

OIE Reference Laboratory Reports Activities

Activities in 2020

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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 Nathalie Vachery
Name (including Title and Position) of OIE Reference Expert:	Dr Geneviève Libeau
Which of the following defines your laboratory? Check all that apply:	Other: EPIC, Industrial and Commercial Public Establishment

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
cELISA	Yes	8	0
Direct diagnostic tests		Nationally	Internationally
real-time RT-PCR	Yes	696	122
RT-PCR	Yes	0	41
Partial sequencing	Yes	0	21
Full genome sequencing	Yes	7	2
Isolation	Yes	0	15

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
inactivated strains	Real-time RT-PCR	Produced/ provide	2ml	4	3	<input 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
PPR positive goat serum	ELISA	Produced/ provide	2ml	37	35	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
live PPR strains	Real-time RT-PCR, VNT, isolation, sequencing	Produced/ provide	6ml	3	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
penside test (IDvet)	penside test (IDvet)	provided	kit	16	2	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Cells (VDS, CHS)	isolation	Produced/ provide	10ml	0	3	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input 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
NIGERIA	october 2020	80	0
RUSSIA	Jan-Dec	20	0
IRAQ	May-Dec	10	0

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
SENEGAL	Protocols for PPR sampling and storage	visioconference, SOPs
BURKINA FASO	Protocols for PPR sampling and storage	visioconference, SOPs
MALI	Protocols for PPR sampling and storage	visioconference, SOPs
RUSSIA	Quality control of vaccine strains produced in Russia; validation of new diagnostic method	visioconference, analyses, presentation of results/reports
BANGLADESH	Requests for vaccine master seed	remote
SYRIA	Requests for vaccine master seed	remote
PAKISTAN	Requests for vaccine master seed	remote
SUDAN	Camel vaccination, ELISA tests, virus detection	remote
COMOROS	PPR suspicion, support for diagnostic	remote, organisation of shipment of samples
EGYPT	PPR isolation, full genome sequencing	remote, organisation of shipment of samples, shipment of cells

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
Livestock Disease Surveillance Knowledge Intregation (LIDISKI)	4 years	Improving surveillance and control of PPR in Nigeria	CIRAD, IZSve, Ikore, NVRI	ITALY NIGERIA
Epidemiology and Control of Peste des Petits Ruminants (ECO-PPR)	2 years	to inform and support ongoing national, regional and global efforts for PPR control and eradication by generating the necessary evidence to support policy dialogue.	ILRI ISRA LCV CIRDES	BURKINA FASO MALI SENEGAL
Study of virulence of peste des petits ruminants virus in relation to variability of host response	3 years	Study of virulence of peste des petits ruminants virus in relation to variability of host response	IVI, Bern	SWITZERLAND
Development of multispecies validated serology protocols for complex ecosystems, focused on East Africa, in support of Global PPR eradication	1.5years	Development of multispecies validated serology protocols for complex ecosystems, focused on East Africa, in support of Global PPR eradication	RVC, PI, IAEA, U of Glasgow, SACID	AUSTRIA TANZANIA UNITED KINGDOM
Support Towards the Operationalization of the SADC Regional Agricultural Policy (STOSAR)' Project	1.5 years	Specialized services for risk analysis, training and sample testing for the management of PPR	FAO, SADC	ANGOLA BOTSWANA COMOROS ESWATINI LESOTHO MADAGASCAR MOZAMBIQUE SEYCHELLES SOUTH AFRICA TANZANIA ZAMBIA ZIMBABWE

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?

Yes

If the answer is yes, please provide details of the data collected:
1) PPR distribution and genetic diversity in Nigeria 2) quality of vaccines produced and distributed 3) Variability in immune response to PPR

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

Yes

If the answer is yes, please provide details of the data collected:
1) PPR distribution and genetic diversity in Nigeria 2) Association between PPR transmission and animal mobility in Senegal

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: 4

- Fine AE, Pruvot M, Benfield CTO, Caron A, Cattoli G, Chardonnet P, et al. Eradication of Peste des Petits Ruminants Virus and the Wildlife-Livestock Interface. *Frontiers in Veterinary Science*. 2020;7(50).
- Dundon WG, Diallo A, Cattoli G. Peste des petits ruminants in Africa: a review of currently available molecular epidemiological data, 2020. *Arch Virol*. 2020.
- Fernandez Aguilar X, Mahapatra M, Begovoeva M, Kalema-Zikusoka G, Driciru M, Ayebazibwe C, et al. Peste des Petits Ruminants at the Wildlife-Livestock Interface in the Northern Albertine Rift and Nile Basin, East Africa. *Viruses*. 2020;12(3):293.
- Comerlato J, Albina E, Puech C, Franco AC, Minet C, Eloiflin R-J, et al. Identification of a murine cell line that distinguishes virulent from attenuated isolates of the morbillivirus Peste des Petits Ruminants, a promising tool for virulence studies. *Virus Research*. 2020:198035.

b) International conferences: 2

- 1- EU-FMD, online dec 2020. Geographical distribution of PPR
- 2- Annual workshop of NRLs for PPR, online, dec 2020. Presentation 1: results of proficiency tests; presentation 2: OIE PPR GEP-Ref lab network; presentation 3: New project on wildlife serology tests

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 1

1. ÉTUDE DE LA VIRULENCE DU VIRUS DE LA PESTE DES PETITS RUMINANTS. Chloé Corbanini. 2020. Montpellier: UM2, 48 p. Mémoire de master 2: Interactions Microorganismes Hôtes et Environnements. Mention Biologie Agrosociétés. Université de Montpellier.

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: 1
- b) Seminars: 3
- c) Hands-on training courses: 0
- d) Internships (>1 month): 1

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	Nigeria	4
b	21 EU member states (Austria, Belgium, Bulgaria, Republic of Cyprus, Czech Republic, Germany, Greece, Hungary, Ireland, Italy, Latvia, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom and France) and of 10 non-EU countries (Albania, Belarus, Bosnia and Herzegovina, Republic of North Macedonia, Kosovo, Georgia, Montenegro, Serbia, Turkey and Kazakhstan)	68
b	SADC countries	40
b	Senegal, Mali, Burkina Faso	20
d	Nigeria	1

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 17025	1-2207.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
C-ELISA	COFRAC

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
PPR-GREN	12/2020	online	expert	participation to workshop discussions
EU-FMD open sessions	12/2020	online	speaker	geographical distribution of PPR

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.
Serology and virology	organiser	1	The Pirbright Institute (TPI)

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
Organisation of the network of OIE ref lab for PPR	Organisation of the network of OIE ref lab for PPR	Pirbright, China Animal Health and Epidemiology Center

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
Serology	34	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Gene and antigen detection	34	<input checked="" 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)
Attendance at the PPR Ad hoc meeting	online	Several tasks including to advise the OIE for the endorsement of countries' PPR-free official status and also of their national official control programme with regard to PPR.

25. Additional comments regarding your report: