

WOAH Reference Laboratory Reports Activities 2025

This report has been submitted: 28 janvier 2026 18:08

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	Brucellosis (Brucella abortus)
*Address of laboratory:	177, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, 39660
*Tel:	+82-54 912 0754
*E-mail address:	lejj84@korea.kr
Website:	http://www.qia.go.kr
*Name (including Title) of Head of Laboratory (Responsible Official):	Jung-rok Choi (Commissioner, APQA)
*Name (including Title and Position) of WOAHO Reference Expert:	Jin-Ju Lee (Researcher, APQA)
*Which of the following defines your laboratory? Check all that apply:	Governmental

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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
RBT	Yes	1124	0
SAT	Yes	1088	0
ELISA	Yes	1623	0
FPA	Yes	1623	0
Rapid slide agglutination test(RSAT) for B.canis	No	62	0
Immunochromatography test(Dip-stick) for B.canis	No	62	0
Direct diagnostic tests			
Bacterial culture	Yes	732	0
PCR	Yes	96	0
MLVA	Yes	90	0
MLST	Yes	96	0

TOR2: REFERENCE MATERIAL

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

No

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

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOA Member Countries	Country of recipients
SAT antigen	SAT	Produced	1,325 ml	0	1	KOREA (REP. OF),
indirect ELISA kit	i-ELISA	Provide	27,840 tests	0	1	KOREA (REP. OF),
PCR test kit (Multiplex PCR)	PCR	Produced	1,440 tests	0	1	KOREA (REP. OF),
FPA kit	FPA	Provide	2,500 tests	0	1	KOREA (REP. OF),
RSAT antigen	RSAT	Produced	326 ml	0	1	KOREA (REP. OF),

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA Members?

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 WOA Standards for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
SNP-based MLST	Manual of Diagnostic Tests and Vaccines for Terrestrial Animals
WGS-based MLST	Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

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

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

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOA Member Country receiving a technical consultancy	Purpose	How the advice was provided
BANGLADESH LAOS MALAYSIA MYANMAR SINGAPORE SRI LANKA THAILAND VIETNAM	To provide opinion about protocol for serological tests and PCR to detect Brucella	in loco

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA Members other than the own?

No

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

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:

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MLST genotype data of Brucella abortus

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 research conference and seminar

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:

0

b) International conferences:

0

c) National conferences:

6

1. Jin-Ju Lee, Ah-Ryeong Joe, Myeong Ju Nam, Yoon-Jeong Seo, SeJeong An, Sehyun Son, Ok-Mi Jeong, Jaemyung Kim (2025) Bovine brucellosis : new aspects of an old disease(The Korean Society of Veterinary Service)
2. Ah-Ryeong Joe, Jin-Ju Lee, Yoon-Jeong Seo, Myeong Ju Nam, SeJeong An, Sehyun Son, Ok-Mi Jung, Jaemyung Kim (2025) Brucella canis infection in a pet dog with spondylitis (The Korean Society of Veterinary Service)
3. Myeong Ju Nam, Jin-Ju Lee, Ah-Ryeong Joe, Yoon-Jeong Seo, SeJeong An, Sehyun Son, Ok-Mi Jung, Jaemyung Kim (2025) Comparison of real-time PCR detection performance for Brucella abortus based on DNA preparation methods (The Korean Society of Veterinary Service)
4. Jin-Ju Lee, Ah-Ryeong Joe, Myeong Ju Nam, Yoon-Jeong Seo, SeJeong An, Sang-Ji Seo, Sehyun Son, Ok-Mi Jeong, Jaemyung Kim (2025) Investigation of bacterial isolation and genetic relationships for animal brucellosis in Korea (The Korean Society of Veterinary Science)
5. Jin-Ju Lee, Ah-Ryeong Joe, Myeong Ju Nam, Yoon-Jeong Seo, SeJeong An, Sang-Ji Seo, Sehyun Son, Ok-Mi Jeong, Jaemyung Kim (2025) Whole genome sequencing-based phylogenetic analysis of Brucella canis isolate in Korea (The Korean Society of Veterinary Science)
6. Jin-Ju Lee, Ah-Ryeong Joe, Myeong Ju Nam, Yoon-Jeong Seo, SeJeong An, Sehyun Son, Ok-Mi Jeong, Jaemyung Kim (2025) Specific detection of Brucella suis using real-time PCR assay with Hybprobe (The Korean Society of Veterinary Science)

