

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 1 mai 2024 07:10

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Brucellosis (Brucella abortus)
Address of laboratory:	177, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, 39660
Tel.:	+82-54 912 0754
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Website:	http://www.qia.go.kr
Name (including Title) of Head of Laboratory (Responsible Official):	Jung-hee Kim (Commissioner, APQA)
Name (including Title and Position) of WOA 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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
RBT		609	0
SAT		235	0
ELISA		1278	0
FPA		571	0
Rapid slide agglutination test(RSAT) for B.canis		93	0
Immunochromatography test(Dip-stick) for B.canis		93	0
Direct diagnostic tests			
Bacterial culture		2098	0
PCR		174	0
MLVA		99	0
MLSA		104	0

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOA-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 WOAHP MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
SAT antigen	SAT	Produced	1,790 ml	0	1	KOREA (REP. OF),
indirect ELISA kit	indirect ELISA	Provided	2,688 ml	0	1	KOREA (REP. OF),
PCR test kit (Multiplex PCR)	PCR	Produced	2,000 tests	0	1	KOREA (REP. OF),
RSAT antigen	RSAT	Produced	88 ml	0	1	KOREA (REP. OF),

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHP Members?

No

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 WOAHP Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
Brucellin skin test	Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

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

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

NAME OF THE WOAHP MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
ARGENTINA	To obtain opinion about B. canis-specific PCR	Remote (e-mail)
AUSTRALIA	To obtain opinion about protocol for serological tests of B. canis	Remote (e-mail)

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

Yes

Research need : 1

Please type the Research need: Brucellin skin test

Relevance for WOAHP Standard Setting,

Relevance for the Codes or Manual Manual,

Field Diagnostics,

Animal Category Terrestrial,

Disease:

Brucellosis (Brucella abortus, Brucella melitensis, Brucella suis)

Kind of disease (Zoonosis, Transboundary diseases) Zoonosis,

Additional keywords if needed: One keyword per entry

Interpretation

If any, please specify relevance for Codes or Manual, chapter and title

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

Answer: Terrestrial Manual Chapter 3.1.4. – Brucellosis (infection with Brucella abortus, B. melitensis and B. suis), B. DIAGNOSTIC TECHNIQUES, 3. Tests for cellular immunity, 3.1. Brucellin skin test

Notes:

Answer: Interpretation (swelling and induration) stage setting 1. Swelling : No change (stage 0, negative), Slightly swelling (stage 1, positive), Moderately swelling (stage 2, positive), Strongly swelling (stage 3, positive) 2. Induration : No change (stage 0, negative), Slightly solid (stage 1, positive), Moderately solid (stage 2, positive), Strongly solid (stage 3, positive)

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:

Bacterial isolation, MLVA and MLSA genotype data of Brucella abortus, Serological tests

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:

Articles published in journals, 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:

1

Ah-Ryeong Joe, Jin Ju Lee, Eun Ji Yum, Yoon-Jeong Seo, So-Ra Sung, Jeong-Soo Choi, Soon-Seek Yoon (2023). Comparison of serological tests for bovine brucellosis in South Korea (*J. Prev. Vet. Med.*, 47(3))

b) International conferences:

0

c) National conferences:

5

1. Jin Ju Lee, Ah-Ryeong Joe, Eun Ji Yum, So-Ra Sung, Yoon-Jeong Seo, Jeong-Soo Choi, Soon-Seek Yoon (2023). Characterization of brucellin skin test (BST) antigen focusing on immunogenic reaction. (2023 Korean Society of Veterinary Preventive Medicine)

2. Jin Ju Lee, Ah-Ryeong Joe, Eun Ji Yum, Ha-Young Nam, Yoon-Jeong Seo, Jeong-Soo Choi, Soon-Seek Yoon (2023). Evaluation of intradermal brucellin skin test (BST) for bovine brucellosis. (2023 Korean Society of Veterinary Service)

3. Jin Ju Lee, Ah-Ryeong Joe, Eun Ji Yum, So-Ra Sung, Yoon-Jeong Seo, Jeong-Soo Choi, Soon-Seek Yoon (2023). Molecular epidemiological correlations of Brucella abortus isolates from Korea according to time and regions. (2023 Autumn meeting, Korean Society of Veterinary Science)

4. Jin Ju Lee, Yoon-Jeong Seo, Ah-Ryeong Joe, Eun Ji Yum, So-Ra Sung, Jeong-Soo Choi, Soon-Seek Yoon (2023). Comparison in phylogenetic characteristics of Brucella canis strains between pet and breeding dogs. (2023 Autumn meeting, Korean Society of Veterinary Science)

5. Ah-Ryeong Joe, Jin Ju Lee, Yoon-Jeong Seo, Eun Ji Yum, So-Ra Sung, Jeong-Soo Choi, Soon-Seek Yoon (2023). Microbiological and genetical monitoring of brucellosis in

multiple livestock species in South Korea. (2023 Autumn meeting, Korean Society of Veterinary Science)

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 WOAHA Members?

Yes

a) Technical visit : 12

b) Seminars : 12

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
A	MALAYSIA	2
A	VIETNAM	3
A	KAZAKHSTAN	2
A	PHILIPPINES	3
A	SRI LANKA	2
B	MALAYSIA	2
B	VIETNAM	3
B	KAZAKHSTAN	2
B	PHILIPPINES	3
B	SRI LANKA	2
C	MALAYSIA	2
C	VIETNAM	3
C	KAZAKHSTAN	2
C	PHILIPPINES	3
C	SRI LANKA	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_Eng.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 WOA?H?

No

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

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Meeting for sharing information on agenda items for the 90th General Session of WOA?H	2023-04-23	Web seminar	short communications	- Amendments to the WOA?H Manual of Diagnostic Tests and Vaccines for Terrestrial Animals - Amendments to the WOA?H Aquatic Animal Health Code

TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

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

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS
WOA?H Reference Centres in Asia and the Pacific/Brucellosis	Participant	32	3

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS/ ORGANISING WOA?H REF. LAB.
To assess the reliability of bacteriological testing for Brucellosis	participant	34	4

26. Did your laboratory collaborate with other WOA?H 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 WOA?H Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOA?H Member Countries
To assess the reliability of bacteriological testing for Brucellosis	participant	34	Bacteriological testing	AUSTRIA, BELGIUM, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, KOREA (REP. OF), LATVIA, LITHUANIA, MALTA, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SPAIN, SWEDEN,

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Verification of WOA?H 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 2023, unfortunately, we could not carry out them because we could not meet all conditions. Currently, we are pursuing to promote an international joint research, and the research can be going to start from 2026.