WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 29 mai 2024 09:10

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Rabies
Address of laboratory:	Changchun Veterinary Research Institute ChineseAcademy of Agriculture Sciences, Changchun, CHINA
Tel.:	+86-431 81.03.20.22
E-mail address:	changchun_tu@hotmail.com
Website:	
Name (including Title) of Head of Laboratory (Responsible Official):	Dr Changchun Tu, Professor
Name (including Title and Position) of WOAH Reference Expert:	Dr Changchun Tu, Professor
Which of the following defines your laboratory? Check all that apply:	Academic institution

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 WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Fluorescent antibody virus neutralisation (FAVN)		3786	0
Direct diagnostic tests		Nationally	Internationally
Fluorescent antibody test (FAT)		39	0
Reverse transcription-nest PCR (RT-nPCR)		91	0
Real time TaqMan RT-PCR (FQ-PCR)		285	0
G gene Sequencing		25	0
N gene Sequencing		27	0
Genome Sequencing		0	105

TOR2: REFERENCE MATERIAL

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

No

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

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOAH MEMBER COUNTRIES	COUNTRY OF RECIPIENTS

CVS-11 strain	RT-PCR	Provide	2 ml	/	1	CHINA (PEOPLE'S REP. OF),
BHK cell	RT-PCR	Provide	5 ml	/	1	CHINA (PEOPLE'S REP. OF),

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

No

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
Blocking ELISA	Under study

7. Did your laboratory validate diagnostic methods according to WOAH 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 WOAH Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOAH 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
PHILIPPINES	2023-01-03	High-throughout sequencing	0	65
PHILIPPINES	2023-07-06	High-throughout sequencing	0	40

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

Yes

NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
PHILIPPINES	Strengthen animal rabies surveillance	Via email

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAH 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
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

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

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:
Nationally, surveillance data from surveillance programmes (suspect dogs and domestic animals) is collected. From an international perspective, RABV sequences from Asian countries were collected from Genbank and analysed.

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:
National data is reported to the Ministry of Agriculture and Rural Affairs of China.

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:

5

Zhang, L., Sun, S., Gong, W., Thompson, L., Cruz, J., Dukpa, K., Gonzales, R. M., Tu, Z., He, B., Liu, Y., Tu, C., & Feng, Y. (2023). Large-scale phylogenetic analysis reveals genetic diversity and geographic distribution of rabies virus in South-East and South Asia. Infection, genetics and evolution: journal of molecular epidemiology and evolutionary genetics in infectious diseases, 113, 105472. https://doi.org/10.1016/j.meegid.2023.105472

Ma, J., Tu, Z., Du, S., Zhang, X., Wang, J., Guo, J., Feng, Y., He, H., Wang, H., Li, C., Tu, C., & Liu, Y. (2023). IFITM3 restricts RABV infection through inhibiting viral entry and mTORC1- dependent autophagy. Veterinary microbiology, 284, 109823. https://doi.org/10.1016/j.vetmic.2023.109823

Zhang, Y., Mo, R., Sun, S., Cui, Z., Liang, B., Li, E., Wang, T., Feng, Y., Yang, S., Yan, F., Zhao, Y., & Xia, X. (2023). Bacillus subtilis vector based oral rabies vaccines induced potent immune response and protective efficacy in mice. Frontiers in microbiology, 14, 1126533. https://doi.org/10.3389/fmicb.2023.1126533for rabies. Journal of medical virology, 95(8), e29016. https://doi.org/10.1002/jmv.29016

Liu, Y., Mo, X., Feng, Y., Willoughby, R. E., Weng, X., Wang, Y., Li, X., Gao, J., Tian, J., & Peng, J. (2023). Metagenomic next-generation sequencing for the etiological diagnosis of rabies virus in cerebrospinal fluid. Frontiers in medicine, 10, 982290.

Long, C., Wang, W., Hao, X., Yu, C., Feng, Y., Tu, C., Sun, S., Bian, L., Liu, Z., & Wang, L. (2023). Development of a novel bispecific antibody GR1801 https://doi.org/10.3389/fmed.2023.982290

b) International conferences:

0

c) National conferences:

1

Rabies conference in China, 12-13th May, Taiyuan, China.

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

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 0

b) Seminars : 10

c) Hands-on training courses: 0

d) Internships (>1 month) 0

Type of technical training	Country of origin of the expert(s)	No. participants from the

provided (a, b, c or d)	provided with training	corresponding country
B	CAMBODIA	2
B	THAILAND	2
B	INDONESIA	2
B	MALAYSIA	2
B	MYANMAR	2
B	PHILIPPINES	2

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	/	英文版认证认可证书.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
CNAS (equal to ISO/IEC 17025)	/

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

Yes

The laboratory activities are carries out according to Biosecurity Law of the People's Republic of China(2020)

TOR9: SCIENTIFIC MEETINGS

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

No

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

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
WOAH Regional Information Sharing Meeting on Molecular Epidemiology Techniques (MET) for Rabies	2023-11-22	Webinar	Speakers	Panorama of rabies virus (RABV) transmission in Southeast and South Asia through systematic phylogenetic analysis

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

Yes

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

No

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

No

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

No

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen?

No

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Provide consultations about the rabies chapters	Webinar	Complete the Chinese version translation of Terrestrial Animal Health Code & Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

29. Additional comments regarding your report:

No