes	496	0
Histopathology	Yes	17	0
Direct diagnostic tests		Nationally	Internationally

	No		

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
WSSV nucleic acid	Real-time PCR	provide	10*5 reaction	0	1	CHINA (PEOPLE'S REP. OF),

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?

Yes

Name of the WOAH Member Country receiving a technical consultancy	Purpose	How the advice was provided
ITALY	GCP/GLO/352/NOR: 'Responsible use of fisheries and aquaculture resources for sustainable development' – Component 3: Enhance partner countries and aquaculture stakeholders	2024 workshop on Aquaculture Biosecurity and Antimicrobial Resistance (AMR) 13-18 May, 2024

	capacities to improve health of aquatic animals and plants through the PMP/AB	Qingdao, China
ITALY	Three FAO Reference Centers of China will be able to work closely to promote the development of sustainable fisheries and aquaculture by using diagnosis and early warning technology.	Official visit by Assistant Director General of the Food and Agriculture Organization of the United Nations (FAO) 25 October, 2024, Qingdao, China

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
Assessment for biosafety risk and ecological safety risk of aquaculture pathogens	Oct. 2023-Oct. 2025	Assessment for biosafety risk and ecological safety risk of shrimp viruses	Duke-NUS Medical School	SINGAPORE
Rapid detection of aquaculture pathogens	Oct. 2020-Oct. 2025	Developing the rapid detection method and kit for aquaculture pathogens	Michigan State University	UNITED STATES OF AMERICA

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 surveillance area for WSD involved in crustaceans in China and the shrimp stock samples import from Thailand and USA. The major surveillance target species were shrimp.

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:
We analysed and submitted the epidemiological data to the Bureau of Fisheries, Ministry of Agriculture and Rural Affairs, P.R. China.

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) Li C, Yang B, Wang M, Wan X, Yu W, Li W, Song X, Liu L, Li Q, Zhang Q. The 2023 National Proficiency Test for molecular detection of shrimp infectious myonecrosis virus (IMNV) in China. Aquaculture. 2025 Feb 15;596:741775.
(2) Guo, X. M., Xing, J. Y., Li, A., Qiu, L., Zhang, Q. L., & Huang, J. (2024). Establishment of a real-time PCR for the detection of decapod iridescent virus 1 (DIV1). Journal of fish diseases, 47(6), e13926.
(3) Jia, T., Liu, S., Yu, X., Xu, T., Xia, J., Zhao, W., ... & Zhang, Q. (2024). Prevalence investigation of translucent post-larvae disease (TPD) in China. Aquaculture, 583, 740583.
(4) Jia, T., Xu, T., Xia, J., Liu, S., Li, W., Xu, R.,Xia J. Zhao W, Wang W, Kong J., Zhang, Q. (2023). Clinical protective effects of polyhexamethylene biguanide hydrochloride (PHMB) against Vibrio parahaemolyticus causing translucent post-larvae disease (VpTPD) in Penaeus vannamei. Journal of Invertebrate Pathology, 201, 108002.
(5) Yang, M., Wang, B., Xu, R., Li, P., Xia, J., Jia, T., Li W, Zhang Y, Zhang, Q. (2024). Evaluation of combined disinfection methods of infectious myonecrosis virus (IMNV) in seawater using Pacific white shrimp (Penaeus vannamei). Aquaculture, 590, 741063.

b) International conferences:

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(1) Qingli Zhang and Bing Yang. 2024 workshop on Aquaculture Biosecurity and Antimicrobial Resistance (AMR). 13-18 May, 2024 Qingdao, China
(2) Bing Yang. 2024 Hong Kong-Zhuhai-Macao Marine Industry Development Forum & China-ASEAN Mariculture Industry Development Forum. 4-8 March, 2024 Zhuhai, China
(3) Qingli Zhang. 2024 "Belt and Road" International Training Workshop on Mariculture Technologies. 22 October-5 November, 2024 Qingdao, China
(4) Bing Yang. 2024 "Belt and Road" International Training Workshop on Mariculture Technologies. 22 October-5 November, 2024 Qingdao, China

c) National conferences:

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(1) Qingli Zhang. Crustaceans non-regulated aquatic animal disease seed farm construction points and precautions. National training cause. May, 9-10th,2024 XiNing, China
(2) Qingli Zhang and Xiaoyuan Wan. Report for WSSV testing in the National Laboratory Proficiency Testing 2024. Ministry of Agriculture and Rural Affairs, PRC. 10 October, 2024 Suzhou, China
(3) Qingli Zhang. Epidemic situation of shrimp blight and prevention and control suggestions. The second plenary meeting of the Expert Committee on Aquaculture Disease Control of the Ministry of Agriculture and Rural Affairs. November 26 - November 27, 2024 Yantai, China
(4) Bing Yang. Comments on the report of the Aquatic Animal Health Standards. Session of WOAH Aquatic Animal Health Code and WOAH Manual of Diagnostic Tests for Aquatic Animals. Introduction of WOAH reference laboratory on WSD and IHHN. 7 May 2024 and 18 November 2024.
(5) Qingli Zhang. Shrimp emerging Disease and Biosafety. Shanghai Crustacean Health Breeding and Genetic Breeding Symposium, December 27-28, 2024 Shanghai, China.

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 : 1

b) Seminars : 2

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
B	ITALY	60
B	INDONESIA	19
A	MALAYSIA	3
C	INDIA	3

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	4. CNAS认可证书(中英文)(有效期:2024-03-05至2030-03-04).pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
White spot virus: Diagnostic protocols for white spot disease Part2: Nested PCR method GB/T 28630.2-2012; Manual of Diagnostic Tests for Aquatic Animals (WOAH , 2024) Chapter 2.2.9 White spot disease	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

P2 laboratory certification and laboratory related management system

TOR9: SCIENTIFIC MEETINGS

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

Yes

National/ International	Title of event	Co-organiser	Date	location	No. Participants
International	2024 workshop on Aquaculture Biosecurity and Antimicrobial Resistance (AMR)	FAO, WOAH, NACA and China	2024-05-12	Qingdao, China	60

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?

No

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?

No

We did not organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen during the past 2 years

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?

No

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
To participate in Asia-Pacific Laboratory Proficiency Testing Program	Participant	11	Asia-Pacific Laboratory Proficiency Testing Program	AUSTRALIA,

To organize National Testing Programme for Aquatic Animal Disease Laboratories in Aquatic Animal Epidemic Prevention System of China. To provide testing standards and samples for WSSV, and to analyze the results from the inter laboratory test comparisons	Organiser	177	National Testing Programme for Aquatic Animal Disease Laboratories in Aquatic Animal Epidemic Prevention System of China	CHINA (PEOPLE'S REP. OF),

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No