

OIE Reference Laboratory Reports Activities

Activities in 2021

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Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Rabies
Address of laboratory:	Changchun Veterinary Research Institute Chinese Academy of Agriculture Sciences 666 Liuying West Rd., Jingyue Economic Development Zone, Changchun, CHINA
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Name (including Title) of Head of Laboratory (Responsible Official):	Dr Changchun Tu, Professor
Name (including Title and Position) of OIE Reference Expert:	Dr Changchun Tu, Professor
Which of the following defines your laboratory? Check all that apply:	Academic

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			
Fluorescent antibody virus neutralisation (FAVN)	Yes	2730	0
Direct diagnostic tests			
Fluorescent antibody test (FAT)	Yes	35	
Reverse transcription-nest PCR (RT-nPCR)	Yes	150	28
Real time TaqMan RT-PCR (FQ-PCR)	Yes	150	
G gene and N gene Sequencing	Yes	28	
Genome Sequencing	Yes	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?

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
The rabies positive microscope slides	FAT	Produced and provide	8 pieces	40 pieces	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
FTA cards	Collect and transport samples	Provide		84 pieces	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input 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
PHILIPPINES	December	28	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
PHILIPPINES	Strengthen animal rabies surveillance	Via 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
Phylogenetic analysis of RABVs from Philippines	Ongoing	Molecular characterization of currently circulating RABVs in Philippines	Bureau of Animal Industry, Animal Disease Diagnosis and Reference Laboratory	PHILIPPINES

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:
Collect the RABV sequences information in China, and submit to the Ministry of Agriculture and Rural Affairs of China.

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:

We investigated the epidemiologic information of rabies and genetic diversity of RABVs in China and other Asian countries, as well as their phylogenetic and phylogeographic relationships with those of countries.

**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. Y Feng, J. Ma, S Sun, L. Chi, Z. Kou, C. Tu. Epidemiology of Animal Rabies-China, 2010-2020. China CDC Weekly, 2021, 3(39):815-818.
2. H Yi, J Zhang, Y Zhang, M Huo, Y Feng, C Tu, Y Liu. The Expression of Toll-like Receptors and Related Cytokines in Rabies Virus Infected Mice. Journal of Jilin Agricultural University, 2021. (in Chinese)
3. M Huo, W Xu, H Feng, T Liu, H Yi, Y Liu, C Tu, J Ma, Y Feng. Cross-neutralization Efficacy of Sera Induced by Rabies Vaccines Against Rabies Field Strains. Chinese Journal of Virology, 2021. (in Chinese)

b) International conferences: 5

1. The 3rd OIE Regional Meeting for OIE Reference Centres in Asia and the Pacific, 24-25th February 2021, Online Webinar
2. OIE RAB LAB Virtual launch meeting, 6th May 2021, Online Webinar
3. United Against Rabies Forum Annual Meeting, 27th September, 4th October, 11th October 2021, Online Webinar
4. Tripartite Webinar on "Rabies: Facts, Not Fear" in the Asia Pacific Region, 28th September 2021, Online Webinar
5. IAEA and WHO-SEARO Webinar Series to support the COVID-19 testing laboratories in the Asia and the Pacific Region, 23rd November 2021, Online Webinar

c) National conferences: 3

1. Rabies conference in China, 21-22th May, Nanchang, China.
2. Veterinary testing and diagnosis Conference, 25-27th June, Hangzhou, China
3. Monitoring, prevention and control of diseases on wildlife animals, 15-16th July, Harbin, China

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: 0

b) Seminars: 0

c) Hands-on training courses: 12

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
c	Malaysia	2
c	Vietnam	2
c	Philippines	2
c	Indonesia	2
c	Thailand	2
c	Myanmar	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)
CNAS (equal to ISO/IEC 17025)	TOR8_Q1_T1_L1_C3.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Fluorescent antibody virus neutralisation (FAVN)	CNAS (ISO 17025)
Fluorescent antibody test (FAT)	CNAS (ISO 17025)
Reverse transcription-nest PCR (RT-nPCR)	CNAS (ISO 17025)
Real time TaqMan RT-PCR (FQ-PCR)	CNAS (ISO 17025)

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
OIE Regional Virtual Training Workshop on Molecular Epidemiology Techniques (MET) for Rabies	10/2021	Webinar	Speakers	Introduction to molecular epidemiology techniques

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.
ANSES international rabies diagnostic proficiency scheme (FAT, RTCIT and PCR)	participant	> 50	OIE-RL ANSES Nancy, France (Organising Lab)

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 Rabies Laboratories Network	Expand access to high-quality diagnostic services to continuously enhance regional and national diagnostic capacities, and contribute to worldwide improvement of laboratory-based rabies surveillance and information exchange.	11 OIE Reference Laboratories for Rabies

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
Inter-laboratory test for rabies serology (FAVN test)	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input 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)
Provide consultations	Beijing, China	Revise national technical specification for prevention and control of animal rabies
Provide consultations about the rabies chapters	Webinar	Compile biosafety development strategy study (2021-2035) and veterinary science and technology research progress report
Provide consultations on the animal rabies surveillance	Beijing, China	Compile a white paper entitled Progress in Rabies Epidemic and Prevention and Control in China (2010-2020)

25. Additional comments regarding your report: