

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-21 11:59:43

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Infection with white spot syndrome virus
Address of laboratory:	Chinese Academy of Fishery Sciences 106 Nanjing Road, Qingdao Shandong 266071 CHINA (PEOPLES REP. OF)
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Website:	
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Qingli Zhang, Senior Researcher
Name (including Title and Position) of OIE Reference Expert:	Dr. Qingli Zhang, Senior Researcher
Which of the following defines your laboratory? Check all that apply:	Academic

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Nested-PCR	Yes	315	3
Real-time PCR	Yes	79	0
LAMP	Yes	820	0
Histopathology	Yes	5	0
TEM	Yes	3	0
Direct diagnostic tests			

ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards. To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
WSSV nucleic acid	PCR	provide	10 ⁵	0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
High Sensitive Detection Kits for WSSV	LAMP	produced	19	0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
THAILAND	01-28-2021	2	0
THAILAND	07-16-2021	1	0

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
INDONESIA	OIE twinning project of China and Indonesia on WSD and IHNN, The third year of the project consists of a visit by the expert from the Parent laboratory , Candidate laboratory will participate an annual ring test organized by Parent laboratory.	All the activities have been rescheduled and accomplished the objectives according to the rearrangement via online virtual meeting in 2021

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
OIE twinning project of China and Indonesia on WSD and IHNN	January, 2021-December, 2021	Twinning project to get OIE reference laboratory status for Candidate Laboratory	The Fish Quarantine and Inspection - Standard Testing Laboratory (FQI-STL), Republic of Indonesia	INDONESIA
Maritime Silk Road Training Course on Mariculture Technologies	25-26 October 2021	Jointly create a sustainable and healthy development path for the world aquaculture industry	NACA and 29 countries	

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:
The surveillance area for IHHN involved in 10 provinces of China. The major surveillance target species were shrimp. In total, WSSV was detected of samples with an average (within batch) positive rate of 14.9%

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

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.

13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)

a) Articles published in peer-reviewed journals: 3

(1) Tingting Xu, Xiujuan Shan, Yingxia Li, Tao Yang, Guangliang Teng, Qiang Wu, Chong Wang, Kathy F.J. Tang, Qingli Zhang*, Xianshi Jin. White spot syndrome virus (WSSV) prevalence in wild crustaceans in the Bohai Sea. *Aquaculture*, 2021, 736810.

(2) Zou RF, Cai M, Liu QH. LvCSN5 is involved in WSSV infection via interaction with wsv006. *Dev Comp Immunol*. 2021 Jan;114:103870. doi: 10.1016/j.dci.2020.103870.

(3) Ren XC, Liu QH. LvCPG2 facilitated WSSV infection by interaction with VP26 and VP28. *Fish Shellfish Immunol*. 2021 Nov;118:313-320. doi: 10.1016/j.fsi.2021.09.019.

b) International conferences: 10

(1) Qingli Zhang, Aquatic disease prevention and control system: Biosecurity and Biosafety. Training Course on Diseases Prevention and Control of Marine shrimp for Indonesia. 2-3 September 2021, Qingdao, China.

(2) Qingli Zhang, R&D, application of rapid detection kit for aquatic pathogens. Training Course on Diseases Prevention and Control of Marine shrimp for Indonesia. 2-3 September 2021, Qingdao, China.

(3) Bing Yang, Profile of WSD and IHHN OIE reference laboratory activities based on Quality management system. Training Course on Diseases Prevention and Control of Marine shrimp for Indonesia. 2-3 September 2021, Qingdao, China.

(4) Qingli Zhang. 3rd meeting of ad hoc Steering Committee of the Regional Collaboration Framework on Aquatic Animal Health in Asia and the Pacific. 6-7 December 2021, Tokyo.

(5) Bing Yang. 3rd meeting of ad hoc Steering Committee of the Regional Collaboration Framework on Aquatic Animal Health in Asia and the Pacific. 6-7 December 2021, Tokyo.

(6) Bing Yang. Implementation of OIE Twinning Project on WSD and IHHN between China and Indonesia. Final workshop OIE twinning laboratory program between Fish Quarantine and Inspection - Standard Testing Laboratory (FQI-STL), The Republic of Indonesia and The Yellow Sea Fisheries Research Institute (YSFRI), The People's Republic of China. 23 November 2021, Jakarta - Qingdao - Tokyo.

(7) Qingli Zhang. Aquatic disease prevention and control system: Biosecurity and Biosafety. Final workshop of OIE twinning laboratory program between Fish Quarantine and Inspection - Standard Testing Laboratory (FQI-STL), The Republic of Indonesia and The Yellow Sea Fisheries Research Institute (YSFRI), The People's Republic of China. 23 November 2021, Jakarta - Qingdao - Tokyo.

(8) Bing Yang. Profile of WSD and IHHN OIE reference laboratory activities (2019-2021). Meeting of OIE twinning laboratory program between Fish Quarantine and Inspection - Standard Testing Laboratory (FQI-STL), The

Republic of Indonesia and The Yellow Sea Fisheries Research Institute (YSFRI), The People's Republic of China. 9 September 2021, Jakarta - Qingdao.

