

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Decapod iridescent virus 1 (DIV1)
*Address of laboratory:	No. 106, Nanjing Road, Qingdao, China
*Tel:	+8653285823062
*E-mail address:	qiuliang@ysfri.ac.cn
Website:	http://www.yxfri.ac.cn/jgsz/kyxt/yzswjbkzyfzblxyjs.htm
*Name (including Title) of Head of Laboratory (Responsible Official):	Professor Qingli Zhang
*Name (including Title and Position) of WOA Reference Expert:	Associate Professor Liang Qiu
*Which of the following defines your laboratory? Check all that apply:	Research agency

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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Direct diagnostic tests			
PCR	Yes	31	0
Real-time PCR	Yes	755	0
Histopathology	Yes	40	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?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA Members?

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 WOAHS Standards for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
the nested PCR method for DIV1 targeting ATPase gene	Xing, J.Y., Li, A.Q., Guo, X.M., Wang, M., Guan, X., Qiu, L. *, Zhang, Q.L., Huang, J. (2024). Optimizing the nested PCR method for Decapod iridescent virus 1 (DIV1) targeting ATPase gene by reselecting the inner primers, Journal of Invertebrate Pathology, 207: 108212. DOI: 10.1016/j.jip.2024.108212

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

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

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOAHS Member Country receiving a technical consultancy	Purpose	How the advice was provided
AUSTRALIA CANADA CHILE CHINA (PEOPLE'S REP. OF) GEORGIA HONG KONG INDIA SINGAPORE SPAIN UNITED KINGDOM UNITED STATES OF AMERICA	Define the farm-level EWS scope and functions for aquatic animal health (AAH), prioritizing WSS in shrimp and streptococcosis in tilapia as initial use cases. Form a multi-stakeholder Technical Working Group (TWG) spanning competent authorities, research institutes, industry and international organizations (e.g. WOAHS, WorldFish, AU-IBAR, NACA) to steer development, piloting and uptake. Outline resourcing and collaboration mechanisms for sustained development.	Workshop on the Development of a Farm-Level Early Warning System (EWS) for Aquatic Animal Diseases 3-5 November 2025 Qingdao, China

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

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 major surveillance target species were shrimp in China. In total, DIV1 was detected of samples with an average (within batch) positive rate of 5.0 %.

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

Yes

Liang Qiu - - PEOPLE'S_REPUBLIC_OF_CHINA

If the answer is yes, please provide details of the data collected:

We submitted the data to 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:

2

(1) Xing, J.Y., Guo, X.M., Wang, M., Guan, X., Qiu, L.*, Li, A.Q.*, Zhang, Q.L., Huang, J. *Advances in Diagnostic Methods of Infection with Decapod Iridescent Virus 1. Acta Veterinaria et Zootechnica Sinica*. 2025 56(4): 1549-1560.

(2) Guo, X.M., Wang, G.H., Chen, X.L., Xing, J.Y., Qiu, L.*, Yao, J.Y.*, Huang, J. *Penaeus chinensis nearing a critical threshold of susceptibility to Decapod iridescent virus 1 (DIV1). Fish and Shellfish Immunology*. 2025 165: 110523. DOI: 10.1016/j.fsi.2025.110523

b) International conferences:

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(1) *Workshop on the Development of a Farm-Level Early Warning System (EWS) for Aquatic Animal Diseases*. 3-5 November 2025 Qingdao, China

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 WOA Members?

Yes

a) Technical visit : 1

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
A	CHINA (PEOPLE'S REP. OF)	40
B	CHINA (PEOPLE'S REP. OF)	40

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
Decapod iridescent virus 1: Nested PCR and DIV1-MCP real-time PCR Manual of Diagnostic Tests for Aquatic Animals (WOAH, 2025) Chapter: 2.2.3. Infection with Decapod iridescent virus 1	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 WOA?

Yes

National/ International	Title of event	Co-organiser	Date	location	No. Participants
International	Workshop on the Development of a Farm-Level Early Warning System (EWS) for Aquatic Animal Diseases	FAO, WOA and China	2025-11-02	Qingdao, China	40

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

No

TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

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

No

24. Are you a member of a network of WOA Reference Laboratories designated for the same pathogen?

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOA Reference Laboratories designated for the same pathogen during the past 2 years?

No

None

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

No

None

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No