

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	Infectious hypodermal and haematopoietic necrosis
*Address of laboratory:	
*Tel:	+86 532 858 230 62
*E-mail address:	yangbing@ysfri.ac.cn
Website:	
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Qingli Zhang, Senior Researcher
*Name (including Title and Position) of WOAHO Reference Expert:	Bing Yang, 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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
PCR	Yes	40	0
Real-time PCR	Yes	570	0
Histopathology	Yes	50	0
Direct diagnostic tests			
0	No	0	0

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAHO?

No

3. Did your laboratory supply standard reference reagents (nonWOAHO-approved) and/or other diagnostic reagents to WOAHO Members?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHO Members?

TOR3: NEW PROCEDURES

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6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

7. Did your laboratory validate diagnostic methods according to WOAHP Standards for the designated pathogen or disease?

No

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

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

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOAHP Member Country receiving a technical consultancy	Purpose	How the advice was provided
AUSTRALIA CANADA CHILE CHINA (PEOPLE'S REP. OF) GEORGIA HONG KONG INDIA ITALY NORWAY SINGAPORE SPAIN THAILAND UGANDA UNITED KINGDOM UNITED STATES OF AMERICA VIETNAM ZAMBIA	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. WOAHP, WorldFish, AU-IBAR, NACA) to steer development, piloting and uptake. Outline resourcing and collaboration mechanisms for sustained development, capacity building and country adoption.	Workshop on the Development of a Farm-Level Early Warning System (EWS) for Aquatic Animal Diseases 3-5 November 2025 Qingdao, China
CHINA (PEOPLE'S REP. OF) SRI LANKA	Consultation of IHNNV in Shrimp (<i>Penaeus monodon</i>)	Communication and exchange in 2025 via email
CHINA (PEOPLE'S REP. OF) FRANCE UNITED STATES OF AMERICA	The specificity of molecular methods to clearly differentiate between genetic sequences and endogenous viral elements (EVEs)	Consultation on IHNNV Diagnostic Challenges on line 17 July 2025 Paris, France

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

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, IHNNV was detected of samples with an average (within batch) positive rate of 4.6%.

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:

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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) Ruo-Xuan LÜ, Xiu-Hua Wang, Mei-Feng Wang, Xin-Yu Lian, Chen Li, Hua Xu, Wei-Li Yin, Peng Jia, Bing Yang *. Infectious Hypodermal and Hematopoietic Necrosis Virus Detection in Shrimp Farming Pond Sediments. *Progress in Fishery Sciences*. 2025 46(3): 160-169

(2) Xin-Yu Lian, Xiu-Hua Wang, Chen Li, Qing-Li Zhang, Ruo-Xuan Lu, Zi-Yue Gou, Hua Xu, Mei-Feng Wang, Peng Jia, Bing Yang*. Evaluation of the finders technology associates cards for storage and molecular detection of Infectious hypodermal and hematopoietic necrosis virus (IHHNV) DNA [J]. *Journal of Virological Methods*. 2025: 338, 115209 DOI: 10.1016/j.jviromet.2025.115209

b) International conferences:

1

(1) Qingli Zhang and Bing Yang. 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:

0

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 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	ITALY	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

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Infectious hypodermal and hematopoietic virus: Polymerase chain reaction (PCR) method for infectious hypodermal and hematopoietic necrosis virus (IHHNV) GB/T 25878-2010 Manual of Diagnostic Tests for Aquatic Animals (WOAH, 2025) Chapter 2.2.5 Infectious hypodermal and hematopoietic necrosis

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 WOAHP?

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, WOAHP 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 WOAHP?

No

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

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

No

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

No

No

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

No

No

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Comments of the specificity of molecular methods to clearly differentiate between genetic sequences and endogenous viral elements (EVEs)	WOAHP (Paris, France); Qingdao, China	Consultation on IHHNV Diagnostic Challenges on line

29. Additional comments regarding your report:

No

No