

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 25 juin 2024 10:43

Laboratory Information

Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	Rabies
Address of laboratory:	Domaine de Pixérécourt Technopôle Agricole et Vétérinaire - Bâtiment H - 54220 Malzéville Cedex FRANCE
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Website:	https://www.anses.fr/fr
Name (including Title) of Head of Laboratory (Responsible Official):	Elodie Monchatre-Leroy
Name (including Title and Position) of WOAHO Reference Expert:	FlorenceCliquet
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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Fluorescent antibody virus neutralisation test (FAVN t)		634	1185
Potency test of inactivated animal vaccines		31	4
Direct diagnostic tests			
Fluorescent antibody test (FAT)		772	1
Cell culture inoculation test (RTCIT)		54	1
Real time RT-PCR		9	1
Viral RNA (Real time RT-PCR and RT PCR, N and G genes)		10	1
G gene and N gene Sequencing		1	54
Rabies virus titration (titration of oral vaccines)		0	30

TOR2: REFERENCE MATERIAL

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

Yes

TYPE OF REAGENT	RELATED DIAGNOSTIC	PRODUCED/ IMPORTED	QUANTITY SUPPLIED	QUANTITY SUPPLIED AT INTERNATIONAL LEVEL	NAME OF BENEFICIARY WOAHO MEMBER
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AVAILABLE	TESTING		NATIONWIDE (ML, MG)	(ML, MG)	COUNTRIES
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3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA 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 MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
Naïve reference serum	Seroneutralisation	Produced	171 mL	162 mL	8	CHILE, FRANCE, GERMANY, MADAGASCAR, MOROCCO, SLOVENIA, THE NETHERLANDS, UNITED KINGDOM,
Challenge virus standard (CVS)	Seroneutralisation	Produced	0	12 mL	5	BRAZIL, DENMARK, MADAGASCAR, SERBIA, SPAIN,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA 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 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 WOA Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOA 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
LEBANON	2023-08-17	FAT	1	1

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

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA 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
WOAH rabies twinning project	3 years	The main purpose was to improve laboratory capacity for rabies diagnosis and serology for rabies surveillance	Pasteur Institute of Tunis	TUNISIA

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

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:

Data of rabies passive surveillance collected by National Reference Laboratories

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:

Data of rabies passive surveillance collected by National Reference Laboratories

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:

6

1/ *Arnaout Y, Picard-Meyer E, Robardet E, Cappelle J, Cliquet F, Touzalin F, Jimenez G, Djelouadji Z. Assessment of virus and Leptospira carriage in bats in France. PLoS One. 2023 Oct 20;18(10):e0292840. doi: 10.1371/journal.pone.0292840. PMID: 37862301; PMCID: PMC10588846.*

2/ *Viviani L, Balks E, Beken S, Brady AM, Clayton R, Cliquet F, Desmayanti L, Fragoeiro S, Hamtak Tj, John D, Jungbaeck C, Kalaivani M, Kross I, Lang C, Ria Isriyanthi NM, Mallet L, Milne C, Rubbrecht M, Siklodi B, Singh B, Srinivas GB, Stickings P, Stirling C, Sundram P, Szabó M, Thomas A, van den Berg M, Walker A, Philippe C, Vandeputte J. 3Rs implementation in veterinary vaccine batch-release testing: Current state-of-the-art and future opportunities. A webinar and workshop report. Biologicals. 2023 Aug;83:101695. doi: 10.1016/j.biologicals.2023.101695. Epub 2023 Jul 27. PMID: 37516084.*

3/ *Dascalu MA, Picard-Meyer E, Robardet E, Servat A, Arseniev S, Groza O, Starciuc N, Vuta V, Barbuceanu F, Tanase OI, Daraban Bocaneti F, Quenault H, Hirchaud E, Blanchard Y, Velescu E, Cliquet F. Whole genome sequencing and phylogenetic characterisation of rabies virus strains from Moldova and north-eastern Romania. PLoS Negl Trop Dis. 2023 Jul 6;17(7):e0011446. doi: 10.1371/journal.pntd.0011446. PMID: 37410714; PMCID: PMC10325106.*

4/ *Rathnadiwakara H, Gunatilake M, Servat A, Wasniewski M, Thibault JC, Cliquet F. Potency of Veterinary Rabies Vaccines Marketed in Sri Lanka. Vaccines (Basel). 2023 May 9;11(5):961. doi: 10.3390/vaccines11050961. PMID: 37243065; PMCID: PMC10222363.*

5/ *Rathnadiwakara H, Gunatilake M, Cliquet F, Wasniewski M, Thammitiyagodage M, Karunakaran R, Thibault JC, Ijas M. Detection of immunity in sheep following anti-rabies vaccination. Clin Exp Vaccine Res. 2023 Apr;12(2):97-106. doi: 10.7774/cevr.2023.12.2.97. Epub 2023 Apr 30. PMID: 37214148; PMCID: PMC10193110.*

6/ *Crozet G, Rivière J, Rapenne E, Cliquet F, Robardet E, Dufour B. Quantitative risk assessment of rabies being introduced into mainland France through worldwide noncommercial dog and cat movements. Risk Anal. 2023 May;43(5):896-916. doi: 10.1111/risa.13976. Epub 2022 Jun 21. PMID: 35728942.*

b) International conferences:

7

1/ *Picard-Meyer E. Inter-laboratory assay for performance evaluation of Lyssavirus (rt) RT-PCR techniques: results of year 2022. 14th Workshop for Rabies Ljubljana, Slovenia, 22 June 2023*

2/ *Cliquet F, Lohman I, Bago Z, Duscher G, Nakova E, Kirandjiski T. On the way to rabies elimination in the Western Balkan countries. 14th Workshop for Rabies Ljubljana, Slovenia, 22 June 2023*

3/ *Robardet E. Retrospective analysis of sero-prevalence and bait uptake estimations in foxes after oral rabies vaccination programmes at European level: lessons learned and paths forward. Fifth Meeting of the Standing Group of Rabies in Europe (SGE RAB5), Brussels, Belgium, 04 July 2023 (online).*

4/ *Cliquet F. Beyond the Western Balkans project ADEWB – follow up initiative “Capacity building of Veterinary and Plant Health Services in the Western Balkans”: Fifth Meeting of the Standing Group of Rabies in Europe (SGE RAB5), Brussels, Belgium, 04 July 2023 (online).*

5/ *Cliquet F. Update on rabies data reporting in terrestrial animals. EFSA Scientific Network for Zoonoses monitoring data, Maisons-Alfort, France, 09-11 October 2023.*

6/ *Cliquet F. International harmonization of laboratory diagnosis. Towards rabies control: Epidemiology, diagnosis, vaccination, REMESA training course, Padova, Italy, 26-28 September 2023 (online).*

7/ *Cliquet F. Rabies elimination in Europe: an achievable goal? World rabies day symposium, Vienna, Austria, 26 September 2023.*

c) National conferences:

1

Picard-Meyer E. Chauves-souris et Lyssavirus. Rencontre animateurs PRAC, Eguzon, 20-22 Novembre 2023.

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

1

Editor of a rabies book :

One Health for dog-mediated rabies elimination in Asia: A collection of local experiences, Slack V, Nadal D, Yasobant S, Cliquet F, Ahmad W, Pushpakumara N, Ghosh S, CABI International, 2023 June 30. doi: 10.1079/9781800622975.0000, 258 pages,

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 : 1

b) Seminars : 0

c) Hands-on training courses: 0

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	UNITED STATES OF AMERICA	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 (MJA)	pdf	Audit Attestation_EDQM-MJA-195_MJA0124.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Rabies virus neutralisation test (FAVN test)	COFRAC (since Feb 2008)
Rabies diagnosis (FAT)	COFRAC (since Oct 2012)
Rabies diagnosis (RTCIT)	COFRAC (since Oct 2012)
Potency test of rabies inactivated vaccines for veterinary and human use (challenge and serological tests)	EDQM (since March 2008)
Potency test of rabies vaccines (live, oral) for foxes and raccoon dogs	EDQM (since March 2008)
Rabies Real time RT-PCR (SybrGreen)	COFRAC (since March 2020)
Rabies conventional RT-PCR	COFRAC (since March 2020)

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

Yes

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAHA REFERENCE LABORATORIES

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

Yes

24. Do you network (collaborate or share information) with other WOA Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA REF. LABS
WOAH RABLAB network	Participating together with other WHOA rabies experts to the goal of Zero human cases mediated by dog rabies by 2030	12	All WOA Ref. labs. for rabies

25. Did you organise or participate in inter-laboratory proficiency tests with WOA 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 REF. LABS/ ORGANISING WOA REF. LAB.
Proficiency test for rabies diagnosis	Coordinator and participant	33	2
Evaluation of laboratories for rabies diagnosis	Coordinator	5	0

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

No

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Technical questions on rabies	On line	International standard serum of dog origin, statement for vaccine quality, international movements of pets, etc...

29. Additional comments regarding your report:

No