

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 28 juin 2024 17:27

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Brucellosis (Brucella abortus, B. melitensis, B. suis)
Address of laboratory:	French Agency for Food, Environmental & Occupational Health & Safety (ANSES) Animal Health Laboratory - Bacterial Zoonoses Unit 14 rue Pierre et Marie Curie F-94701 Maisons-Alfort Cedex FRANCE
Tel.:	0619817740
E-mail address:	claire.ponsart@anses.fr
Website:	www.anses.fr ; https://eurl-brucellosis.anses.fr/
Name (including Title) of Head of Laboratory (Responsible Official):	Dr Pascal BOIREAU Director of the Animal Health Laboratory Dr Claire PONSART Head of the Bacterial Zoonoses Unit
Name (including Title and Position) of WOAH Reference Expert:	
Which of the following defines your laboratory? Check all that apply:	Dr Claire PONSART DVM, PhD, Head of Bacterial Zoonoses Unit, ANSES 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 WOAH Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Rose Bengal Test		26	7
Complement fixation Test		14	43
indirect ELISA		168	39
Microplate Agglutination Test (B. canis)		303	13
Direct diagnostic tests			
Culture		56	106
Brucella identification and biotyping (animal str.)		56	106
Brucella sp. PCR on specimens		148	105
Brucella molecular typing (PCR HRM, WGS, MLVA)		35	9
Official control of diagnostic antigen batches		8	0
Official control of serum ELISA kit batches		3	0
Official control of milk ELISA kit batches		3	0
Official control of control sera batches		2	0

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H 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?H MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
National standard panel of positive sera	Diagnostic reagent batch control	Produced	16	23	3	AUSTRIA, FRANCE, LITHUANIA,
National standard panel of negative sera	Diagnostic reagent batch control	Produced	7	15	3	AUSTRIA, FRANCE, LITHUANIA,
National RBT standard serum (BRU POS SE 01 eq. OIEISS)	RBT antigen batch control	Produced	3	0	1	FRANCE,
National CFT/SAT/MRT standard serum (BRU POS SE 02 eq. OIEISS)	CFT/SAT/MRT antigen batch control	Produced	2	3	2	AUSTRIA, FRANCE,
National ELISA standard serum (BRU POS SE 03 eq. OIEELISA _{spSS})	ELISA kits batch control	Produced	8	12	4	AUSTRIA, FRANCE, SERBIA, SWITZERLAND,
European standard serum for pig brucellosis (EUPBSS)	ELISA kit batch control	Produced	0	2	2	LITHUANIA, SERBIA,
European standard serum for dog brucellosis (EUDogSS)	antigen batch control	Produced	0	3	3	ITALY, LITHUANIA, PORTUGAL,
European standard serum for sheep & goat brucellosis	antigen batch control	Produced	0	7	2	LITHUANIA, SERBIA,
Phages	Brucella conventional Identification and typing	Produced	0	10	2	IRELAND, ITALY,
Anti-A, anti-M monospecific, anti-R and negative sera	Brucella conventional Identification and typing	Produced	14	11	4	AUSTRIA, FRANCE, ITALY, PORTUGAL,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA?H 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 WOA?H Standards for the designated pathogen or disease?

No

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

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOHM MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
DENMARK	2023-01-31	Complement fixation test	5	0
DENMARK	2023-02-28	Complement fixation test	6	0
DENMARK	2023-03-31	Complement fixation test	4	0
DENMARK	2023-07-31	Complement fixation test	6	0
DENMARK	2023-08-31	Complement fixation test	4	0
DENMARK	2023-10-31	Complement fixation test	2	0
BELGIUM	2023-07-31	B. canis rapid slide agglutination test	0	1
MADAGASCAR	2023-06-30	B. canis rapid slide agglutination test	3	0
MADAGASCAR	2023-08-31	B. canis rapid slide agglutination test	2	0
MADAGASCAR	2023-11-30	B. canis rapid slide agglutination test	2	0
MOROCCO	2023-06-30	B. canis rapid slide agglutination test	1	0
FRENCH POLYNESIA	2023-05-31	B. canis rapid slide agglutination test	0	1
EGYPT	2023-06-30	Bacteriology and molecular identification	0	55
TURKEY	2023-05-31	Bacteriology and molecular identification	0	50

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

Yes

NAME OF THE WOHM MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
EGYPT	Bacteriology and molecular identification of Brucella	Analyses of samples / strains; 6-months visit and training of a scientist from the Faculty of Veterinary Medicine, Beni-suef University
AZERBAIJAN GEORGIA TURKEY	Phenotypical and molecular identification of Brucella	Analyses of samples / strains; visioconferences; training session; interlaboratory trial

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOHM MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
Biosurveillance of Brucellosis in Azerbaijan, Georgia and Turkey	3 years (2021-2024)	One health approach in the silk road area	members of the project	AZERBAIJAN GEORGIA TURKEY UNITED STATES OF AMERICA
IDEMBRU	3 years (2020-2023)	Identification of emerging Brucella species	members of the consortium of One Health EJP	BULGARIA GERMANY ITALY PORTUGAL THE NETHERLANDS UNITED KINGDOM
Brucellosis in French Guyana	2 years (2023-2024)	Finding the reservoirs for B. amazoniensis	Members of the project	FRANCE - FRENCH GUIANA
Diversity of Brucella strains in Egypt	6 months	Investigate and identify Brucella strains	Faculty of Veterinary Medicine, Beni-Suef University	EGYPT

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

Yes

— Research need : 1 —

Please type the Research need: Brucella canis, movements of dogs between countries, treatment of canine brucellosis

Relevance for WOA Disease Control, Animal Welfare,

Relevance for the Codes or Manual Code, Manual,

Field Epidemiology and Surveillance, Diagnostics, Therapeutics,

Animal Category Terrestrial,

Disease:

Brucellosis (Brucella canis)

Kind of disease (Zoonosis, Transboundary diseases) Zoonosis,

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: Brucella canis (new chapter)

Notes:

Answer:

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:

The European Union One Health 2022 Zoonoses Report
<https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2023.8442>

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:

The European Union One Health 2022 Zoonoses Report
<https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2023.8442>

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:

6

- Girault G., Djokic V., Petot-Bottin F., Perrot L., Bourgoin T., Hoffmann S., Ferreira Vicente A., Ponsart C., Freddi L. "Molecular Investigations of Two First Brucella suis Biovar 2 Infections Cases in French Dogs". *Pathogens*, DOI: 10.3390/pathogens12060792
- Freddi L., Ferreira Vicente A., Petit E., Ribeiro M., Game Y., Locatelli Y., Jacques I., Riou M., Jay M., Garin-Bastuji B., Rossi S., Djokic V., Ponsart C. "Evaluation of a Lateral Flow Immunochromatography Assay (LFIA) for Diagnosis and Surveillance of Brucellosis in French Alpine Ibex (Capra ibex)". *Microorganisms*, DOI: 10.3390/microorganisms11081976
- Lambert S., Thébault A., Anselme-Martin S., Calenge C., Dunoyer C., Freddi L., Garin-Bastuji B., Guyonnaud B., Hars J., Marchand P., Payne A., Petit E., Ponsart C., Quéméré E., Toïgo C., van de Wiele A., Rossi S., Gilot-Fromont E. "Brucellosis in Alpine ibex: 10 years of research and expert assessments". *Med Sci (Paris)*, DOI: 10.1051/medsci/2023132
- Djokic V., Freddi L., de Massis F., Lahti E., van den Esker M.H., Whatmore A., Haughey A., Ferreira A.C., Garofolo G., Melzer F., Sacchini F., Koets A., Wyllie S., Fontbonne A., Girault G., Ferreira Vicente A., McGiven J., Ponsart C. "The emergence of Brucella canis as a public health threat in Europe: what we know and what we need to learn". *Emerg Microbes Infect*, DOI: 10.1080/22221751.2023.2249126
- Barros NLC., Lopes Ribeiro M., Freitas AR., Delai RR., Kmetiuk LB., Teixeira WSR., Appolinario CM., Pimpão CT, Ponsart C, Ferreira Vicente A., Biondo AW, Megid J. "Serological and Molecular Survey of Brucella Species in Owners and Their Dogs Living on Island and Mainland Seashore Areas of Brazil". *Vector Borne Zoonotic Dis*, DOI: 10.1089/vbz.2023.0061
- Schiavo L., Ribeiro ML., de Almeida MB., Ribeiro da Cunha G., Almeida Nocera Espírito Santo G., Midori Morikawa V., Ferreira Vicente A., Ponsart C., de Santi CE., Kmetiuk LB., Megid J., Biondo AW. "One Health approach for Brucella canis: Serological and molecular detection in animal-hoarding individuals and their dogs". *PLoS Negl Trop Dis*, DOI: 10.1371/journal.pntd.0011974

b) International conferences:

1

Ponsart, Claire, 2023. "Animal brucellosis: host range and symptoms." STOR Mediterranean Animal Health Network, Palermo, 23 November 2023

c) National conferences:

1

Ponsart, C. 2023. « Estimation de la circulation de Brucella canis dans les élevages canins et facteurs associés au risque d'infection en France. » Société Centrale canine & Fonds AGRIA. Paris, France, 20 avril 2023.

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

2

EURL website: <https://eurl-brucellosis.anses.fr/>

OHEJP website: <https://eurl-brucellosis.anses.fr/>

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 1

b) Seminars : 1

c) Hands-on training courses: 3

d) Internships (>1 month) 1

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	GEORGIA	10
B	AUSTRIA	1
B	BELGIUM	1
B	CROATIA	1
B	CZECH REPUBLIC	1
B	DENMARK	1
B	ESTONIA	1
B	FINLAND	1
B	GERMANY	1
B	HUNGARY	1
B	IRELAND	2
B	ITALY	2
B	LATVIA	1
B	LITHUANIA	1
B	LUXEMBOURG	1
B	MALTA	1
B	THE NETHERLANDS	1
B	POLAND	1
B	PORTUGAL	1

B	ROMANIA	1
B	SLOVAKIA	2
B	SLOVENIA	1
B	SPAIN	1
B	SWEDEN	3
B	ALBANIA	1
B	NORTH MACEDONIA (REP. OF)	1
B	MONTENEGRO	1
B	SWITZERLAND	1
C	IRELAND	1
C	ESTONIA	1
C	AUSTRIA	1
C	CROATIA	1
C	ITALY	1
C	ROMANIA	1
C	SPAIN	2
C	SLOVENIA	1
C	CZECH REPUBLIC	1
C	LATVIA	1

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025	pdf	1-2246.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
RBT/CFT / SAT / ELISA	COFRAC (member of EA and ILAC)
Isolation, identification and biotyping of Brucella	COFRAC (member of EA and ILAC)
control of RBT, CFT, SAT antigens and ELISA kits	COFRAC (member of EA and ILAC)
control of Brucella vaccines (in vitro bath control)	COFRAC (member of EA and ILAC)
Brucella DNA detection (PCR) in tissues, milk, strains	COFRAC (member of EA and ILAC)

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

Yes

Protocols are in place in order to ensure biosecurity and biosafety. The process is managed by a biorisk officer. The biorisk management system is regularly officially inspected by an independent agency (ANSM).

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?

No

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
EURL Workprogramme for brucellosis (2023-2024)	Coordinator of the network	35	FLI, ISZAM
Collaboration on brucellosis in camels	Partner	2	Dubai
One Health EJP (IDEMBRU)	Coordinator	7	APHA, FLI, ISZAM

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
Bovine Serology	Organiser	110	APHA, FLI, ISZAM

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?

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOAHP REFERENCE LABORATORIES
IDEMBRU - Identification of emerging Brucella	The aim was to investigate different biotopes in order to isolate and characterise emerging Brucella species and to detect atypical hosts.	APHA, FLI, ISZAM

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?

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
Bovine serology	Organiser	110	RBT, CFT, ELISA, SAW	ALBANIA, AUSTRIA, BELGIUM, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, LATVIA, LITHUANIA, MALTA, MONTENEGRO, NORTH MACEDONIA (REP. OF), NORWAY, POLAND, PORTUGAL, ROMANIA, SERBIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, THE NETHERLANDS, UNITED KINGDOM,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report: