

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-28 13:16:10

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Infection with white spot syndrome virus
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Website:	
Name (including Title) of Head of Laboratory (Responsible Official):	Dr.Qing-Li Zhang, Senior Researcher
Name (including Title and Position) of OIE Reference Expert:	Dr.Qing-Li 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	225	8
Histopathology	Yes	2	2
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 ⁴ reactions	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	36	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?

No

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 second year of the project consists of a training for Candidate laboratory staff in Parent laboratory for fourteen days, a visit by the expert from the Parent laboratory visit Candidate 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 2020 due to the COVID-19 pandemic between the Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences (YSFRI), China, and the Fish Quarantine and Inspection - Standard Examination Laboratory (FQI-SEL), Indonesia

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	September, 2020-December, 2021	Twinning project to get OIE reference laboratory status for candidate laboratory	Fish Quarantine and Inspection-Standard Examination Laboratory in Jakarta, Republic of Indonesia	INDONESIA
The 2nd 2020 Training on Mariculture Technologies for the Asia-Pacific Region ---- Aquaculture Biosecurity	15-18 December 2020	Stressing the importance of biosecurity in the sustainable development of aquaculture and are developing guidelines and recommendations to build an aquaculture biosecurity system at national and establishment levels	NACA, FAO, OIE and 26 countries	CHINA (PEOPLE'S REP. OF)

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 WSD 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 10.2%

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: 1

Xu, T., Shan, X., Yang, T., Teng, G., Wu, Q., Wang, C., Tang, K. F. J., Jin, X., Zhang, Q*. Investigation of white spot syndrome virus (WSSV) infection in wild crustaceans in the Bohai Sea. <https://doi.org/10.1101/2020.08.12.247486>.

b) International conferences: 3

- (1)Qingli Zhang. R&D, application of rapid detection kit for aquatic pathogens. The 1st 2020 Training on Mariculture Technologies for the Asia-Pacific Region. 22-25 September 2020, Qingdao, China.
- (2)Qingli Zhang. Operational Training of Rapid Detection for Aquaculture Pathogens. The 2nd 2020 Training on Mariculture Technologies for the Asia-Pacific Region ---- Aquaculture Biosecurity. 15-18 December 2020, Qingdao, China.
- (3)Jie Huang. Theory and Framework to Establish the Biosecurity Plan for the Aquaculture System. 15-18 December 2020, Qingdao, China.

c) National conferences: 6

- (1)Qingli Zhang. Preliminary study on pathogenic ecological risk of cultured shrimp. The 4th Annual Meeting of Qingdao Ecological Society. 20-21 November 2020, Qingdao, China.
- (2)Qingli Zhang. Investigation and Research Progress of New Shrimp Diseases. National Symposium on Prevention and Control of Aquatic Animal Diseases. 18-20 November 2020, Fuzhou, China.
- (3)Qingli Zhang. Shrimp epidemiology and biological security prevention and control.China Shrimp Seed Industry Innovation Alliance 2020 Annual Meeting. 1-2 November 2020, Changsha, China.
- (4) Yang B, Wan X-Y. Report for WSSV testing in the National Laboratory Proficiency Testing 2020. Ministry of Agriculture and Rural Affairs, PRC.
- (5) Yang B. Framework of aquatic animal epidemic prevention standardization. Training course on aquatic standardization 2020. Ministry of Agriculture and Rural Affairs, PRC.
- (6) Yang B. WSD and IHNN OIE reference laboratory activities.Training course for Shrimp disease diagnosis.7-11, December 2020,Qingdao,China.

d) Other:

(Provide website address or link to appropriate information) 5

- (1) Huang J, Zhang QL, Qiu L, XU TT, Sang SW, Wan XY, Liang Y, Yang B, Li C. Detection method by loop-mediated

isothermal amplification for white spot syndrome virus. Industry Standards of the People's Republic of China (In press).

(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 first quarter of 2020.

(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 second quarter of 2020.

(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 third quarter of 2020.

(5) 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 2020.

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: 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	Indonesia	15
b	Philippines, China, Myanmar, Indonesia, Bangladesh, Cambodia, Malaysia, Thailand, Kuwait, Egypt, India, Cameroon, Ecuador, New Caledonia, Saudi Arabia, Nigeria, Brazil, USA, Iran, Brunei Darussalam, Singapore, Norway, Italy, Pakistan, France, Kenya	300
c	Indonesia	15

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, 2019) 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 “bio-risk 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
National	Training course for Shrimp disease diagnosis	China	7-11, December 2020	Qingdao, China	9
International	The 2nd 2020 Training on Mariculture Technologies for the Asia-Pacific Region -- Aquaculture Biosecurity	NACA, OIE, FAO	15-18 December 2020	Qingdao, China (Virtual meeting)	300

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	15, September 2020	Jakarta, Indonesia; Qingdao, China; Paris France (virtual meeting)	Short communications	Reschedule OIE twinning program of 2020 activities due to the COVID-19
OIE twinning project of China and Indonesia on WSD and IHNN(workshop)	22-23, October 2020	Jakarta, Indonesia; Qingdao, China; (virtual meeting)	speaker	1.Deletion and Variation Analysis of WSSV in China 2. Detection White Spot Syndrome Virus and Infectious Hypodermal and Haematopoietic Necrosis Virus using Fluorescent Probe-Based Lateral Flow Nucleic Acid Assay method 3. Rapid test using LAMP for shrimp virus diseases
OIE twinning project of China and Indonesia on WSD and IHNN(final meeting of 2020)	1, December 2020	Jakarta, Indonesia; Qingdao, China; (virtual meeting)	speaker	1. Evaluation of the first year twinning program 2. Surveillance study on shrimp diseases

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 inter-laboratory test comparisons	142	<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 IHHN	Qingdao, China; Jakarta, Indonesia	The Candidate Laboratory and Parent Laboratory held virtual meeting and accomplished the activities in 2020 and had supported by OIE

25. Additional comments regarding your report: