

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-02-21 04:49:35

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Acute hepatopancreatic necrosis disease
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Name (including Title) of Head of Laboratory (Responsible Official):	Grace Lo
Name (including Title and Position) of OIE Reference Expert:	Grace 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
IQ2000 (PCR)	YES	664	0
Direct diagnostic tests		Nationally	Internationally

**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?

No

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?

No

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
AHPND/shrimp interaction	2 years	To find the AHPND toxin targeting mechanisms	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:
To collect and analyze AHPND-related samples

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 collect and analyze AHPND-related samples

**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: 4

1. Lin SJ, Huang JY, Le PT, Lee CT, Chang CC, Yang YY, Su CY, Lo CF*, Wang HC*. (2022) Expression of the AHPND toxins PirAvp and PirBvp is regulated by components of the *Vibrio parahaemolyticus* quorum sensing (QS) system. *International Journal of Molecular Sciences*. (In Revision.)
2. Luangtrakul W, Boonchuen P, Jaree P, Kumar R, Wang HC*, Somboonwiwat K*. (2021) Cytotoxicity of *Vibrio parahaemolyticus* AHPND toxin on shrimp hemocytes, a newly identified target tissue, involves binding of toxin to aminopeptidase N1 receptor. *PLoS Pathogens*. 17: e1009463. Ranking: 0.14 (MICROBIOLOGY, 19/135) IF: 6.218.
3. Kumar R, Tung TC, Ng TH, Chang CC, Chen YL, Chen YM, Lin SS, Wang HC* (2021) Metabolic alterations in shrimp stomach during acute hepatopancreatic necrosis disease and effects of taurocholate on *Vibrio parahaemolyticus*. *Front. Microbiol.* 12:631468. Ranking: 0.25(MICROBIOLOGY, 34/135), IF: 4.236.
4. Chen YL, Kumar R, Liu CH, Wang HC* (2021) In *Litopenaeus vannamei*, the cuticular chitin-binding proteins LvDD9A and LvDD9B retard AHPND pathogenesis but facilitate WSSV infection. *Dev. Comp. Immunol.*, 120, p103999. Ranking: 0.0238 (ZOOLOGY, 4/168), IF: 3.192.

b) International conferences: 3

- The 3rd OIE Regional Meeting for OIE Reference Centres in Asia and the Pacific
2. The 3rd International Symposium on The Control of Aquatic Animal Diseases (2021 CAAD)
3. The 3rd meeting of the steering committee of the Regional Collaboration Framework

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 1

By internet:

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?

No

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/ICE 17025	2020-2023 ISO17025 證書 (PDF).pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
AHPND 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
The 3rd meeting of the steering committee of the Regional Collaboration Framework	12/2021	Virtual meeting	Speaker, expert	Updates on the project: Collection and Evaluation of Existing Test Method for Acute hepatopancreatic necrosis disease (AHPND)
The 3rd OIE Regional Meeting for OIE Reference Centres in Asia and the Pacific	02/2021	Virtual meeting	expert	

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
PT for AHPND PCR 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)
The 3rd meeting of the steering committee of the Regional Collaboration Framework	Virtual meeting	The Steering committee meeting
The 3rd OIE Regional Meeting for OIE Reference Centres in Asia and the Pacific	Virtual meeting	The regional meeting in Asia and the Pacific

25. Additional comments regarding your report: