

# OIE Reference Laboratory Reports Activities

## *Activities in 2020*

**This report has been submitted : 2021-01-19 22:32:50**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	Infection with Hepatobacter penaei (necrotising hepatopancreatitis)
<b>Address of laboratory:</b>	Aquaculture Pathology Laboratory School of Animal and Comparative Biomedical Sciences University of Arizona 1117 E Lowell St. Tucson Arizona 85721 UNITED STATES OF AMERICA
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<b>Website:</b>	<a href="https://aquapath.lab.arizona.edu/">https://aquapath.lab.arizona.edu/</a>
<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Arun K Dhar, Professor Director Aquaculture Pathology Laboratory
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Luis Fernando Aranguren Caro. PhD, Research Scientist
<b>Which of the following defines your laboratory? Check all that apply:</b>	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			
0	0	0	0
Direct diagnostic tests			
PCR/ Real-time PCR	Yes	519	103
Histology	Yes	20	1

**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
Positive control tissue	PCR	Produced	1-3 g	1-3 g	3	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Tissue	Histology	Produced	1	0		<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input 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?

Yes

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

No

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
NHP detection using Flg E	Aranguren L., and Dhar Arun K. 2018. Detection and quantification of <i>Hepatobacter penaei</i> bacteria (NHPB) by new PCR and real-time quantitative PCR assays. <i>Diseases of Aquatic Organisms</i> , 131: 49-57.

**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
BELGIUM	varied	4	0
CANADA	varied	9	0
CHILE	varied	1	0
CHINA (PEOPLE'S REP. OF)	varied	2	0
CZECH REPUBLIC	varied	1	0
ECUADOR	varied	6	0
FRANCE	varied	6	0
GERMANY	varied	1	0
ISRAEL	varied	2	0
INDONESIA	varied	1	0
JAPAN	varied	2	0
MADAGASCAR	varied	5	0
THE NETHERLANDS	varied	11	0
RUSSIA	varied	16	0
SINGAPORE	varied	1	0
THAILAND	varied	35	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
SAUDI ARABIA	Conducting training on Shrimp Disease Diagnostics for OIE Twinning Project between Jeddah Fish Health Safety Laboratory, Saudi Arabia and The University of Arizona, USA	Visited Saudi Arabia, attended conference, gave lectures and hands on training

**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 Program	2018-2020	To improve the candidate laboratory compliance with OIE diagnostic standard for crustacean disease/ shrimp disease	Kingdom of Saudi Arabia, laboratory Health and Safety fish in Jeddah Center Research Center	SAUDI ARABIA
OIE-Twinning Program	2015-2018	To improve the candidate laboratory compliance with OIE diagnostic standard for crustacean disease/ shrimp disease	Indonesia, Fish Health and Environmental Laboratory, Brackishwater Aquaculture Development Center	INDONESIA
Training on Shrimp Disease	2020	To improve the candidate laboratory	West Bengal government	INDIA
Workshop theoretical and practice n shrimp diseases	2020	Workshop theoretical and practice n shrimp diseases	World Aquaculture Society (WAS)	COSTA RICA

**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:
Samples collected by IMARPE in Peru were partially analyzed in the lab

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

No

If the answer is no, please provide a brief explanation of the situation:
NA

**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

Ramírez B, Guevara M, Alfaro R, Montoya V, Mai N M, Serna M, Dhar A, Aranguren\* LF. 2020. A cross-sectional study of shrimp pathogens in wild shrimp, *Penaeus vannamei* and *Penaeus stylirostris* in Tumbes, Peru. *Aquaculture Research*.00:1-9. <https://doi.org/10.1111/are.14969>

b) International conferences: 3

1. Costa Rica. World Aquaculture Society (WAS) Workshop theoretical and practice n shrimp diseases (Curso teórico-practico sobre patologías en camarones de cultivo)
2. FAO, Organización de las naciones Unidas para la alimentación y la agricultura. Curso de capacitación para el análisis de riesgos ante la importación de animales acuáticos y productos acuícolas. November 30, 2020
3. Mexico. 2nd International Conference of Shrimp Aquaculture. Reunión Científica y Tecnológica sobre el Cultivo de Camarón, to give a talk on "Emerging Diseases in Shrimp Aquaculture in Mexico"

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 0

**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: 1

b) Seminars: 3

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	India	15
b	Mexico	100
b	Peru	20
b	Mexico	30

**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 17025:2017	UofAZ17025CertScopeV005 Exp dec 2022.pdf
ISO 17043:2010	APL ISO 17043.2010 Proficiency Certificate Exp Dec2022.pdf
USDA	APL USDA live crustaceans and samples permit Exp Mar2021.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Histology	ANSI-ASQ National Accreditation Board
PCR	ANSI-ASQ National Accreditation Board

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

No

*(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?

No

**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?

Not applicable (Only OIE Reference Lab. designated for disease)

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?

Not applicable (Only OIE Reference Lab. designated for disease)

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?

Not applicable (Only OIE Reference Lab. designated for disease)

**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 <sup>1</sup>	No. participating laboratories	Region(s) of participating OIE Member Countries
Proficiency test August 2020	28	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Proficiency test- February 2020	26	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Proficiency test histology	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" 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?

No

25. Additional comments regarding your report:

None