

OIE Reference Laboratory Reports Activities

Activities in 2019

This report has been submitted : 2019-12-18 14:25:51

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Peste des petits ruminants
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Name (including Title) of Head of Laboratory (Responsible Official):	Dr Bryan Charleston
Name (including Title and Position) of OIE Reference Expert:	Dr Michael D Baron, Honorary Research Fellow
Which of the following defines your laboratory? Check all that apply:	Research

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
C-ELISA	Yes	0	0
Direct diagnostic tests		Nationally	Internationally
Real-time RT-PCR	Yes	0	20

ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards. To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
Ivory coast Lineage I RNA	PCR	Provide	100ul	0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Georgia Lineage IV RNA	PCR	Provide	100ul	0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
PPRV Georgia isolate	PCR	Provide	0	2ml	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
PPRV antigen LFD test kits	Antigen detection	Provide	0	1567 kits (25 per kit)	6	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
ALGERIA	February	8	0
TURKEY	March	0	12

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
CHINESE TAIPEI	Advice given on diagnostic test selection and result interpretation	Email
UNITED ARAB EMIRATES	Advice given on diagnostic test selection	Email
UNITED STATES OF AMERICA	advice given on virus isolation, diagnostic testing, biosafety protocols, and design of animal studies	Email, face-to-face
ETHIOPIA	Advice given on diagnostic lab organisation, and training given on virus isolation and real-time PCR for PPRV detection	face-to-face during visit to laboratory in Ethiopia, and in follow-up emails
MOROCCO	Availability of PT schemes	Email

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Role of cattle in transmission of PPRV	3 years	Measure transmission of PPRV (if any) from infected cattle	Penn State University (USA), NAHDIC(Ethiopia)	ETHIOPIA UNITED STATES OF AMERICA
IAEA: Veterinary diagnostic laboratory network (VETLAB network) to prevent and control transboundary diseases	5 years total	Production of validated reagents. Building capacity for diagnostics	ANSES, IRAD,CSIRO,SENASA, LANAVET, CVI,LANADA,UKIM,ONSSA,NAHDIC, IAEA	ARGENTINA AUSTRALIA AUSTRIA CAMEROON COTE D'IVOIRE CROATIA ETHIOPIA FRANCE MOROCCO NORTH MACEDONIA (REP. OF) SUDAN UNITED KINGDOM
Enhancement of diagnostic capacity and epidemiosurveillance for PPR in Tanzania	18 mont extension (now complete)	Capacity building	CIBD	TANZANIA

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological data relevant to international disease control?

No

If the answer is no, please provide a brief explanation of the situation:
We work with other member states to help them collect their own data

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

No

If the answer is no, please provide a brief explanation of the situation:

See answer 11

**13. What method of dissemination of information is most often used by your laboratory?
(Indicate in the appropriate box the number by category)**

a) Articles published in peer-reviewed journals: 3

1: Flannery J, Rajko-Nenow P, Arnold H, van Weezep E, van Rijn PA, Ngeleja C, Batten C. Improved PCR diagnostics using up-to-date in silico validation: An F-gene RT-qPCR assay for the detection of all four lineages of peste des petits ruminants virus. J Virol Methods. 2019 Dec;274:113735. doi: 10.1016/j.jviromet.2019.113735. Epub 2019 Sep 14.

2: Rajko-Nenow P, Flannery J, Arnold H, Howson ELA, Darpel K, Stedman A, Corla A, Batten C. A rapid RT-LAMP assay for the detection of all four lineages of Peste des Petits Ruminants Virus. J Virol Methods. 2019 Dec;274:113730. doi: 10.1016/j.jviromet.2019.113730.

3: Mahapatra M, Howson E, Fowler V, Batten C, Flannery J, Selvaraj M, Parida S. Rapid Detection of Peste des Petits Ruminants Virus (PPRV) Nucleic Acid Using a Novel Low-Cost Reverse Transcription Loop-Mediated Isothermal Amplification (RT-LAMP) Assay for Future Use in Nascent PPR Eradication Programme. Viruses. 2019 Jul 31;11(8). pii: E699. doi: 10.3390/v11080699

b) International conferences: 1

M. D. Baron. Keynote Lecture at 13th Annual Epizone meeting, Berlin, Germany. "PPR, a threat or a problem?"

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 0

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries

To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

Yes

a) Technical visits: 3

b) Seminars: 2

c) Hands-on training courses: 2

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
a	Ethiopia	3
b,c	Turkey	2

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO/IEC17025	UKAS scope.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Real-time RT-PCR	UKAS
C-ELISA	UKAS

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

Yes

(See Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Peste des petits ruminants virus (PPRV) Global Research and Expertise Network (GREN) Meeting	11/19	Nairobi, Kenya	Speaker	The Pirbright Institute Activities on PPR
EuFMD Special Committee on Surveillance and Applied Research (SCSAR)	09/19	Bari, Italy	Participant	discuss inclusion of FAST diseases (PPRV)

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

Yes

Purpose of the proficiency tests: ¹	Role of your Reference Laboratory (organiser/ participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.
to strengthen and harmonise the ability of the laboratories to detect PPRV antibodies by competition ELISA and PPRV RNA by real-time and conventional RT-PCR assays	Participant	31	Organising OIE ref lab - CIRAD France.

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

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

No

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: <http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

Purpose for inter-laboratory test comparisons ¹	No. participating laboratories	Region(s) of participating OIE Member Countries
To strengthen and harmonise the ability of the laboratories to detect PPRV antibodies by competition ELISA and PPRV RNA by real-time and conventional RT-PCR assays	31	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

Yes

Kind of consultancy	Location	Subject (facultative)
Revision of Terrestrial Manual	U.K.	Two separate revisions of chapter of Terrestrial Manual on Infection with PPRV (currently 3.07.09)
Expert contribution to meeting	Kenya	Participate in meeting of Advisory Committee for PPR-GEP

25. Additional comments regarding your report:

The OIE twinning project with CIBD, Tanzania has now been finalised and the project has been closed.

A new LAMP and real-time RT-PCT for PPRV have been developed and the studies have been published (see publication list).

Presentations on these assays were given at the IAEA VETLAB network meeting in August and at the NRL for PPRV workshop hosted by the EURL (CIRAD, France) in Belgium in October.