

OIE Reference Laboratory Reports Activities

Activities in 2019

This report has been submitted : 2020-01-22 16:24:34

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	White spot disease
Address of laboratory:	No. 500, Sec. 3 Anming Road Annan District Tainan City 709 CHINESE TAIPEI
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Name (including Title) of Head of Laboratory (Responsible Official):	Prof./Dr. Grace Chu-Fang Lo
Name (including Title and Position) of OIE Reference Expert:	Prof./Dr. Grace Chu-Fang Lo
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		Nationally	Internationally
NA	NA	NA	NA
Direct diagnostic tests		Nationally	Internationally
IQ2000(OCR)	Yes	1003	82
Real-time PCR for genome copy	Yes	65	0

**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 Antibody against WSSV VP664	ELISA, Western blot	Produced	20 micro-liter	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
CHINA (PEOPLE'S REP. OF)	Feb.	4	0
CHINA (PEOPLE'S REP. OF)	Mar.	10	0
CHINA (PEOPLE'S REP. OF)	Mar.	12	0
CHINA (PEOPLE'S REP. OF)	May	6	0
JAPAN	Nov.	50	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
JAPAN	Lab technical training, inter- calibration, and prevention of occurrence of WSD in shrimp farms	In loco and remote assistance
VIETNAM	Monitor and prevention of occurrence of WSD in shrimp farms	In loco and remote assistance

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
Screening for WSSV resistant shrimp	2 years	Screening of WSSV resistant shrimp for culturing	TAKUSUI shrimp farm	JAPAN
WSSV/shrimp interaction	5 years	Mechanisms of anti-viral protein interaction and signaling pathway	Chulalongkorn University, Thailand	THAILAND

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:
For scientific output

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:
To publish scientific paper

**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: 2

1. Apitanyasai K, Chang CC, Ng TH, Liu CH, Lo CF, Lin SS, Wang HC (2019) Penaeus vannamei serine proteinase inhibitor 7 (LvSerp7) acts as an immune brake by regulating the proPO system in AHPND-affected shrimp. Dev. Comp. Immunol. Revision. Ranking: 0.0412 (ZOOLOGY, 7/170), IF: 3.119.

2. He ST, Lee DY, Tung CY, Li CY, Wang HC (2019) Glutamine metabolism in both the oxidative and reductive directions is triggered in shrimp immune cells (hemocytes) at the WSSV genome replication stage to benefit virus replication. Front. Immunol. 10: 2102. Ranking: 0.272 (IMMUNOLOGY, 43/158), IF: 4.716.

b) International conferences: 2

1. Wang HC, Huang JY, Ding JY, Lo CF. (2019) Moving shrimp research from benchtop to pondside: generating new knowledge and using it to breed disease-resistant shrimp. The Fifth FRDC Australasian Scientific Conference on Aquatic Animal Health & Biosecurity. Cairns, Australia. July 8-12, 2019. (Oral presentation)

2. Huang JY, Lo CF. (2019). Accelerated breeding of commercially viable WSSV-resistant black tiger prawns. OIE Global Conference on Aquatic Animal Health. Santiago, Chile, 2-4 April 2019. (Oral presentation)

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 1

1. International Center for the Scientific Development of Shrimp Aquaculture
<https://sites.google.com/view/icdsa/>

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: 8
- b) Seminars: 0
- 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	Japan	5
a	Vietnam	1
a	Thailand	2

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	ISO Scan E.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
WSSV PCR detection	Taiwan Accreditation Foundation

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?

No

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
1st meeting of the ad hoc Steering Committee of the Regional Collaboration Framework on Aquatic Animal	11/2019	Thailand	OIE expert	NA
Global Conference on Aquatic Animal health in Santiago	04/2019	Chile	Speaker	Accelerated breeding of commercially viable WSSV-resistant black tiger prawns
Regional AAH teleconference_OIE expert consultation meeting on Aquatic Animal diagnosis	03/2019	In loco	OIE expert	NA

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?

No

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
PCR for WSSV detection	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

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)
1st meeting of the ad hoc Steering Committee of the Regional Collaboration Framework on Aquatic Animal	Thailand	Regional Meeting of OIE Reference Centres in Asia and the Pacific

25. Additional comments regarding your report: