

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-27 02:30:27

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Red sea bream iridoviral disease
Address of laboratory:	422-1 Nakatsuhamura Minami-ise, Mie 516-0193 JAPAN
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Website:	http://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 OIE Reference Expert:	Yasuhiko Kawato
Which of the following defines your laboratory? Check all that apply:	Governmental Research

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
ELISA	No	0	0
Direct diagnostic tests		Nationally	Internationally
Cell Culture	Yes	9	0
PCR	Yes	20	0
Sequence	Yes	20	0
real-time PCR	Yes	880	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
Positive control DNA for PCR	PCR	Produced	0.1 ml	0.2 ml	2	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Monoclonal antibody (M10)	IFAT	Produced	30 ml	0	0	<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?

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.)
real-time PCR	Kawato et al. (2021) Fish Pathology 56, 177-186.

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?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
CHINA (PEOPLE'S REP. OF)	real-time PCR method for RSIV	remote (e-mail)
UNITED STATES OF AMERICA	Cell line and virus isolation	remote (e-mail and online-meeting)
CANADA	Cell line	remote (e-mail)
ISRAEL	Confirmatory diagnosis	remote (e-mail)

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?

No

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:
1. Surveillance of wild fish 2. Application of environmental DNA (eDNA) for monitoring RSIV

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:
Iron flocculation is effective for monitoring RSIV in eDNA

**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: 5

Kawato Y, Mekata T, Inada M, Ito T. Application of Environmental DNA for Monitoring Red Sea Bream Iridovirus at a Fish Farm. *Microbiol Spectr*. 2021 Oct 31;9(2):e0079621. doi: 10.1128/Spectrum.00796-21.

Kawato Y, Cummins DM, Valdeter S, Mohr PG, Ito T, Mizuno K, Kawakami H, Williams LM, Crane MSJ, Moody NJG. (2021) Development of New Real-time PCR Assays for Detecting Megalocytivirus Across Multiple Genotypes. *Fish Pathol* 56:177-186.

Kawato Y, Mekata T, Nishioka T, Kiryu I, Sakai T, Maeda T, Miwa S, Koike K, Sadakane M, Mori KI. (2021) Isolation and characterization of hirame aquareovirus (HAqRV): A new Aquareovirus isolated from diseased hirame *Paralichthys olivaceus*. *Virology*. 559:120-130. doi: 10.1016/j.virol.2021.04.002.

Mekata T, Kawato Y, Ito T. (2021) Complete Genome Sequence of Carp Edema Virus Isolated from Koi Carp. *Microbiol Resour Announc*. 10:e00239-21. doi: 10.1128/MRA.00239-21.

Matsuura Y, Nishioka T, Satoh J, Shimahara Y, Matsuyama T, Takano T, Kiryu I, Kawato Y, Terashima S, Masuma S, Nakayasu C. (2021) Development of a method for experimental infection of Pacific bluefin tuna with red seabream iridoviral disease. *Aquaculture*, 539:7366627.

b) International conferences: 1

3rd meeting of ad hoc Steering Committee of the Regional Collaboration Framework on Aquatic Animal Health in Asia and the Pacific, 6-7 Dec 2021 (Online Meeting)

c) National conferences: 1

Kawato Y, Mekata T, Ito T, Mizuno K, Yamamoto C, Kawakami H. Monitoring virus dispersion from a net-pen where RSIVD outbreak. Annual meeting of the Japanese Society for Fish Pathology, 20-21 Mar 2021 (Online Meeting)

Kawato Y. Can we make a free zone of RSIVD in semi-open system? Seminar for local fish farmer, 15 Nov 2021 in Ehime.

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?

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)
ISO17025	Certificate of ISO17025.pdf

16. Is your quality management system accredited?

Yes

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

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?

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 ¹	No. participating laboratories	Region(s) of participating OIE Member Countries
Determining a laboratory's capability to conduct specific diagnostic tests	45	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" 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: