WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 17 mai 2023 10:33

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Infectious bursal disease (Gumboro disease)
Address of laboratory:	Division of Avian Immunosuppressive Disease Harbin Veterinary Research Institute (HVRI) Chinese Academy of Agricultural Sciences (CAAS) 678 Haping Road Xiangfang District Harbin 150069 CHINA (PEOPLES REP. OF)
Tel.:	+86-451 51 05 16 90
E-mail address:	wangxiaomei@caas.cn
Website:	
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Zhigao Bu, the director of HVRI, CAAS
Name (including Title and Position) of WOAH Reference Expert:	Dr. Xiaomei Wang
Which of the following defines your laboratory? Check all that apply:	Governmental Research agency 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
ELISA Ab detection	YES	100	0
Direct diagnostic tests		Nationally	Internationally
RT-PCR for VP2	YES	55	0
virus titration in cells	YES	5	

			0
indirect immunofluorescence assay (IFA) in cells	YES	50	0
Virus gene sequencing	YES	10	0

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?

No

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAH Members?

Not applicable

TOR3: NEW PROCEDURES

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

Yes

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

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
AGID kit for IBD detection	It can be used to detect Ab or Ag of IBDV. It has got the certification from the Ministry of Agriculture and Rural Affairs of China.

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

Yes

9. Did your laboratory validate vaccines according to WOAH Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW VACCINE DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
The Recombinant live Vaccine against vvIBDV (rGtHLJVP2 strain)	It was developed by reverse genetics technique. The application for the certification from the Ministry of Agriculture and Rural Affairs of China is under reviewing.
The recombinant MDV vaccine expressed VP2 of IBDV (rMDV-VP2 strain)	The application for the certification from the Ministry of Agriculture and Rural Affairs of China is under reviewing.
The subunit vaccine against novel varaint IBDV (SHG19-VLP)	The laboratory evaluation has been completed.

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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
CHINA (PEOPLE'S REP. OF)	IBD detection and control	Phone, Email, Seminar, and Training sessions
POLAND	IBDV genotyping technology	Email
SPAIN	Neutralization titer detection technology of variant IBDV	Email
FRENCH POLYNESIA	IBD diffusion detection technology in international live poultry trade	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?

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:
Relevant information was collected through published literature.

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:
Disseminate epizootiological data through published literature and presentation.

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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[1] Bao KY, Qi XL, Li Y, Gong MQ, Wang XM, Zhu P.. Cryo-EM structures of infectious bursal disease viruses with different virulences provide insights into their assembly and invasion. Science Bulletin, 2022, 6(6): 646-654.
[2] Liu AJ, Pan Q, Wang SY, Zhang Y, Li Y, Wang YL, Qi XL, Gao L, Liu CJ, Zhang YP, Cui HY, Li K, Wang XM, Gao YL. Identification of chicken CD44 as a novel B lymphocyte receptor for infectious bursal disease virus. J Virol, 2022, 96(6):e0011322.
[3] Fan LJ, Wang YL, Jiang N, Gao YL, Niu XX, Zhang WY, Huang MM, Bao KY, Liu AJ, Wang SY, Gao L, Li K, Cui HY, Pan Q, Liu CJ, Zhang YP, Wang XM, Qi XL. Residues 318 and 323 in capsid protein are involved in immune circumvention of the atypical epizootic infection of infectious bursal disease virus. Frontiers in Microbiology, 2022, 13: 909252.

[4] Zhang WY, Wang XM, Gao YL, Qi XL. The over-40-years-epidemic of infectious bursal disease virus in China. Viruses, 2022, 14(10):2253.
[5] Yan NN, Wang YQ, Chen Z, Liu AJ, Li Y, Yang B, Li K, Qi XL, Gao YL, Gao L, Liu CJ, Zhang YP, Cui HY, Pan Q, Wang XM. Stromal Interaction Molecule 1 Promotes the Replication of vvIBDV by Mobilizing Ca2+ in the ER. Viruses, 2022, 14(7):1524.
[6] Zhang Y, Liu AJ, Jiang N, Qi XL, Gao YL, Cui HY, Liu CJ, Zhang YP, Li K, Gao L, Wang XM, Pan Q. A novel inactivated bivalent vaccine for chickens against emerging hepatitis-hydropericardium syndrome and infectious bursal disease. Vet Microbiol. 2022, 266:109375.
[7] Zhang WY, Jiang N, Wang YL, Ma GB, Niu XX, Huang MM, Wang GD, Song GC, Li KL, Liu AJ, Wang SY, Gao L, Ccui HY, Liu CJ, Li K, Pan Q, Zhang YP, Wang XM, Gao YL, Qi XL. Immunogenicity analysis of the recombinant eukaryotic expression plasmid expressing capsid protein of novel variant strain of infectious bursal disease virus. China Poultry, 2022, 44(6): 31-35.

b) International conferences:

1
[1] Workshop for the OIE avian disease network in east Asia, the OIE Regional Representation for Asia and the Pacific, Tokyo, Japan (on-line), 21 April 2022.

c) National conferences:

1
[1] 2022 Academic Forum of Veterinary Microbiology Professional Committee of Chinese Microbiological Society. Changchun, China, 12-14 August 2022.

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

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TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

No

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	pdf	CNAS Certificate.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Isolation and Identification of Infectious Bursal Disease Virus	CNAS
RT-PCR Assay for Detecting Infectious Bursal Disease Virus	CNAS
ELISA for Antibody Detection of Infectious Bursal Disease Virus	CNAS

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

Yes

Implement China's Regulation on Biosafety Management of Pathogenic Microbiology Laboratory.

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
Workshop for the OIE avian disease network in east Asia,	2022-04-21	Tokyo, Japan (on-line)	SPEAKER	The prevalence of novel variant infectious bursal disease virus (nVarIBDV) in East Asia

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. Are you a member of a network of 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?

No

29. Additional comments regarding your report:

No