WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 3 mai 2024 06:13

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Infectious haematopoietic necrosis virus
Address of laboratory:	Pacific Biological Station, 3190 Hammond Bay Road, Nanaimo, British Columbia, Canada, V9T 6N7
Tel.:	12507136422
E-mail address:	kyle.garver@dfo-mpo.gc.ca
Website:	https://profils-profiles.science.gc.ca/en/profile/kyle-garver
Name (including Title) of Head of Laboratory (Responsible Official):	Andrew Thomson (Regional Director of Science)
Name (including Title and Position) of WOAH Reference Expert:	Dr. Kyle Garver, Research Scientist
Which of the following defines your laboratory? Check all that apply:	Governmental

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 WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Direct diagnostic tests		Nationally	Internationally
RT-qPCR		692	175
RT-PCR		4	0

TOR2: REFERENCE MATERIAL

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

No

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

No

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAH Members?

Not applicable

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 WOAH 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 WOAH Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
AUSTRIA	Diagnostic Testing Methodology Training	remote
CANADA	Biosecurity considerations for culture facilities	remote and in-person
DENMARK	Tissue tropism considerations	remote
VIETNAM	Test method information	remote

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAH 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
Epidemiology of IHNV in the North Pacific	2018-2025	Genotype IHNV in Western North American waters	Western Fisheries Research Center	UNITED STATES OF AMERICA

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

Yes

Research need : 1

Please type the Research need: validation of a modified diagnostic assay for IHNV

Relevance for WOAH Standard Setting,

Relevance for the Codes or Manual Manual,

Field Diagnostics,

Animal Category Aquatic,

Disease:

Infection with infectious haematopoietic necrosis virus

Kind of disease (Zoonosis, Transboundary diseases) 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: Manual of diagnostic tests for aquatic animals 2021 - Chapter 2.3.5 Infection with infectious haematopoietic necrosis virus

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:
Surveillance of wild and farmed salmon stocks for prevalence of IHNV

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:
Nucleic acid detection of IHNV in wild and farmed salmon stocks of Canada, efficacy of a commercial IHNV vaccine in salmonid broodstock and characterization of host response.

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:

b) International conferences:

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Aquaculture America 2023 https://www.was.org/Meeting/Code/AA2023

62nd Western Fish Disease Workshop
https://event.fourwaves.com/cbd19bf6-2dec-4ea7-bfd4-6762a939ace5/pages

c) National conferences:

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Australian Aquatic Animal Health Technical Forum and Skills Training Workshop -invited speaker

Salmon Enhancement Managers Meeting – invited speaker

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

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1. Saksida, S.M., Fast, M.D., Garver, K.A., and Johnson, S.C. (2023) Movement of Infectious Agents between Wild and Farmed Fish. In: Woo, P.T.K. and Subasinghe, R.P. (editors). Climate Change on Diseases and Disorders of Finfish in Cage Culture. CAB International, 2023 London, UK

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH 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)	
ISO/IEC 17025:2017	pdf	ASB_SOA_151008_FY23_v1_2023-07-31.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Reverse Transcription Quantitative PCR for Detection of Infectious Hematopoietic Necrosis Virus (IHNV)	Standards Council of Canada
Isolation of Viral Agents (IPNV, IHNV, EHNV, SVCV, ISAV, SAV, & VHSV) from Finfish by Cell Culture	Standards Council of Canada
Reverse Transcription Quantitative PCR for Detection of Viral Hemorrhagic Septicemia Virus (VHSV)	Standards Council of Canada
Reverse transcription quantitative PCR assay for detection of infectious pancreatic necrosis virus (IPNV)	Standards Council of Canada
RT-qPCR Test Method Protocol using TaqMan Universal PCR Master Mix for the Detection of Infectious Salmon Anemia Virus	Standards Council of Canada
Histological Detection and Identification of Bivalve Mollusc Pathogens	Standards Council of Canada

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

Yes

Maintain laboratory compliance level 2 for in vitro facilities in accordance with the Canadian Biosafety Standard and the Containment Standards for Facilities Handling Aquatic Animal Pathogens

TOR9: SCIENTIFIC MEETINGS

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

No

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

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Salmonid Enhancement Program Seminars	2023-11-10	remote	speaker	Infectious Hematopoietic necrosis virus in British Columbia

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS
Infectious hematopoietic necrosis virus	co-participant	2	Dr. Liu, Customs of China (GACC),

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.
Interlaboratory proficiency test by the European Union Reference Laboratory for Fish and Crustacean Diseases	Participant	43	WOAH reference laboratory for VHSV in Korea and Canada

26. Did your laboratory collaborate with other WOAH 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 WOAH Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAH Member Countries
Checking and certifying the performance of individual operators	organizer	2	RNA finfish pathogen RT-qPCR testing	CANADA,
Assess competency for diagnosis of fish diseases including IHN (Paticipate in the inter-laboratory PT from EU Reference Laboratory for fish & crustacean diseases)	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)	DENMARK,

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Review of WOAH Standards	remote	Aquatic animal commission report
responding to specific technical queries from WOAH	remote	Training opportunities and sample preservation advice

29. Additional comments regarding your report:

No