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

5

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6. Jin-Ju Lee, Ah-Ryeong Joe, Myeong Ju Nam, Yoon-Jeong Seo, SeJeong An, Sehyun Son, Ok-Mi Jeong, Jaemyung Kim (2025) Specific detection of Brucella suis using real-time PCR assay with Hybprobe (The Korean Society of Veterinary Science)

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 0

b) Seminars : 25

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
B	MALAYSIA	1
B	BANGLADESH	1
B	LAOS	2
B	MYANMAR	2
B	SRI LANKA	2
B	THAILAND	2
B	SINGAPORE	2
B	VIETNAM	13
C	MALAYSIA	1
C	BANGLADESH	1
C	LAOS	2
C	MYANMAR	2
C	SRI LANKA	2
C	THAILAND	2
C	SINGAPORE	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/IEC 17025	PDF	KT372_Animal_and_Plant_Quarantine_Agency.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
MRT, RBT, SAT, ELISA, PCR, Bacterial culture, Biochemical identification, Immunochromatography test, Rapid slide agglutination test	ilac-MRA

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

Yes

Maintaining the biorisk management system as a biosafety level 3 according to a legislated biorisk management regulation and a risk management policy appropriate to the nature and scale of the facility, activities, and associated biological risks. Laboratory and animal facilities managers provide a management system that ensures safe and secure handling, storage, and transport of these biological materials. The system also provides the veterinary authorities of a country or jurisdiction, with a structured process for assessing, reviewing and controlling biological risks.

TOR9: SCIENTIFIC MEETINGS

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

No

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

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
WOAH Asia Pacific Gender Awareness Raising Webinar	2025-04-27	Web seminar(ONLINE)	short communications	- Introduction on Gender and Animal Health - Antimicrobial Resistance in Livestock Through a Gender Lens: - Gender in veterinary workforce

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOAHP Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
WOAH Reference Centres in Asia and the Pacific / Brucellosis	participant	42	3

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen during the past 2 years?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAHP Ref. Labs/ organising WOAHP Ref Lab
To assess the reliability of Brucella abortus ELISA	participant	17	3/1

26. Did your laboratory collaborate with other WOAHP 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 WOAHP Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAHP Member Countries
To assess the reliability of Brucella abortus ELISA	participant	17	ELISA	AUSTRALIA, AUSTRIA, BELGIUM, DENMARK, GUATEMALA, INDIA, IRELAND, KOREA (REP. OF), MALTA, NEW ZEALAND, PORTUGAL, SAUDI ARABIA, SWEDEN, SWITZERLAND, UNITED ARAB EMIRATES, UNITED KINGDOM, UNITED STATES OF AMERICA,

TOR12: EXPERT CONSULTANTS

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

Yes

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Kind of consultancy	Location	Subject (facultative)
Verification of WOAHA Manual	Online (South Korea)	WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

29. Additional comments regarding your report:

Yes

Concerning question 4, 5, 8, 9, I answered 'No' because we implement a policy to prohibit the vaccination for brucellosis.

Concerning question 12, 26, I answered 'No'. In order to carry out such collaboration, participating countries must promote an international joint research. In the process, various requirements like Memorandum of Understanding (MOU) between countries or agencies and fund raising for research would take place. While we made efforts to promote these collaborations in 2024, unfortunately, we could not carry out them because we could not meet all conditions. Currently, we are pursuing to promote an international joint research in the future.