

WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 7 mars 2023 16:50

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Peste des petits ruminants
Address of laboratory:	The Pirbright Institute, Ash Road, Pirbright, Surrey, UK, GU24 0NF
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Website:	https://www.pirbright.ac.uk/our-science/vector-borne-viral-diseases/non-vesicular-disease-reference-laboratory
Name (including Title) of Head of Laboratory (Responsible Official):	Prof Bryan Charleston, Institute Director
Name (including Title and Position) of WOA Reference Expert:	Dr Michael D Baron, Honorary Fellow
Which of the following defines your laboratory? Check all that apply:	Research Institute

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
cELISA	Yes	0	0
Direct diagnostic tests		Nationally	Internationally

Real-time RT-PCR	Yes	0	27
Virus isolation	Yes	0	9

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
Live PPRV vaccine strain Nigeria/75	PCR	Provide	0	2 ml	1	MiddleEast
Live PPRV strain PPRV/Georgia/2016	PCR	Provide	0	2 ml	1	MiddleEast
Live PPRV strain PPRV/UAE/1986	PCR	Provide	0	2 ml	1	MiddleEast
Live PPRV strain PPRV/Cote d'Ivoire/1989	PCR	Provide	0	2 ml	1	MiddleEast
goat antiserum to PPRV	ELISA	Provide	0	12.5 ml	3	Asia and Pacific Europe
Inactivated PPRV antigen	PCR	Provide	0	3 ml	2	Asia and Pacific Europe
RNA from PPRV vaccine Nigeria/75	PCR	Provide	0	100 µl	1	Asia and Pacific
RNA from PPRV/Oman/1983	PCR	Provide	0	100 µl	1	Asia and Pacific
RNA from PPRV/Georgia/2016	PCR	Provide	0	300 µl	1	America Asia and Pacific
Penside test kit for PPR (LFDs)	Lateral flow test	Provide	0	1 kit (25 tests)	1	MiddleEast

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 WOAHP Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOAHP 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
KUWAIT	2022-05-17	Real-time RT-PCR and Virus isolation	0	16
MONGOLIA	2022-05-16	Real-time RT-PCR and Virus isolation	0	5
EGYPT	2022-12-08	Real-time RT-PCR	0	6

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

Yes

NAME OF THE WOAHP MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
KUWAIT	Diagnosis of PPRV	Email
ETHIOPIA UNITED STATES OF AMERICA	Support of research study on PPRV transmission	Zoom conferences, emails, written document

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAHP MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
Development of multispecies validated serology protocols for complex ecosystems, focused on East Africa, in support of Global PPR eradication	18 months (completed January 2022)	Validate existing diagnostic tests for detection of PPRV antibodies in livestock	Royal Veterinary College; CIRAD; IAEA; U of Glasgow; SACID	AUSTRIA FRANCE TANZANIA

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:

Sequence analysis from 2022 submissions are being analysed and prepared for publication. We also analysed all available PPRV sequences, identifying the large fraction of suspect sequences in the database and linking the remaining sequences to geographic locations of origin.

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:

The datasets described in 14 have been published and made available through the web site of the WOAHPPR Reference Laboratory Network

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

Baron MD, Bataille A. 2022. A curated dataset of peste des petits ruminants virus sequences for molecular epidemiological analyses. *PLoS ONE* 17:e0263616.

b) International conferences:

3

The evaluation of five serological assays in determining seroconversion in typical and atypical host species of PPR :13th International Conference on Goats 2022 – 19-22 September

A curated dataset of peste des petits ruminants virus sequences for molecular epidemiological analyses.

A comparison of available serological assays for detecting PPRV antibodies in wildlife :WOAH PPRV network workshop 2022 – 1 December

A curated dataset of peste des petits ruminants virus sequences for molecular epidemiological analyses: 5th PPR-GREN meeting, Montpellier, 7-9 December

c) National conferences:

0

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

1

We have created an eLearning course on PPR, covering the virus, the disease, disease control, diagnostics (including which diagnostic to use when) and the global eradication campaign. This course is aimed primarily at laboratory scientists and veterinarians engaged in diagnostic or surveillance work. Full details are available at <https://www.pirbright.ac.uk/elearning-courses/peste-des-petits-ruminants-ppr-elearning>.

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 :

b) Seminars : 1

c) Hands-on training courses:

d) Internships (>1 month)

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	Various	

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		Pirbright UKAS Accreditation 2022.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
cELISA	UKAS
Real-time RT-PCR (Batten et al)	UKAS
Real-time RT-PCR (Flannery et al)	UKAS

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

Yes

The institute works to reduce biorisk across all areas of its work

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
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25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
Harmonization of diagnostic tests for PPRV	Participant	11	Organiser: CIRAD, France

26. Did your laboratory collaborate with other WOAHP 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 WOAHP REFERENCE LABORATORIES
Quality control and filtering of all publicly available PPRV sequences	Analysis, quality filtering and geolocation of known PPRV sequences	CIRAD, France
Development of multispecies validated serology protocols for complex ecosystems, focused on East Africa, in support of Global PPR eradication	Development of multispecies validated serology protocols for complex ecosystems, focused on East Africa, in support of Global PPR eradication	CIRAD, France

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHP 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 WOAHP Member Countries
Harmonisation of diagnostic tests for PPRV	Participant	11	Africa Asia and Pacific Europe

Molecular detection ILC 2021 (note due to COVID reported in 2022)

Participant

31

Africa
Asia and Pacific
Europe

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Member of WOA Ad Hoc Group	Virtual	PPR status of Member States

29. Additional comments regarding your report:

Yes

Virus could not be isolated from the Kuwait and Mongolian positive samples. Results for samples from Egypt are pending.

Pirbright experts gave a virtual seminar at a PPRV training course organised by IAEA.

The Pirbright institute has also participated in contract research on PPRV that cannot be reported here as it is commercially sensitive.