# WOAH Reference Laboratory Reports Activities 2023

## Activities in 2023

### This report has been submitted : 12 juin 2024 05:26

## 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.:** | +8618945083045 |
| **E-mail address:** | gaoyulong@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. Yulong Gao |
| **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 | | 432 | 0 |
| Direct diagnostic tests | | Nationally | Internationally |
| virus isolation | | 2 | 0 |
| Virus titration in chicken embryo | | 4 | 0 |
| virus isolation or titration in cells | | 4 | 0 |
| indirect immunofluorescence assay (IFA) in cells | | 40 | 0 |
| Preparation of virus stocks from infected bursa | | 4 | 0 |
| Virus gene sequencing of VP2 or VP1 | | 92 | 0 |
| Complete virus genome sequencing | | 2 | 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?

No

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?

Yes

| NAME OF THE NEW VACCINE DEVELOPED | DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.) |
|---|---|
| The IBD live vaccine | It is currently under review by the Ministry of Agriculture and Rural Affairs of China |
| The recombinant MDV vaccine expressing IBDV VP2 | It is currently under review by the Ministry of Agriculture and Rural Affairs of China |
| The subunit vaccine against IBDV | The laboratory evaluation has been completed |

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?

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 |
|---|---|---|
| POLAND | Review grant proposal for the National Science Center, Poland | Online review system (February 4, 2023) |
| FRANCE | Reference Laboratory Questionnaire | Online Survey questionnaire (June 26, 2023) |
| UNITED KINGDOM | WOAH Lab Twinning Participation Survey | Online Survey questionnaire (July 11, 2023) |

# 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

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: |
|---|
| Relevant information was collected from the publication. |

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 the epidemiological data through the published paper and the academic report.

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:

*3*

*[1] Jiang N, Wang GD, Zhang WY, Wang YL, Niu XX, Huang MM, Gao L, Li K, Cui HY, Liu CJ, Zhang YP, Bao KY, Wang SY, Chen YT, Wang XM, Gao YL, Qi XL. A single mutation of VP2 is responsible for the lethality and antigenicity differences between novel variant and very virulent IBDV strains. Transboundary and Emerging Diseases, 2023, 6684304.*
*[2] Mi JL, He TN, Hu XY, Wang Z, Wang T, Qi X, Li K, Gao L, Liu C, Zhang Y, Wang S, Qiu Y, Liu Z, Song J, Wang X, Gao YL, Cui HY. Enterococcus faecium C171: Modulating the Immune Response to Acute Lethal Viral Challenge. Int J Antimicrob Agents. 2023, 62(5):106969.*
*[3] Li KL, Niu XX, Jiang N, Zhang W, Wang G, Li K, Huang M, Gao YL, Qi XL, Wang XM. Comparative Pathogenicity of Three Strains of Infectious Bursal Disease Virus Closely Related to Poultry Industry. Viruses. 2023, 15(6):1257.*
*[4] Qi XL, Wang XM, Gao YL. The Epidemic Situation and New Epidemic of Infectious Bursal Disease in China. Poultry farming and prevention and control of poultry diseases (in Chinese). 2023, 8: 23-28.*
*[5] Li XH, Yang FC, Liu R, Gao L, Cui HY, Zhang YP, Liu CJ, Qi XL, Wang XM, Gao YL, Li K. Construction and biological characteristics analysis of a recombinant turkey herpesvirus expressing the VP2 gene of infectious bursal disease virus in chickens. Journal of Animal Husbandry and Veterinary Medicine (in Chinese).2023, 54(2): 656-662.*

b) International conferences:

*1*
*[1] The XXII World Veterinary Poultry Association Congress. Oral presentation, the sudden epidemic, immune escape, vaccine development of novel variant infectious bursal disease virus (nVarIBDV). Verona, Italy, September 4-8, 2023.*
*[2] The XXII World Veterinary Poultry Association Congress. Oral presentation, Molecular Mechanism of Host factor OASL regulating the replication of infectious Bursal disease virus. Verona, Italy, September 4-8, 2023.*
*[3] The 12th Asia Pacific Poultry Conference. Oral presentation, Genetic variation and new epidemic characteristics of infectious bursal disease. Nanjing, China, October 31-December 3, 2023.*

c) National conferences:

*1*
*[1] The 15th National Immunology Academic Conference. Oral presentation, The molecular mechanism of host factor OASL regulating the replication of infectious bursal disease virus. Suzhou, China, November 5, 2023.*

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?

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/IEC 17025:2017 | CNAS certificate | CNAS Certificate.pdf |

19. Is your quality management system accredited?

Yes

| | Accreditation body |
|---|---|

| Test for which your laboratory is accredited | |
|---|---|
| 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

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?

No

## 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?

No

29. Additional comments regarding your report:

No