

OIE Reference Laboratory Reports Activities

Activities in 2019

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Name of disease (or topic) for which you are a designated OIE 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)
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Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Zhigao Bu the director of HVRI, CAAS
Name (including Title and Position) of OIE Reference Expert:	Dr. Xiaomei Wang the head of OIE Reference Laboratory for IBD the head of State key laboratory of veterinary biotechnology of China the vice director of HVRI, CAAS
Which of the following defines your laboratory? Check all that apply:	Governmental Research 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		Nationally	Internationally
ELISA Ab detection	Yes	2299	0
Direct diagnostic tests		Nationally	Internationally
Partial amplification of IBDV genome (RT-PCR for VP2 or VP1)	Yes	463	0
virus isolation or titration in eggs	Yes	5	0
virus isolation or titration in cells	Yes	10	0
indirect immunofluorescence assay (IFA) in cells	Yes	50	0
Preparation of virus stocks from infected bursa	Yes	5	0
Virus gene sequencing of VP2 or VP1	Yes	212	0
Complete virus genome sequencing	Yes	3	5

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?

No

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?

Yes

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
AGID kit for IBD detection	It can be used to detect Ab or Ag of IBDV. The application for the certification from the Ministry of Agriculture of China is under reviewing.
The Recombinant live Vaccine of IBDV	It was developed by reverse genetics technique. The clinical trail in China is being performed.
The recombinant MDV vaccine expressed VP2 of IBDV	We have got GMO safety certificate and are applying for the clinical trail in China.

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?

No

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
CHINA (PEOPLE'S REP. OF)	Reverse genetics and vvIBDV isolation	Phone
PAKISTAN	IBDV epidemiology	Phone and seminar
INDONESIA	IBDV vaccine	Phone

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
the National Key Research and Development Program of China[]Study on avian major infectious diseases prevention and control and the development of international scientific and technological cooperation platform	3 years	see title	University of Veterinary and Animal Sciences, Lahore	PAKISTAN
the National Key Research and Development Program of China[]Study on avian major infectious diseases prevention and control and the development of international scientific and technological cooperation platform	3 years	see title	University of Udayana	INDONESIA
Epidemiology of IBDV in Pakistan (PhD thesis)	3 years	see title	University of Veterinary and Animal Sciences, Lahore	PAKISTAN

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:
We collect epizootiological data relevant to IBD control through international project and cooperation and publication.

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 disseminate epizootiological data through conference and publication.

**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: 6

[1]Aijing Liu, Hui Li, Xiaole Qi, Qi Wang, Bo Yang, Tiantian Wu, Nana Yan, Yue Li, Qing Pan, Yulong Gao, Li Gao, Changjun Liu, Yanping Zhang, Hongyu Cui, Kai Li, Yongqiang Wang and Xiaomei Wang. Macrophage Migration Inhibitory Factor Triggers Inflammatory Responses During Very Virulent Infectious Bursal Disease Virus Infection. 2019, 10:2225.

[2]Linjin Fan, Tiantian Wu, Yulong Wang, Altaf Hussain, Nan Jian, Li Gao, Kai Li, Yulong Gao, Changjun Liu, Hongyu Cui, Qing Pan, Yanping Zhang, Xiaomei Wang, Xiaole Qi. Novel Variants of Infectious Bursal Disease Virus Can Severely Damage the Bursa of Fabricius of Immunized Chickens. Veterinary Microbiology. 2020, 240:108507.

[3]Linjin Fan, Tiantian Wu, Altaf Hussain, Yulong Gao, Xianying Zeng, Yulong Wang, Li Gao, Kai Li, Yongqiang Wang, Changjun Liu, Hongyu Cui, Qing Pan, Yanping Zhang, Yufeng Liu, Hongjiang He, Xiaomei Wang, Xiaole Qi. Novel Variant Strains of Infectious Bursal Disease Virus isolated in China. Veterinary Microbiology.2019, 230:212-220.

[4]Altaf Hussain, Tiantian Wu, Hui Li, Linjin Fan, Kai Li , Li Gao, Yongqiang Wang, Yulong Gao, Changjun Liu, Hongyu Cui, Qing Pan, Yanping Zhang, Asim Aslam, Khan Muti-Ur-Rehman, Muhammad Munir, Salman Latif Butt, Xiaomei Wang, Xiaole Qi. Pathogenic Characterization and Full Length Genome Sequence of a Reassortant Infectious Bursal Disease Virus Newly Isolated in Pakistan. Virologica Sinica. 2019, 34(1):102-105.

[5]Wang W, Song Y, Liu L, Zhang Y, Wang T, Zhang W, Li K, Qi X, Gao Y, Gao L, Liu C, Zhang Y, Wang Y, Pan Q, He G, Wang X, Cui H. Neutralizing-antibody-mediated protection of chickens against infectious bursal disease via one-time vaccination with inactivated recombinant Lactococcus lactis expressing a fusion protein constructed from the RCK protein of Salmonella enterica and VP2 of infectious bursal disease virus. Microbial cell factories. 2019,18(1)21-32.

[6]FAN Lin-jin, WANG Yu-long, WU Tian-tian, I Kai, JIANG Nan, GAO Yu-long, GAO Li, LIU Chang-jun, CUI Hong-yu, PAN Qing, ZHANG Yan-ping, LIU Yu-feng, SUN Xian-ben, LIU Jun-qi, WANG Xiao-mei, QI Xiao-le. The prevalence of novel variant strains of infectious bursal disease virus in China. Chinese Journal of Preventive Veterinary Medicine. 2019(41)11, doi: 10.3969/j.issn.1008-0589. 201907028.

b) International conferences: 6

[1]Epidemic status and prevention and control technology of avian immunosuppressive disease, Keynote presentation by Yulong Gao, The first (2019) Harbin international poultry summit meeting \ Harbin, China \ 2019.11.28-29.

[2]Epidemic status and prevention and control technology of avian immunosuppressive disease, Keynote presentation by Gao Yulong, Special seminar for foreign experts about new strategies and tools for prevention and control of major avian diseases \ Binzhou, China \ 2019.9.20-22.

[3]Prevention and Control Technology of Avian Immunosuppressive Disease. Oral communication by Xiaomei Wang and Yulong Gao. The 21st world poultry disease congress \ Bangkok \ Thailand \ 2019.9.16-9.20.

[4]Prevention and Control Technology of Avian Immunosuppressive Disease. Oral communication by Yulong Gao. UK-China BBSRC NEWton Fund (Swine and Poultry) \ London, UK \ 2019.6.17.

[5]Variation of Infectious Bursal Disease Virus Threaten Healthy Breeding by Xiaole Qi, Presentation, Conference

on the Cooperation and Collaboration on Prevention and Control of Animal Diseases \ Hangzhou, China \ 2019.5.22-23.

[6]Prevention and Control Technology of Avian Disease. Oral communication by Xiaomei Wang and Xiaole Qi. The National Key Research and Development Program of China “Study on Avian Major Infectious Diseases Prevention and Control and the Development of International Scientific and Technological Cooperation Platform Project”Interim Progress Meeting \ Hangzhou, China \ 2019.5.21.

c) National conferences: 4

[1]Immunosuppression of infectious bursal disease and its prevention and control, Keynote Presentation by Xiaole Qi, Longhu forum of Henan Agricultural University \ Zhengzhou, China \ 2019.12.22.

[2]Prevention and Control Technology of Avian Immunosuppressive Disease, Keynote presentation by Xiaomei Wang, The sixth national poultry disease molecular biotechnology youth workers conference \ Luoyang, China \ 2019.10.18-21.

[3]Immunosuppression and Control of Infectious Bursal Disease Virus, by Xiaole Qi, Presentation, The 7th national immunology young scholars forum of China immunology society \ Kaifeng, China \ 2019.7.18-20.

[4]Immunosuppression of infectious bursal disease and its prevention and control, Keynote presentation by Xiaole Qi, China livestock industry development forum \ Zhucheng, China \ 2019.9.4-6.

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: 3

b) Seminars: 0

c) Hands-on training courses: 0

d) Internships (>1 month): 5

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
a	Pakistan	2
a	Indonesia	1
d	Pakistan	5

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/IEC 17025:2005	CNAS Certificate .jpg

16. 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

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?

No

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?

No

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?

No

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

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: