World Organisation for Animal Health

Irene Cano Cejas - - UNITED_KINGDOM

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

***Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:**	Koi herpesvirus disease
***Address of laboratory:**	Barrack Road, The Nothe, Weymouth, Dorset DT4 8UB
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***E-mail address:**	irene.canocejas@cefas.gov.uk
Website:	https://www.cefas.co.uk/
***Name (including Title) of Head of Laboratory (Responsible Official):**	Dr Rachel Hartnell, Science Director
***Name (including Title and Position) of WOAH Reference Expert:**	Dr Irene Cano Cejas, Principal Virologist and Immunologist
***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
Histopathology	Yes	2	0
Direct diagnostic tests		Nationally	Internationally
Conventional PCR (CyHV-pol and/or TK Bercovier)	Yes	155	0
PCR amplicon sequencing	Yes	37	0
Real-time PCR	Yes	119	0
Cell culture (CCB and/or KF cells)	Yes	0	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?

No

5. Did your laboratory supply vaccines to WOAH Members?

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?

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

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
SOUTH AFRICA	Advice on PCR tests for surveillance programs	Emails

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

Yes

Research need : 1

Please type the Research need: Discrimination of KHV-variants

Relevance for WOAH Disease Control, Capacity Building,

Relevance for the Code or Manual Manual,

Field Epidemiology and Surveillance,

Animal Category Aquatic,

Disease:

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: Currently, discrimination of KHV-variants are conducted by PCR targeting eight different VNTR sequences. A better understanding of KHV-variants is needed for surveillance programs and vaccine development.

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:
The routine national surveillance program includes testing to retain freedom in approved compartments, ad hoc testing programme of susceptible ornamental imports and course fish testing on suspicion.

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:
We keep an up-to-date record of relevant published data on KHV. There have been no major changes in the distribution or severity of KHV.

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:

0

b) International conferences:

1
Scott, G., Ryder, D., Wood, G., Savage, J., Paley, R., Batista, F. (2025). Koi Herpes Virus Whole Genome Sequencing Using Nanopore Long Read Sequencing. 22nd International Conference on Diseases of Fish and Shellfish. 1-5th September 2025, Crete, Greece.

c) National conferences:

1
Ryder, D., Scott, G., Wood, G., Savage, J., Paley, R., Batista, F. (2025). Whole genome sequencing of Cyprinid herpesvirus 3 isolates collected in the UK using an amplification free long read sequencing approach. Genome Science UK 2025. 9 – 11thJuly, Newcastle, UK

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 WOAH Members?

Yes

a) Technical visit : 0

b) Seminars : 0

c) Hands-on training courses: 1

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
C	SOUTH AFRICA	4

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO9001	scan attached	11 102147 HSEQ CORP Quality ISO 9001 certificate.PDF_2.pdf
ISO17025	scan attached	2293Testing-Single Weymouth UKAS Accred ISO17025 cert 2024.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Detection and confirmation of Koi herpesvirus (KHV) DNA by PCR	UKAS
Detection and confirmation of CyHV-3 (KHV) DNA by PCR	UKAS

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

Yes

Cefas Biorisk management system includes a range of practices and procedures to ensure biosecurity, biosafety, and biocontainment of infectious agents including security measures for laboratories, from standard operating procedures to physical measures to individual practices in the laboratory. This includes a dedicated Biosafety and Biosecurity Committee with lead and deputy officers and a internally published laboratory Biosecurity Handbook.

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	location	Role (speaker, presenting poster, short communications)	Title of the work presented
WOAH ad hoc workshop to identify highest priority research areas for finfish health	2025-02-20	Paris	Speaker presentation and participation in round tables and discussions	Environmental drivers of disease emergence

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS
KHV	Participant	3	KHV ref labs in Germany and Japan

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

No

Inter-laboratory proficiency tests were conducted with non-ref labs

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 during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons1	**Role of your reference laboratory (organizer/participant)**	**No. participating laboratories**	**Name of the test**	**WOAH Member Countries**
Validation of diagnostic	Participant	9	To validate and confirm the presence of KHV in positive material used for an interlaboratory	UNITED KINGDOM

protocols	Participant	9	positive material used for an interlaboratory proficiency test	UNITED KINGDOM,
EURL annual Comparative test of diagnostic procedures for EU listed fish diseases	Participant	43	Inter-Laboratory Proficiency Test 2025 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)
Technical advice	National laboratory	New diagnostic chapter for TiLV
Technical advice	National laboratory	Review of Aquatic Manual introductory Chapter 1.1.2 'Validation of diagnostic assays for infectious diseases of aquatic animals'

29. Additional comments regarding your report:

Yes

In collaboration with national universities and institutions, we have submitted a grant application to UKRI to test vaccine platforms for KHV.