(9) Bing Yang. Profile of WSD and IHNV OIE Reference Laboratory Activities Based on Quality Management System. Maritime Silk Road Training Course on Mariculture Technologies. 26 October 2021, Qingdao, China.

(10) Qingli Zhang. R&D, Application of Rapid Detection Kit for Aquatic Pathogens. Maritime Silk Road Training Course on Mariculture Technologies. 25 October 2021, Qingdao, China.

c) National conferences: 3

(1) Yang B, Li C. Report for IHNV testing in the National Laboratory Proficiency Testing 2021. Ministry of Agriculture and Rural Affairs, PRC.

(2) Yang B. Comments on the report of the Aquatic Animal Health Standards. Session of OIE Aquatic Animal Health Code and OIE Manual of Diagnostic Tests for Aquatic Animals. 10 June 2021 and 19 November 2021, Qingdao, China.

(3) Zhang Qingli. The basic situation and prevention and control plan of the shrimp epidemic in 2021, the 2021 annual meeting of the Shrimp Industrial Aquaculture Science and Technology Innovation Alliance. October 16-17, 2021; Dongying, Shandong, China.

d) Other:

(Provide website address or link to appropriate information) 4

(1) Quarterly Aquatic Animal Disease Report of the Maricultural Organism Disease Control and Molecular Pathology Laboratory, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences to the Ministry of Agriculture of China, the first quarter of 2021.

(2) Quarterly Aquatic Animal Disease Report of the Maricultural Organism Disease Control and Molecular Pathology Laboratory, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences to the Ministry of Agriculture of China, the second quarter of 2021.

(3) Quarterly Aquatic Animal Disease Report of the Maricultural Organism Disease Control and Molecular Pathology Laboratory, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences to the Ministry of Agriculture of China, the third quarter of 2021.

(4) Quarterly Aquatic Animal Disease Report of the Maricultural Organism Disease Control and Molecular Pathology Laboratory, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences to the Ministry of Agriculture of China, the fourth quarter of 2021.

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries

To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

Yes

a) Technical visits: 0

b) Seminars: 3

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	Indonesia (two seminars)	200
b	Bangladesh, Bhutan, Brazil, China, Hong Kong, Cote d'Ivoire, Egypt, Philippines, France, India, Indonesia, Iran, Kenya, Malaysia, Mexico, Myanmar, Nepal, Nigeria, Oman, Pakistan, Peru, Romania, Russia, Singapore, Solomon Islands, Sri Lanka, Thailand, Tunisia, Vietnam	255
c	Indonesia	40

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO/IEC 17025	2020.7.31 CNAS laboratory accreditation certificate.pdf

16. 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 (OIE, 2021) Chapter 2.2.8 White spot disease 4.3.1.2.4.1.	China National Accreditation Service for Conformity Assessment, CNAS

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

Yes

(See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*, Chapter 1.1.4)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

Yes

National/ International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
International	Training Course on Diseases Prevention and Control of Marine shrimp for Indonesia	China	2-3 September 2021	Qingdao, China	40

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
OIE twinning project of China and Indonesia on WSD and IHNN	9 September 2021	Jakarta, Indonesia; Qingdao, China (virtual meeting)	speaker	Profile of WSD and IHNN OIE reference laboratory activities (2019-2021)
OIE twinning project of China and Indonesia on WSD and IHNN (final workshop)	23 November 2021	Jakarta, Indonesia; Qingdao, China; Tokyo, Japan (virtual meeting)	speaker	1. Implementation of OIE Twinning Project on WSD and IHNN between China and Indonesia 2. Aquatic disease prevention and control system: Biosecurity and Biosafety
3rd meeting of ad hoc Steering Committee of the Regional Collaboration Framework on Aquatic Animal Health in Asia and the Pacific	6-7 December 2021	Tokyo, Japan	short communication	Discussion on aquaculture Biosecurity, new name for the Regional Collaboration Framework, Updates on aquatic pathogen detection using eDNA.

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

Yes

Purpose of the proficiency tests: ¹	Role of your Reference Laboratory (organiser/participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.
Asia-Pacific Laboratory Proficiency Testing Program	participant	26	P.R.China, Burnei Darussalam, India, Indonesia, Iran, Malaysia, New Caledonia, Philippines, Sri Lanka, Thailand, Vietnam

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

22. Did your laboratory collaborate with other OIE Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: <http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

Purpose for inter-laboratory test comparisons ¹	No. participating laboratories	Region(s) of participating OIE Member Countries
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 interlaboratory test comparisons	171	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
To participate in Asia-Pacific Laboratory Proficiency Testing Program	26	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

Yes

Kind of consultancy	Location	Subject (facultative)
OIE twinning project between China- Indonesia on WSD and IHNN	Qingdao, China; Jakarta, Indonesia	The Candidate Laboratory and Parent Laboratory held virtual meeting and accomplished the activities in 2021 and had supported by OIE
Feedback on the new key and explanatory text in the Manual of Tests for Aquatic Animals Table 4.1. OIE recommended diagnostic methods and their level of validation for surveillance of apparently healthy animals and investigation of clinically affected animals	OIE(Paris, France); Qingdao, China	Comments on the explanatory text for Table 4.1 to OIE

25. Additional comments regarding your report: