

WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 13 février 2025 08:05

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Viral haemorrhagic septicaemia
*Address of laboratory:	Henrik Dams Allé, Building 202, 2800 Kgs, Lyngby
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*E-mail address:	abrj@dtu.dk
Website:	www.aqua.dtu.dk; 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:	Professor 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	60	16
Direct diagnostic tests		Nationally	Internationally
Cell cultivation BF-2 cells	Yes	372	44
Cell cultivation EPC cells	Yes	372	44
RT-qPCR	Yes	50	102

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, FHM, CHSE-214, CCB, SSN-1, ASK	Virus isolates on cell culture	Yes	0	29x120ml (25cm ² cell culture flasks)	7	BULGARIA, FINLAND, GREECE, ICELAND, IRELAND, SLOVAKIA, SWEDEN, THE NETHERLANDS,
VHSV 1a (freeze dried)	For diagnostic training	Yes	0	1 ampul	1	CHINA (PEOPLE'S REP. OF),
Anti-VHSV Mab	For diagnostic use	Yes	0	4 ml	1	SPAIN,

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

Name of WOA?H 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
ARMENIA	2024-04-25	Real time RT-qPCR	5	0

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LITHUANIA	2024-05-15	ELISA, Cell cultivation	5	0
NORTH MACEDONIA (REP. OF)	2024-06-27	Real time RT-qPCR, Cell cultivation	39	0

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

No

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
Species which may act as vectors or reservoirs of diseases covered by the Animal Health Law: Listed pathogens of fish	2024	To identify vector or reservoir species of listed fish diseases	EFSA	

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?

Yes

If the answer is yes, please provide details of the data collected:

We have asked all European countries for the prevalence and incidence of VHSV in our annual survey for fish diseases in Europe

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 28th Annual Workshop of the National reference laboratories for fish diseases. Report available upon request.

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:

3

1: "Epitope mapping of the monoclonal antibody IP5B11 used for detection of viral haemorrhagic septicaemia virus facilitated by genome sequencing of carpione novirhabdovirus" <https://doi.org/10.1186/s13567-023-01166-w>

2: Viral Haemorrhagic Septicemia Virus (VHSV) Isolated from Atlantic Herring, *Clupea harengus*, Causes Mortality in Bath Challenge on Juvenile Herring. <https://doi.org/10.3390/v15010152>

3: Development of a novel real-time RT-PCR method using peptide nucleic acid (PNA) probes for detecting and genotyping of viral haemorrhagic septicaemia virus (VHSV). <https://doi.org/10.1016/j.aquaculture.2023.739408>

b) International conferences:

1

Time-course proteomic analysis of the early response induced by a DNA vaccine against viral haemorrhagic septicaemia (VHS) in rainbow trout.

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 WOA H Members?

Yes

a) Technical visit : 0

b) Seminars : 34

c) Hands-on training courses: 18

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	1
B	BELGIUM	2
B	BOSNIA AND HERZEGOVINA	2

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C	BOSNIA AND HERZEGOVINA	1
B	CROATIA	2
C	CROATIA	1
B	CYPRUS	1
B	CZECH REPUBLIC	1
B	DENMARK	6
C	DENMARK	4
B	FAROE (ISLANDS)	1
B	FINLAND	1
C	FINLAND	1

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_05-0588_Akk EN sign.pdf	Certifikat_05-0588_Akk EN sign.pdf
DS/EN ISO/IEC 17043:2010	Certifikat_05-0515_Akk EN sign.pdf	Certifikat_05-0515_Akk 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 tests for viruses in fish	DANAK 17043:2010

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

No

No, our laboratory does not maintain a dedicated biorisk management system for VHS, as the virus does not pose a risk to human health. However, as an ISO 17025-accredited laboratory under DANAK, we adhere to strict quality management and biosafety procedures to minimize any risks associated with working with 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 WOA?H?

No

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?

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS
WOA?H listed disease	participant providing access to diagnostic laboratory to test reference controls and samples	2	WOA?H ref lab for VHS at NIFS
IHN?V	Host	6	Fisheries and Oceans Canada (DFO)

25. Did you organise or participate in inter-laboratory proficiency tests with WOA?H Reference Laboratories designated for the same pathogen during the past 2 years?

No

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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?

Yes

Title of the project or contract	Scope	Name(s) of relevant WOA?H Reference Laboratories
Testing of universal PCR positive control for fish diseases	Testing the analytical sensitivity of a PCR positive plasmid control including targets for recommended assays to detect all listed fish diseases. This control can be used for direct comparison of reagents, laboratories and diagnostic assays.	WOA?H reference laboratory for VHS in Korea

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 during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOA?H Member Countries
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to primarily assess the identification of the fish viruses VHSV, IHNV, EHN, SVCV and IPNV by cell culture methods	Organizer and participant	44
To assess the ability to identify fish pathogens by PCR: ISAV, SAV, KHV	Organizer and participant	44
Interlaboratory proficiency test 2024 for WSSV	Organizer and participant	24
Interlaboratory proficiency test 2024 for detection of TSV and YHV1	Organizer and participant	21
Asia pacific laboratories proficiency test for aquatic animal program -Fin fish PCR	participant	1
Asia pacific laboratories proficiency test for aquatic animal program -Crustacean PCR	participant	1

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No