

WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 8 mai 2023 14:23

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Viran haemorrhagic septicaemia
Address of laboratory:	Technical University of Denmark National Institute of Aquatic Resources Kemitorvet, Building 202 2800 Kgs, Lyngby DENMARK
Tel.:	+45 35 88 68 31
E-mail address:	abrij@aqua.dtu.dk
Website:	https://www.aqua.dtu.dk/ ; https://www.eurl-fish-crustacean.eu/
Name (including Title) of Head of Laboratory (Responsible Official):	Director Friedrich Wilhelm Köster
Name (including Title and Position) of WOA Reference Expert:	Senior scientist Britt Bang Jensen DVM, PhD, Head of Section
Which of the following defines your laboratory? Check all that apply:	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	
Indirect diagnostic tests		Nationally	Internationally
ELISA	Yes	118	0
RT-PCR	No	0	0

IFAT	No	0	0
Direct diagnostic tests		Nationally	Internationally
Cell cultivation BF-2	Yes	839	12
Cell cultivation EPC	Yes	839	12
RT-qPCR	Yes	66	10

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H 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?H MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
BF-2, EPC, RTG-2, ASK,EK-1, SSN-1,	virus isolation on cell culture	Yes	0	32x 120 ml (small cell culture flasks)	5	Europe
VHSV isolates of various genotypes	positive control or validation of test etc	Yes	0	1 (FTA card)	1 (Georgia)	

4. Did your laboratory produce vaccines?

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

				NO. SAMPLES RECEIVED
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NAME OF WOA MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	FOR PROVISION OF CONFIRMATORY DIAGNOSES
THE NETHERLANDS	2022-02-19	Cells+PCR		5
LATVIA	2022-09-13	Cells		5
LITHUANIA	2022-09-21	Cells	10	
ARMENIA	2022-12-16	Cells	10	

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

Yes

NAME OF THE WOA MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
PORTUGAL	Validation of molecular methods based on artificial controls	e-mail correspondence
GEORGIA	diagnostic procedures for detection of VHSV	e-mail correspondence
BELGIUM	Validation of molecular methods based on artificial controls	e-mail correspondence
SWITZERLAND	Testing procedures for amouple of InterLaboratory proficiency test provided by EURL for fish disease	In person meeting during training course
GREECE	Testing procedures for amouple of InterLaboratory proficiency test provided by EURL for fish disease	In person meeting during training course

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA 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
list of vector species for VHSV	2022	update and define list of vector species for VHSV in EU	EFSA mandate Denmark DTUAQUA EURL for fish and crustacean France IFREMER EURL for mollusc Norway NVI WOA ref lab SAV	UNITED KINGDOM

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:

Annual survey and diagnosis : <https://www.eurl-fish-crustacean.eu/fish/survey-and-diagnosis>

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:

Report on survey and Diagnosis of fish diseases in Europe disseminated at the 26th Annual Workshop of the National Reference Laboratories for Fish Diseases, Copenhagen 31st may 2022 and on website: <https://www.eurl-fish-crustacean.eu/fish/survey-and-diagnosis>

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

Marsella, A.; Pascoli, F.; Pretto, T.; Buratin, A.; Biasini, L.; Abbadi, M.; Cortinovis, L.; Berto, P.; Manfrin, A.; Vanelli, M.; Perulli, S.; Rasmussen, J.S.; Sepúlveda, D.; Vendramin, N.; Lorenzen, N.; Toffan, A. Efficacy of DNA Vaccines in Protecting Rainbow Trout against VHS and IHN under Intensive Farming Conditions. *Vaccines* 2022, 10, 2062. <https://doi.org/10.3390/vaccines10122062>

b) International conferences:

2

VHS related presentations at the 26th Annual Workshop of the National Reference Laboratories for Fish Diseases, Copenhagen 31st May and 1st June 2022:

Sanitary situation in France: From IHN and VHS eradication to the characterization of unknown and emergent viruses

VHS outbreak in Romania

c) National conferences:

