

# OIE Reference Laboratory Reports Activities

## *Activities in 2021*

**This report has been submitted : 2022-01-13 07:17:40**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	Brucellosis (Brucella abortus, B. melitensis)
<b>Address of laboratory:</b>	National Institute of Animal Health, Department of Livestock Development (DLD) 50/2 Phahonyothin Road (Kasetklang), Ladyao, Chatuchak, Bangkok 10900 THAILAND
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<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr. Pacharee Thongkamkoon , Director of the National Institute of Animal Health, DLD Ms Reka Kanitpun, Chief of Immunology Section (Brucellosis Laboratory)
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Ms Monaya Ekgatat, Brucellosis Advisor to DLD, National Institute of Animal Health, Department of Livestock Development
<b>Which of the following defines your laboratory? Check all that apply:</b>	Governmental

**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
RBT	Yes	60,321	-
SAT	Yes	0	-
CFT	Yes	345	-
I-ELISA(bovine serum)	Yes	1,854	-
I-ELISA(bovine milk)	Yes	8,208	-
I-ELISA(caprine/ovine serum)	Yes	1,304	-
I-ELISA (others)	No	108	-
FPA	Yes	118	-
Milk Ring Test	Yes	560	-
B. canis RSAT/LFIA	No	0	-
Direct diagnostic tests		Nationally	Internationally
Culture (milk/organ/swab-fluid)	Yes	105/45/0	-
Brucella spp. PCR/Real time PCR (specimens)	Yes	20/0	-
Brucella molecular typing	Yes	11	-
Control of diagnostic antigen batches	Yes	37 (RBT antigen-in house)	1 RBT antigen, 1 CFT antigen

***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?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
National positive control serum	Diagnostic reagents control	Produced/provided	61 tubes (61 x3.0 ml)	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
National standard panel of positive sera	Diagnostic reagents batch control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
National negative control serum	Diagnostic reagents control	Produced/provided	61 tubes (61 x3.0 ml)	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
National standard panel of negative sera	Diagnostic reagents batch control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Negative serum (for reconstitute)	Diagnostic reagents batch control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

Secondary standard bovine serum for RBT	RBT antigen batch control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Secondary standard bovine serum for CFT	CFT antigen batch control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Secondary standard bovine serum for SAT	SAT antigen batch control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Secondary standard goat serum for RBT	Diagnostic reagents batch control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
RBT antigen	Diagnostic reagent	Provided	1,931 bottles (1,931 x10 ml)	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
MRT antigen	Diagnostic reagent	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

RSAT antigen	Diagnostic reagent	Produced	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
PCR (Bruce-ladder)	PCR	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
DNA of reference Brucella spp.	Diagnostic positive control	Produced/provided	-	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
I-ELISA inhouse kit (NIAH)	Diagnostic reagent	Produced/provided	2,000 Tests	-	-	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

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?

No

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

No

**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
MYANMAR	KAP-dairy cattle farm	Remote assistance through email communication
PHILIPPINES	CFT and molecular diagnosis	Remote assistance through email communication
INDONESIA	Disease control	Remote assistance through email communication

**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?

No

**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:
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Compiled laboratory surveillance from Regional Veterinary Research and Development Centers (8 labs) and submitted through Bureau of Disease Control and Veterinary Services to Department of Livestock Development.
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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:
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Presentation at national and international conference/meeting
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**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: 2

1. Weight adjusted sero-surveillance in goats from laboratory submitted samples from central Thailand 2014-2019. (In Thai) Tapakorn Chamchoy\* Kridakorn Vongtongsalee
2. Comparative Evaluation of Bovine Brucellosis Detection between In-house I-ELISA and Commercial Brucellosis Antibody Test using Kappa Statistic. (in Thai) Kridakorn Vongtongsalee\* Tapakorn Chamchoy

b) International conferences: 15

1. The 3rd OIE Regional Meeting for OIE Reference Centres in Asia and the Pacific, 24-25 February 2021, Tokyo, Virtual meeting (Monaya Ekgat and Reka Kanitpun)
2. Brucellosis OIE Experts meeting, 5 March 2021 and 25 March 2021 (Monaya Ekgat)
3. Bilateral Meeting OIE-Thailand (Dr. Pacharee Thongkamkoon, NIAH's Director)
4. The Eight ASEAN Laboratory Directors' Forum (8th ALDF) Meeting, 16 March 2021, Malaysia (Virtual Meeting) (Dr. Pacharee Thongkamkoon and Dr. Reka Kanitpun)
5. The One Health EJP COHESIVE + IDEMBRU Projects controlling the spread of B. canis in Europe, 18 May 2021 (Monaya Ekgat)
6. The 88th General Session of the World Assembly of National Delegates of the World Organisation for Animal Health (OIE) (live webcast), 25-28 May 2021.
7. The 29th Meeting of the ASEAN Sectoral Working Group on Livestock (The 29th ASWGL), 20 May 2021, Malaysia (Video meeting conference) (Dr. Pacharee Thongkamkoon and Dr. Reka Kanitpun)
8. Meeting: Progress of surveillance/animal health situation analysis (Data retrieve, management and analysis) (Monaya Ekgat)
9. Khon Khen Veterinary Annual International Conference "Transboundary Animal Diseases", 22nd - 23rd July 2021. (Monaya Ekgat)
10. Webinar brucellosis "An overview of brucellosis in animals in the Asia Pacific region", 29 July 2021, participation and presentation (Monaya Ekgat, Reka Kanitpun and lab members)
11. Virtual conference: Veterinary Council Annual Conference (VCAC) 2021, 6-8 October 2021
12. The webinar of surveillance/animal health situation data analysis, 1st module 2021, 11-12 October 2021. (R-FETPV)
13. NARO International Symposium 2021, National Institute Animal Health 100th Anniversary Program "Outbreak and control strategy for transboundary animal and zoonotic diseases in Asia" 5 November 2021, NIAH, Tsukuba, Ibaragi, Japan.
14. Virtual conference: The 44th International Conference on Veterinary Science 2021 (ICVS 2021), 25-26 November 2021.
15. The Joint Conference on Contribution of Multi-disciplinary Workforce to Public Health Threat in COVID-19 Era Wednesday - Thursday, 1-2 December 2021.

