

# WOAH Reference Laboratory Reports Activities 2023

## Activities in 2023

This report has been submitted : 10 mai 2024 10:12

### Laboratory Information

<b>Name of disease (or topic) for which you are a designated WOA Reference Laboratory:</b>	IHHNV
<b>Address of laboratory:</b>	1117 E. Lowell St. Bldg 90, Room 114, Tucson AZ, 85721
<b>Tel.:</b>	+1-520 621 87.27
<b>E-mail address:</b>	adhar@arizona.edu
<b>Website:</b>	<a href="https://aquapath.caes.arizona.edu/">https://aquapath.caes.arizona.edu/</a>
<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr. Arun K. Dhar
<b>Name (including Title and Position) of WOA Reference Expert:</b>	Arun K. Dhar, Professor & Director, Aquaculture Pathology Laboratory
<b>Which of the following defines your laboratory? Check all that apply:</b>	Academic institution

### TOR1: DIAGNOSTIC METHODS

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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
0		0	0
Direct diagnostic tests			
PCR / Real-time PCR		1388	358
Histology		80	25

### TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA Members?

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOA MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
Positive Control	PCR	Produced	100 mg	1000 mg	8	CHILE, ECUADOR, INDIA, KOREA (REP. OF), MEXICO, SINGAPORE, UNITED STATES OF AMERICA,

Plasmid DNA	PCR	Produced	2-10 ng	6-20 ng	3	VIETNAM, ECUADOR, SINGAPORE, VIETNAM,
PCR 10 <sup>8</sup> Standards	PCR	Produced	na	na	1	UNITED STATES OF AMERICA,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHA Members?

No

### TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

7. Did your laboratory validate diagnostic methods according to WOAHA Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAHA Standards for the designated pathogen or disease?

No

### TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAHA Members?

Yes

NAME OF WOAHA MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
BELGIUM	2023-12-12	IHHNV	17	0
BRAZIL	2023-12-12	IHHNV	7	0
CANADA	2023-12-13	IHHNV	5	0
DENMARK	2023-12-12	IHHNV	11	0
ECUADOR	2023-12-12	IHHNV	3	0
FRANCE	2023-12-12	IHHNV	16	0
HONDURAS	2023-12-12	IHHNV	7	0
INDIA	2023-12-12	IHHNV	10	0
INDONESIA	2023-12-12	IHHNV	13	0
ISRAEL	2023-12-12	IHHNV	6	0
JAPAN	2023-12-12	IHHNV	3	0
MEXICO	2023-12-13	IHHNV	49	0
MOZAMBIQUE	2023-12-13	IHHNV	0	0
THE NETHERLANDS	2023-12-20	IHHNV	12	0
NORWAY	2023-12-20	IHHNV	4	0
OMAN	2023-12-20	IHHNV	49	0
RUSSIA	2023-12-20	IHHNV	35	0
SEYCHELLES	2023-12-20	IHHNV	2	0
SPAIN	2023-12-20	IHHNV	96	0
UNITED KINGDOM	2023-12-20	IHHNV	1	0
UNITED STATES OF AMERICA	2023-12-20	IHHNV	1214	0

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAHA Member?

Yes

NAME OF THE WOAHA MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
		Two visiting scientists from ICA,

COLOMBIA	OIE Twinning project focused on fish and shrimp viral diseases.	Bogota, Colombia attended a training in the Aquaculture Pathology Laboratory (APL), University of Arizona.
INDIA	Sponsored project with the Government of West Bengal, India to build capabilities on shrimp disease diagnosis.	A training on shrimp disease diagnostics was conducted in West Bengal, India.
VIETNAM	Sponsored project with the Ca Mau Province, Vietnam to build capabilities on shrimp disease diagnosis.	A scientist from the Analysis Testing Center of Camau (ATCC), Vietnam attended a training on molecular diagnostics and histopathology of crustaceans in APL, University of Arizona. In addition, scientists from the APL visited ATCC, Ca Mau, Vietnam to audit disease diagnostic activities of the lab and conducted a proficiency test in the laboratory.

## TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA Members other than the own?

No

13. In exercising your activities, have you identified any regulatory research needs\* relevant for WOA?

No

## TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

No

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

No

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

a) Articles published in peer-reviewed journals:

2

- Dhar, Arun K., Mai, Hung N., Cruz-Florez, Roberto and Warg, J. 2023. Comparison of Polymerase Chain Reaction (PCR) assay performance in detecting Decapod penstylhamaparvovirus 1 in penaeid shrimp. *J. Virol. Methods*, 323: 114840.
- Lee, Y., Vijayan, J., Roh, H. J., Park, J., Lee, J-Y, Luan, N. T., Kim, H. J., Kim, W-S., Dhar, Arun K., Park, C-I, and Kim, D-H. 2023. Nucleic acid-based methods for diagnosis of shrimp viral diseases. *Rev Aquac.* 2023;1–31, DOI: 10.1111/raq.12873

b) International conferences:

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- Arun K. Dhar, Roberto Cruz-Flores, Hung N. Mai, and Janet V. Warg. 2023. COMPARISON OF REAL-TIME PCR ASSAY PERFORMANCE FOR DETECTING Decapod penstylhamaparvovirus 1 IN PENAEID SHRIMP. *Aquaculture America 2023 Conference, World Aquaculture Society, February 23-26, 2023, New Orleans, Louisiana.*
- Janet V. Warg, Hung N. Mai, Paul Schofield, Richard D. Clayton, and Arun K. Dhar. 2023. VALIDATION OF A REAL-TIME PCR ASSAY IN DETECTING INFECTIOUS HYPODERMAL AND HEMATOPOIETIC NECROSIS VIRUS (IHNV) IN PENAEID SHRIMP. *Aquaculture America 2023 Conference, World Aquaculture Society, February 23-26, 2023, New Orleans, Louisiana.*

c) National conferences:

0

d) Other (Provide website address or link to appropriate information):

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Guest lecture

1. Dhar, Arun K. 2023. "Major Diseases & Disease Management in Shrimp Aquaculture", College of Veterinary Medicine, Mississippi State University, Starkville, MS., November 10, 2023.

2. Dhar, Arun K. 2023. "Diseases & Disease Management in Shrimp Aquaculture", Bandung Institute of Technology (Intitut Teknologi Badung), Jawa Barat, Indonesia, November 01, 2023.

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHA Members?

Yes

a) Technical visit : 0

b) Seminars : 0

c) Hands-on training courses: 4

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
C	UNITED STATES OF AMERICA	5
C	ECUADOR	1
C	COLOMBIA	2
C	VIETNAM	3
C	INDIA	7
C	MEXICO	2
C	VENEZUELA	1

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025	PDF	UAZAPL 17025 Scope 2024.pdf
ISO 17043	PDF	UAZAPL 17043 Scope 2024.pdf
USDA	PDF	UAZ_567.2_October 2023 approval letter.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Histology for all the OIE-listed pathogens	ANSI-ASQ National Accreditation Board
PCR for all the OIE-listed pathogens	ANSI-ASQ National Accreditation Board

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

No

## TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA?H?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA?H?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
The Launch of a Regional Aquatic Animal Health Laboratory Network (RAAHLN) for Africa	2023-12-05	South Africa	Invited speaker	Activities of Aquaculture Pathology Laboratory, University of Arizona - The World Organization for Animal Health Reference Laboratory of Crustacean Diseases

## TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOA?H Reference Laboratories designated for the same pathogen or disease?

No

24. Do you network (collaborate or share information) with other WOA?H Reference Laboratories designated for the same pathogen?

Not applicable (Only WOA?H Reference Laboratory designated for the disease)

25. Did you organise or participate in inter-laboratory proficiency tests with WOA?H Reference Laboratories designated for the same pathogen?

No

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

No

## TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA?H Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons <sup>1</sup>	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOA?H Member Countries
Proficiency Test in shrimp pathogens detection by PCR - Ring Test February 2023	Organiser	31	Ring Test	BRAZIL, ECUADOR, GUATEMALA, INDIA, ITALY, MALAYSIA, MEXICO, NICARAGUA, OMAN, PERU, SAUDI ARABIA, THAILAND, VIETNAM,
Proficiency Test in shrimp pathogens detection by PCR - Ring Test August 2023	Organiser	31	Ring Test	AUSTRALIA, CANADA, COLOMBIA, ECUADOR, HONDURAS, INDIA, INDONESIA, KOREA (REP. OF), MADAGASCAR, MALAYSIA, MEXICO, OMAN, PANAMA, PERU, SINGAPORE, THAILAND, UNITED STATES OF AMERICA, VIETNAM,

## TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOA?H?

No

29. Additional comments regarding your report:

No