

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 5 juin 2024 01:38

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Infection with red sea bream iridovirus
Address of laboratory:	422-1 Nakatsuhamaura Minami-ise, Mie 516-0193
Tel.:	+81-599 66.18.30
E-mail address:	kawato_yasuhiko86@fra.go.jp
Website:	https://nria.fra.affrc.go.jp/e/DTC.html
Name (including Title) of Head of Laboratory (Responsible Official):	Takashi Kamaishi (PhD), Director of Pathology division
Name (including Title and Position) of WOA Reference Expert:	Yasuhiko Kawato (PhD), senior researcher
Which of the following defines your laboratory? Check all that apply:	Governmental Research agency

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		Nationally	Internationally
Direct diagnostic tests		Nationally	Internationally
real-time PCR		710	0
Sequencing		14	0

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 (nonWOA-approved) and/or other diagnostic reagents to WOA Members?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA 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 WOAAH Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
real-time PCR (Kawato et al. 2021)	Validation of reproducibility and robustness of the assay by a proficiency test

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

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

NAME OF THE WOAAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
CANADA	disinfection of RSIV	remote (e-mail)
CANADA	PCR for TRBIV	remote (e-mail)
KOREA (DEM. PEOPLE'S. REP. OF)	monoclonal antibody	remote (telephone)

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
Proficiency Test for RSIV real-time PCR	March 2023 through December 2023	To validate reproducibility and robustness of the real-time PCR assay for RSIV	Nick Moody (CSIRO)	AUSTRALIA KOREA (REP. OF)

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

Yes

Research need : 1

Please type the Research need: Determining disinfection condition for RSIV

Relevance for WOAAH Disease Control,

Relevance for the Codes or Manual Manual,

Field Hygiene management in fish farm ,

Animal Category Aquatic,

Disease:

Infection with red sea bream iridovirus

Kind of disease (Zoonosis, Transboundary diseases)

If any, please specify relevance for Codes or Manual, chapter and title

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

Answer:

Notes:

Answer:

TOR6: EPIZOOLOGICAL DATA

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

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

1. Surveillance of wild fish
2. Assessing the transmission risk of red sea bream iridovirus (RSIV) in environmental water
3. Cross-contamination of RSIV in fish farm

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

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

Transmission of RSIV among fish farms via seawater is highly associated with the distance between the net pens, and the environmental water is not always an infection source for the transmission of RSIV between fish farms.

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:

1

Kawato et al. (2023) Assessing the transmission risk of red sea bream iridovirus (RSIV) in environmental water: insights from fish farms and experimental settings. Microbiol. Spectr. 11, e0156723.

b) International conferences:

2

Kawato Y, Takada Y, Kurobe T, Nakagawa Y, Mizuno K, Harakawa S, Kawakami H, Yoshihara Y, Ito T. Estimating transmission risk of red sea bream iridovirus between fish farms via seawater using environmental DNA. 51st Scientific Symposium of the US-Japan Natural Resources Aquaculture Panel, August 2023.

Kurobe T, Kawato Y, Takada Y, Harakawa S, Suzukawa K, Kawakami H, Kiryu I, Ito T. Investigating routes of pathogen spreading in a saltwater fish farm. 51st Scientific Symposium of the US-Japan Natural Resources Aquaculture Panel, August 2023.

c) National conferences:

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

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

No

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted

Certificate scan (PDF, JPG, PNG format)

ISO17025

ISO certificate of accreditation

ISO certificate of accreditation.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
PCR test procedure	Perry Johnson Laboratory Accreditation, Inc.

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

Yes

Access to the laboratory is restricted. Personnel uses PPEs and follows basic laboratory procedures to avoid accidental exposure to the pathogen. All contaminated lab supplies (e.g., dissecting tools) are autoclaved to prevent the pathogen from releasing into the environment.

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Not applicable (only WOAHP Reference Laboratory designated for the disease)

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

Not applicable (Only WOAHP Reference Laboratory designated for the disease)

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

Not applicable (Only WOAHP Reference Laboratory designated for the disease)

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

Not applicable (Only WOAHP Reference Laboratory designated for the disease)

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

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

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAHP Member Countries
PT for validating reproducibility and robustness of real-time PCR assays for RSIV	ORGANIZER	3	Proficiency test of real-time PCR assay for detection of red sea bream iridovirus	AUSTRALIA, KOREA (REP. OF),
Determining a laboratory's capability to conduct specific diagnostic tests	PARTICIPANT	43	Inter-Laboratory Proficiency Test 2023 for identification and titration of VHSV, IHNV, EHNV (fish ranaviruses), SVCV and IPNV (PT1) and identification of CyHV-3 (KHV), SAV and ISAV (PT2)	

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)

ad hoc Group meetings online	online meeting	Susceptibility of fish species to infection with OIE listed diseases (Infection with TiLV)
The 4th meeting of ad hoc Steering Committee on Regional Collaboration Framework on Aquatic Animals Health in Asia and the Pacific	Busan, Republic of Korea	<ul style="list-style-type: none"> - To review the implementation of the projects and flagship activities under the framework - To share challenges and gaps amongst WOAHP-designated experts and members on aquatic animal health management - To identify the potential activities in 2023 onwards

29. Additional comments regarding your report:

No