

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-10 16:23:53

Name of disease (or topic) for which you are a designated OIE 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 OIE Reference Expert:	Florence Cliquet
Which of the following defines your laboratory? Check all that apply:	Governmental

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
Fluorescent antibody virus neutralisation test (FAVN t)	Yes	662	542
Potency test of inactivated animal vaccines	Yes	31	2
Direct diagnostic tests		Nationally	Internationally
Fluorescent antibody test (FAT)	Yes	417	3
Cell culture inoculation test (RTCIT)	Yes	0	3
Real time RT-PCR	Yes	9	5
Viral RNA (Real time RT-PCR and RT PCR, N and G genes)	Yes	14	5
G gene and N gene Sequencing	Yes	5	0
Rabies virus titration (titration of oral vaccines)	Yes	0	7

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?

Yes

NOTE: Currently, there are 22 laboratories that produce Standard Reference Reagents officially recognised by the OIE for 19

diseases/pathogens. Please click the following link to the list of OIE-approved International Standard Sera: <http://www.oie.int/en/our-scientific-expertise/veterinary-products/reference-reagents/>. If the reagent is not listed on this page, it is NOT considered OIE-approved. The next two questions allow you to indicate non-OIE-approved diagnostic reagents.

OIE-approved SRR producing laboratory – Select your lab from list:

Disease	Test	Available from
Rabies	Fluorescent antibody virus neutralisation	Dr Florence Cliquet Anses Nancy, Laboratoire d'études sur la rage et la pathologie des animaux sauvages, Domaine de Pixérécourt, BP 9, 54220 Malzéville, France Tel: 33 (0)3 83.29.89.50 Fax: 33 (0)3 83.29.89.58 florence.cliquet@anses.fr

Type of reagent available	Related diagnostic test	Produced/ Supply imported	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	Name of recipient OIE Member Countries
OIE serum	Seroneutralisation	Produced	<input type="radio"/> <10mL <input checked="" type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input type="radio"/> <10mL <input type="radio"/> 10-100mL <input checked="" type="radio"/> 100-500mL <input type="radio"/> >500mL	
The OIE serum was distributed in Bosnia and Herzegovina, Cambodia, Croatia, Czech Republic, Finland, France, Germany, Indonesia, Israel, Italy, Greece, Hungary, Malaysia, Morocco, Portugal, Russia, Slovenia, South Korea, Spain, the Netherlands, Thailand, Turkey, Ukraine, USA and Vietnam	Seroneutralisation	Produced	<input type="radio"/> <10mL <input checked="" type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input type="radio"/> <10mL <input type="radio"/> 10-100mL <input checked="" type="radio"/> 100-500mL <input type="radio"/> >500mL	

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
Naive reference serum	Seroneutralisation	Produced	135 ml	329 ml	13	<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
Challenge virus standard (CVS)	Seroneutralisation	Produced	0	8 ml	4	<input 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
LUXEMBOURG	May	1	0
LUXEMBOURG	September	1	0
LUXEMBOURG	November	1	0

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

No

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
OIE twinning project	3 years	The main purpose is to improve laboratory capacity for rabies diagnosis and serology and for rabies surveillance	Animal and Health Research Institute of Taipei (Chinese Taipei)	CHINESE TAIPEI
OIE twinning project	3 years	The main purpose is to improve laboratory capacity for rabies diagnosis and serology and for rabies surveillance	Pasteur Institute of Tunis (Tunisia)	TUNISIA

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:
Data of passive surveillance of rabies collected by the EU National Reference Laboratories

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:
Data of passive surveillance of rabies collected by the EU National Reference Laboratories

**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

1/ Benefit-Risk Assessment of the French Surveillance Protocol of Apparently Healthy Biting Dogs and Cats for Human Rabies Prevention.

Crozet G, Charmet T, Cliquet F, Robardet E, Dufour B, Rivière J.

Vet Sci. 2021 Jul 13;8(7):132. doi: 10.3390/vetsci8070132.PMID: 34357924.

2/ Management practices of dog and cat owners in France (pet traveling, animal contact rates and medical monitoring): Impacts on the introduction and the spread of directly transmitted infectious pet diseases.

Crozet G, Lacoste ML, Rivière J, Robardet E, Cliquet F, Dufour B.

Transbound Emerg Dis. 2021 Mar 31. doi: 10.1111/tbed.14088. Online ahead of print. PMID: 33787076.

3/Practices in research, surveillance and control of neglected tropical diseases by One Health approaches: A survey targeting scientists from French-speaking countries.

Molia S, Saillard J, Dellagi K, Cliquet F, Bart JM, Rotureau B, Giraudoux P, Jannin J, Debré P, Solano P.

PLoS Negl Trop Dis. 2021 Mar 4;15(3):e0009246. doi: 10.1371/journal.pntd.0009246. eCollection 2021 Mar. PMID: 33661894.

4/ Multi-annual performance evaluation of laboratories in post-mortem diagnosis of animal rabies: Which techniques lead to the most reliable results in practice?

Robardet E, Servat A, Rieder J, Picard-Meyer E, Cliquet F.

PLoS Negl Trop Dis. 2021 Feb 5;15(2):e0009111. doi: 10.1371/journal.pntd.0009111. eCollection 2021 Feb. PMID: 33544702.

b) International conferences: 8

1/ Jumelage OIE rage : Comment l'intégrer dans les activités régionales?

Cliquet F et Handous M.

Workshop régional sur l'épidémiosurveillance de la rage et la vaccination antirabique des chiens, 16-17 February 2021 (on line).

2/ The laboratory diagnosis of rabies in animals : Implications in Africa.

Cliquet F.

7th International Conference on Rabies in West Africa (RIWA), 03-06 May 2021 (on line).

3/ Rabies in wildlife : Wild reservoirs, actual situation and perspectives of control in Europe.

Cliquet F, Picard-Meyer E, Robardet E, Servat A, Wasniewski M.

XXXII RITA BRAZIL - Conference Rabies in the Americas 2021, Sao Paulo, Brazil, 26-29 October 2021 (on line).

4/ Rabies eradication programmes in Europe.

Cliquet F.

Global anti-rabies efforts : Human and animal vaccines and eradication programmes; OIE, WHO, FAO and UNEP mark World Rabies Day 2021 in the Russian Federation, Moscow, Russian Federation, 28 September 2021 (on

line).

5/ Regional action on animal disease eradication in the Western Balkans (ADEWB) project - Rabies activities.
Kirandjiski T, Cliquet F.

Third Meeting of the Standing Group of Experts on Rabies in Europe (SGE RAB3), Brussels, Belgium, 13 December 2021 (on line).

6/ Update on rabies situation with EU - Annual NRL survey.

Robardet E.

12th EURL workshop for rabies, Nancy, France, 20 April 2021 (on line).

7/ Proficiency test for rabies diagnosis - Session 2019.

Robardet E.

12th EURL workshop for rabies, Nancy, France, 20 April 2021 (on line).

8/ Inter-laboratory study on rabies antibody detection in wildlife samples - Second session.

Wasniewski M, Cliquet F.

12th EURL workshop for rabies, Nancy, France, 20 April 2021 (on line).

c) National conferences: 1

1/ Surveillance de la rage des chauves-souris en France Métropolitaine et Actualités.

Picard-Meyer E.

COPIL PNA Chiroptères, 08 Novembre 2021 (en ligne).

d) Other:

(Provide website address or link to appropriate information) 3

1/ Bilan de la surveillance des infections à Lyssavirus chez les chiroptères en France métropolitaine: 13 cas détectés en 2020.

Servat A, Picard-Meyer E, Litaize E, Stroucken N, Cliquet F.

June 2021.

2/ Inter-laboratory test for rabies diagnosis report - Evaluation of the Direct Immunohistochemical Test (DRIT).

Robardet E, Cliquet F, Servat A.

04 March 2021.

3/ Review of the analysis related to rabies diagnosis and follow up of oral vaccination performed in NRLS in 2020

Robardet E.

July 2021.

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?

No

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 (COFRAC)	Attestation 1-2253.pdf
ISO 17043 (COFRAC)	Attestation_1-6284.pdf
ISO 17025 (MJA)	Audit Attestation_108_MJA0815.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Rabies virus seroneutralisation test (FAVN test)	COFRAC (since February 2008)
Rabies diagnosis (FAT)	COFRAC (since October 2012)
Rabies diagnosis (RTCIT)	COFRAC (since October 2012)
Proficiency test (organisor) for rabies serology	COFRAC (since May 2017)
Potency test of rabies inactivated vaccines for veterina y and human use (challenge test and serological test)	EDQM (since March 2008)
Potency test of rabies vaccines (live, oral) for foxes and raccoon dogs	EDQM (since January 2012)
Rabies Real time RT-PCR (SybrGreen)	COFRAC (since March 2020)
Rabies Conventional RT-PCR	COFRAC (since March 2020)

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?

No

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.
Proficiency test for rabies diagnosis	Organiser	53	06 laboratories

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
OIE RABLAB network	To create a network for participating to the goal of Zero human cases mediated by dog rabies by 2030	All OIE rabies ref lab (12)

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
Proficiency test for rabies diagnosis	53	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" 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?

No

25. Additional comments regarding your report:

In 2021, rabies activities have been reduced due to the pandemic situation. In particular, the laboratory was not able to provide scientific and technical trainings for personnel from OIE Member Countries.