

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 27 mai 2024 16:22

Laboratory Information

Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	Peste des petits ruminants
Address of laboratory:	Campus International de Baillarguet TA A-15/G 34398 Montpellier Cedex 5 FRANCE
Tel.:	+33 4 67 59 39 04
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Website:	https://umr-astre.cirad.fr/
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Nathalie Vachier
Name (including Title and Position) of WOAHO Reference Expert:	Dr. Arnaud Bataille
Which of the following defines your laboratory? Check all that apply:	

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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
ELISA		0	19
Direct diagnostic tests			
RT-PCR en temps réel		0	32
Séquençage de génomes entiers		2	18

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAHO-approved) and/or other diagnostic reagents to WOAHO Members?

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOAHO MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
Souche PPR vivante	RT-QPCR, VNT, Isolement	Souches CIV1989 et Maroc 2008	0	20 ml par souche	1	SPAIN,
Souche PPR inactivé	PCR	Souches de lignée II, lignée III et/ou lignée IV	0	2 ml par tube	3	ALBANIA, BULGARIA, TURKEY,
Sérums positif de chèvre	ELISA	Sérums positif de chèvre	0	2 ml par tube	4	GREECE, MOLDOVA, NORTH MACEDONIA

Cellules (VDS, CHS)	Isolement	Cellules (VDS, CHS)	0	25ml	1	(REP. OF), SERBIA, UNITED ARAB EMIRATES,
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4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAAH Members?

Yes

VACCINE NAME	AMOUNT SUPPLIED NATIONALLY	AMOUNT SUPPLIED NATIONALLY (ML, MG)	NAME OF RECIPIENT WOAAH MEMBERS
Nigeria 75/1	0	10 vials of 1ml	PAKISTAN

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 WOAAH 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 WOAAH Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOAAH 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
NORTH MACEDONIA (REP. OF)	2023-11-01	ELISA	0	18
SENEGAL	2023-02-01	ELISA et RT-qPCR	0	33

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

Yes

NAME OF THE WOAAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
SENEGAL	Système qualité et sur des besoins spécifiques en diagnostic concernant le séquençage, l'isolement viral et la SNT	Jumelage WOAAH
ROMANIA UNITED ARAB EMIRATES	Organisation d'EILA	webinar
NIGERIA	Diagnostic, design d'échantillonnage, enquêtes sur le terrain	Projet LIDISKI
ALGERIA	Analyses d'échantillons dans le cadre de recherche	visioconférence
PORTUGAL	Analyses d'échantillons dans le cadre de recherche	Réunions, visio, formation de labo
INDIA	PPR vaccine production et training offers	Échanges par email et lors du PPR GREN
TURKEY	Développement de méthode dPCR et eRNA	Discussions pendant workshop LRUE-PPR

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAAH 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
Livestock Disease Surveillance Knowledge Intregation (LIDISKI)	5 ans	Improving surveillance and control of PPR in Nigeria	CIRAD, IZSvE, Ikore, NVRI	ITALY NIGERIA
Study of virulence of peste des petits ruminants virus in relation to variability of host response	3 ans	Study of virulence of peste des petits ruminants virus in relation to variability of host response	IVI Bern, WUR, CISA-INIA	SWITZERLAND THE NETHERLANDS
WOAH twinning LNERV-CIRAD	2 ans	Support LNERV to become regional ref lab for PPR	LNERV	SENEGAL
SPIDVAC	4 ans	development of innovative vaccines	FLI, LNERV, IDvet	GERMANY SENEGAL
RFOROA One health	1.5 ans	diagnostic support	IRED, Smithsonian Institute	CHAD UNITED STATES OF AMERICA
SANDSTORM	3 ans	diagnostic support	CIBIO	ANGOLA PORTUGAL

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

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:

1) genetic diversity and evolution of PPRV genetic lineages; 2) Variability in immune response to PPR; 3) epidemiology of PPR au Nigéria; 4) comparison of serological tests (ELISA, SNT, LIPS, PVNA) applied to serum of atypical hosts

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:

1) Données de sequences génomes PPRV
PPR GREN (Inde, Nov 2023), « comparative evolutionary analyses of PPRV lineages »
Curated dataset on the website of the OIE PPR reference laboratory network
2) Données de sérologie PPR faune sauvage

Grosbois V, Kwiatek O, Gaidet N., Chardonnet P., Chardonnet B., Bataille A., Parida S., Roger F., Kock R., Libeau G. & Caron A. (2023). – Peste Des Petits Ruminants Screening and Diagnostic Tests in African Wildlife in the Context of Rinderpest Eradication (1994–2007). *Transboundary and Emerging Diseases*, 2023, 5542497.

3) Données d'évaluation de tests sérologiques sur serums d'hôtes atypique
Tully M., Batten C., Ashby M., Mahapatra M., Parekh K., Parida S., Njeumi F., Willett B., Bataille A., Libeau G., Kwiatek O., Caron A., Berguido F.J., Lamien C.E., Cattoli G., Misinzo G., Keyyu J., Mdetete D., Gakuya F., Bodjo S.C., Taha F.A., Elbasher H.M., Khalafalla A.I., Osman A.Y. & Kock R. (2023). – The evaluation of five serological assays in determining seroconversion to peste des petits ruminants virus in typical and atypical hosts. *Sci Rep*, 13 (1), 14787.

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:

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Grosbois V, Kwiatek O, Gaidet N., Chardonnet P., Chardonnet B., Bataille A., Parida S., Roger F., Kock R., Libeau G. & Caron A. (2023). – Peste Des Petits Ruminants Screening and Diagnostic Tests in African Wildlife in the Context of Rinderpest Eradication (1994–2007). *Transboundary and Emerging Diseases*, 2023, 5542497.

Tully M., Batten C., Ashby M., Mahapatra M., Parekh K., Parida S., Njeumi F., Willett B., Bataille A., Libeau G., Kwiatek O., Caron A., Berguido F.J., Lamien C.E., Cattoli G., Misinzo G., Keyyu J., Mdetete D., Gakuya F., Bodjo S.C., Taha F.A., Elbasher H.M., Khalafalla A.I., Osman A.Y. & Kock R. (2023). – The evaluation of five serological assays in determining seroconversion to peste des petits ruminants virus in typical and atypical hosts. *Sci Rep*, 13 (1), 14787.

b) International conferences:

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- VetBioNet meeting (online Feb 2023) « Study of virulence of PPRV in relation to variability of host response »
- Webinar of the OMSA network of PPR ref lab (online, Sept 2023) « Harmonisation of PPR diagnostic practices through proficiency tests »
- Workshop of the EURL-PPR (Belgique, Oct 2023) (1) « Preliminary evaluation of full genome PPRV sequencing using nanopore sequencing » (2) « Comparative phylogenomic study of PPRV genetic lineages »
- PPR GREN (Inde, Nov 2023), « comparative evolutionary analyses of PPRV lineages »
- PPR GEP advisory committee meeting (Inde, Nov 2023) « Activities of the WOAHA/FAO PPR reference laboratory at CIRAD »
- Workshop of the OMSA network of PPR ref lab (online, Dec 2023) « Update on activities of the reference laboratory »

c) National conferences:

0

na

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

4

- Site web Reference Laboratory of the European Union for Peste des Petits Ruminants (EURL-PPR)
- Site web projet LIDISKI
- Site web the OIE PPR reference laboratory network
- site de l'UMR ASTRE pour les produits de diagnostic vétérinaire

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHA Members?

Yes

a) Technical visit : 0

b) Seminars : 41

c) Hands-on training courses: 3

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
B	FRANCE	15
B	ZIMBABWE	18
B	ROMANIA	2
B	UNITED ARAB EMIRATES	6
C	POLAND	2
C	PORTUGAL	1
D	FRANCE	1

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025	certificat d'accréditation.pdf	certificat d'accréditation.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
ELISA, PCR	COFRAC

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

Yes

CIRAD's facilities are authorized by the French Agency for Health Products (ANSM, equivalent to the FDA) to store and handle selected agents, including PPRV. All laboratory activities are carried out in the facility either at BSL-3+ or BSL-2 biocontainment.

TOR9: SCIENTIFIC MEETINGS

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

Yes

NATIONAL/ INTERNATIONAL	TITLE OF EVENT	CO-ORGANISER	DATE (MM/YY)	LOCATION	NO. PARTICIPANTS
International	annual workshop of the WOA?H network for PPR ref lab	PI, CAHEC	2023-12-13	online	33

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

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
PPR GREN meeting	2023-11-28	inde	speaker	comparative evolutionary analyses of PPRV lineages
• PPR GEP advisory committee meeting	2023-12-01	inde	speaker	Activities of the WOA?H/FAO PPR reference laboratory at CIRAD

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
the WOA?H network for PPR ref lab	organisateur	24	PI, CAHEC

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS/ ORGANISING WOA?H REF. LAB.
Serology, virology	organisateur et participant	46	CIRAD

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
PPRV sequence curation	PPRV sequence curation	PI
Organisation of the network of OIE ref lab for PPR	Organisation of the network of OIE ref lab for PPR	PI, CAHEC

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?

Yes

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Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAH Member Countries
Serology, virology	ORGANISATEUR/PARTICIPANT	46	ELISA, PCR	ALBANIA, ARMENIA, AUSTRIA, AZERBAIJAN, BELGIUM, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, FRANCE, GERMANY, GREECE, HUNGARY, INDIA, IRELAND, ITALY, KAZAKHSTAN, KOREA (REP. OF), KOSOVO, LATVIA, LITHUANIA, MADAGASCAR, MALTA, MOLDOVA, MONTENEGRO, MOROCCO, NIGERIA, NORTH MACEDONIA (REP. OF), POLAND, PORTUGAL, ROMANIA, SAUDI ARABIA, SERBIA, SLOVAKIA, SLOVENIA, SOUTH AFRICA, SPAIN, SWEDEN, SWITZERLAND, THE NETHERLANDS, TURKEY, UKRAINE, UNITED ARAB EMIRATES, UNITED KINGDOM,

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Révision de documents OMSA en cours de rédaction	online	Diagnostic validation of point-of-care tests for WOAH-listed viral diseases using field samples
Révision de documents OMSA en cours de rédaction	online	criteria for the development of PPR reference reagents
Présentation des activités du labo de ref OMSA au PPR GEP AC	inde	Présentation des activités du labo de ref OMSA

29. Additional comments regarding your report:

No