0

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

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 0

b) Seminars : 35 participants physically AW 60 Online participants

c) Hands-on training courses: 13 + 11 EURL TC

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
B	Australia	2
B	Austria	3
B	Belgium	5
B	Bosnia Hercegovina	2
B	Canada	1
B	Croatia	2
B	Cyprus	1
B/C	Czech Republic	2/3
B/C	Denmark	14/4
B	Estonia	1
B	Finland	7
B/C	France	2/1
B	Germany	3
B	Greece	3
B	Hungary	2
B/C	Iceland	3
B/C	Serbia	1/1
B	Iran	1
B	Italy	4
B	Japan	1
B	Latvia	2
B	Lithuania	6
B	Republic of north macedonia	1
B	Norway	3
B	Poland	3
B	Romania	1

B	UK	6
B	Slovakia	9
B	South Korea	1
B	Spain	7
B/C	Sweden	2
B/C	Switzerland	1
B	The Netherlands	1
B/C	Turkey	3
B/C	Ukraine	1
B	Ireland	3

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
DS/EN ISO/IEC 17025:2017		Certifikat_05-0536_1702501Akk EN sign.pdf
DS/EN ISO/IEC 17043:2010		Certifikat_05-0515_17043Akk EN sign.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
VHSV Cell cultivation	DANAK 17025:2017
VHSV IFAT	DANAK 17025:2017
VHSV ELISA	DANAK 17025:2017
VHSV RT-PCR	DANAK 17025:2017
Proficiency test for viruses in Fish	DANAK 17043:2010

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?

No

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

No

TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOA Reference Laboratories designated for the same pathogen?

No

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOA REF. LABS/ ORGANISING WOA REF. LAB.
Inter-Laboratory Proficiency Test 2022 for identification and titration of VHSV, IHNV, EHN, SVCV and IPNV	Organiser	42	2/1

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

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOA REFERENCE LABORATORIES
MEMORANDUM OF AGREEMENT (MOA) BETWEEN THE NATIONAL INSTITUTE OF AQUATIC RESOURCES OF THE KINGDOM OF DENMARK AND THE NATIONAL INSTITUTE OF FISHERIES SCIENCE OF THE REPUBLIC OF KOREA ON COOPERATIVE RESEARCH PROJECT FOR FISH DISEASES	to enhance and strengthen the bilateral relationship through cooperative research and meetings of the Sides for the development and standardization of diagnostic tools; methods to prevent the spread of infectious agents; disease prevention systems, etc., in accordance with basic regulations of the WOA Aquatic Animal Health Code.	Dr Hyoungh Jun Kim - Pathology Research Division in Aquaculture Research Department National Institute of Fisheries Science (NIFS); Ministry of Oceans and Fisheries 216 Gijanghaean-ro Gijang-eup Busan, 46082, KOREA (REP. OF) hjkim1882@korea.kr

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

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

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOA Member Countries
To primarily assess the identification of the fish viruses: viral haemorrhagic septicaemia virus (VHSV); Infectious haematopoietic Necrosis virus (IHNV); Epizootic haematopoietic necrosis virus (EHNV); Spring viraemia of Carp virus (SVCV) AND Infectious Pancreatic necrosis virus (IPNV) by cell culture based	Organiser	42	Africa America Asia and Pacific Europe MiddleEast

methods

WOAH ILPT for Nodavirus detection	participant		Asia and Pacific Europe
To assess the ability of participating laboratories to identify the fish pathogens : Infectious salmon anemia virus (ISAV); Salmonid Alphavirus (SAV) and Cyprinid Herpesvirus 3 (KHV) by biomolecular methods PCR based	Organiser	41	Asia and Pacific Europe
Interlaboratory proficiency test 2022 for detection of White Spot Syndrome Virus (WSSV) in shrimps	Organiser	25	Asia and Pacific Europe
Interlaboratory proficiency test 2022 for detection of Taura Americas Syndrome Virus (TSV) and Yellow Head Virus 1 (YHV1) in Shrimp	Organiser	18	Africa America Asia and Pacific Europe MiddleEast
2022-ILC-01 organized by EU reference laboratory for mollusc diseases, histopathology and cytology	Participant	20	

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
WOAH Aquatic Manual VHS chapter	Online	Final amendments before approval at the WOA General Assembly
Aquatic Manual disease chapters Table 4.1. WOA recommended diagnostic methods and their level of validation for surveillance of apparently healthy animals and investigation of clinically affected animals	Online	feedback on diagnostic performance of recommended assays

29. Additional comments regarding your report:

Yes

The WOA designated laboratory for VHS at DTU AQUA would like to acknowledge the financial support from the EU Reference Laboratory for fish and crustacean diseases to allow the performance of all activities listed in this report.