c) National conferences: 4

1. Webinar: Investigate brucellosis using milk i-elisa of milk tank in dairy herd, Lopburi province, 1 June 2021.
2. Online Webinar: International Standards and Guidelines for Biorisk Management: "WHO Laboratory Biosafety



- Manual 4th edition and the OIE guidance on biosafety and biosecurity: Similarities and Differences”, by Prof. Stuart Blacksell, Mahidol Oxford Tropical Medicine Research Unit (MORU), 15 July 2021  
 3. ISO/IEC 17043:2010 & Document Preparation, 27-29 October 2021. (National Institute of Metrology, Thailand)  
 4. Statistical methods for use in proficiency testing by interlaboratory comparison, 25-26 November 2021 (National Institute of Metrology, Thailand)

d) Other:

(Provide website address or link to appropriate information) 2

1. External lecturer on laboratory practical, Veterinary Public Health and Food Safety Centre for Asia and Pacific; OIE Collaborating Centre for Veterinary Services Capacity Building (Asia, the Far East and Oceania), Faculty of Veterinary Medicine, Chiang Mai University, 2, 5, 7 April 2021, Laboratory practical in Serology: serological analysis, interpretation and application. (Monaya Ekgat)
2. External lecturer on laboratory practical, Veterinary Public Health and Food Safety Centre for Asia and Pacific, OIE Collaborating Centre for Veterinary Services Capacity Building (Asia, the Far East and Oceania), Faculty of Veterinary Medicine, Chiang Mai University, 20-22 September 2021. Laboratory practical in serology, Transboundary animal diseases (TADs): Zoonosis and food security, Serological tests: brucellosis sero-diagnosis. (Monaya Ekgat)

**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: 0
- b) Seminars: 1
- c) Hands-on training courses: 0
- 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. NIAH and Animal Disease Diagnosis and Reference Laboratory (ADDRL), Bureau of Animal Industries, Philippines, on “Refresher on diagnostic tests to confirm brucellosis”	Seminar: Thailand, 30 September 2021	6

**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 17025:2017	ISOIEC 17025 NIAH_Eng 2020-2022.pdf
ISO 9001:2015	Wheaton - ISO_9001.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Rose Bengal test (RBT)	ILAC-MRA by Bureau of Laboratory Quality Standard, Department of Medical Science
Complement Fixation test (CFT)	ILAC-MRA by Bureau of Laboratory Quality Standard, Department of Medical Science
I-ELISA	ILAC-MRA by Bureau of Laboratory Quality Standard, Department of Medical Science

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?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
The 3rd OIE Regional Meeting for OIE Reference Centres in Asia and the Pacific	24-25 February 2021	Tokyo, Virtual meeting	Participation	-
The Eight ASEAN Laboratory Directors' Forum (8th ALDF) Meeting and the sixth AEAN Veterinary Epidemiology group (6th AVEG) meeting	16 March 2021	Virtual Meeting, Malaysia	Participation	Dr. Pacharee Thongkamkoon and Dr. Reka Kanitpun
The 29th Meeting of the ASEAN Sectoral Working Group on Livestock (The 29th ASWGL),	20 May 2021	Video meeting conference, Malaysia	Participation	Dr. Pacharee Thongkamkoon and Dr. Reka Kanitpun
Webinar brucellosis "An overview of brucellosis in animals in the Asia Pacific region"	29 July 2021	Tokyo, Virtual meeting	Participation and presentation	- An overview of brucellosis in animals in the Asia Pacific region (Monaya Ekgatat) - National brucellosis control program progress, challenges, and way forward of Thailand. (Dhamonwon Luangtrakool & Reka Kanitpun)

***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?

Yes

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

Purpose for inter-laboratory test comparisons <sup>1</sup>	No. participating laboratories	Region(s) of participating OIE Member Countries
Final Report of ILPT 2020: Interlaboratory proficiency test on serological tests on RBT, CFT and I-ELISA	48 labs (National and Regional Brucellosis Laboratories in Asia-Pacific and Brucellosis Laboratories within Thailand)	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

**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: