OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-19 19:30:35

Name of disease (or topic) for which you are a designated OIE 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
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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 OIE Reference Expert:	Dr Claire PONSART DVM, PhD Head of Bacterial Zoonoses Unit, ANSES
Which of the following defines your laboratory? Check all that apply:	Governmental Research

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	
Indirect diagnostic tests		Nationally	Internationally
RBT	Yes	365	0
SAT	Yes	0	0
CFT	Yes	178	33
i-ELISA (bovine serum)	Yes	4	0
i-ELISA (bovine milk)	Yes	108	0
i-ELISA (ovine/caprine serum)	Yes	1	0
i-ELISA (pig serum)	Yes	33	0
c-ELISA	Yes	2	0
Direct diagnostic tests		Nationally	Internationally
Culture	Yes	238	0
Brucella identification and biotyping (animal str.)	Yes	122 bacteriology / 52 typing	1 typing
Brucella identification and biotyping (human str.)	Yes	0	0
Brucella sp. PCR on specimens	Yes	1037	133
Brucella molecular typing (PCR HRM, WGS, MLVA)	Yes	15 PCR HRM ; 88 WGS ; 3 MLVA	0
Official control of diagnostic antigen batches	Yes	8 RBT ; 1 CFT	7 RBT ; 3 SAT
Official control of serum ELISA kit batches	Yes	1 iELISA bovine	6 iELISA bovine ; 1 iELISA porcine
Official control of milk ELISA kit batches	Yes	2 iELISA bovine	3 iELISA bovine
Official control of control sera batches	Yes	2 positive controls, 1 negative control	0
Official control of vaccine batches	Yes	0	0

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 standard panel of positive sera	Diagnostic reagent batch control	Produced	5 vials (1 ml)	7 vials (1 ml)	2	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
National standard panel of negative sera	Diagnostic reagent batch control	Produced	12 vials (1 ml)	5 vials (1 ml)	2	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
National RBT standard serum (BRU POS SE 01 eq. OIEISS)	RBT antigen batch control	Produced	-	1 vial (1 ml)	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
National CFT/SAT/MRT standard serum (BRU POS SE 02 eq. OIEISS)	CFT/SAT/MRT antigen batch control	Produced	1 vial (1 ml)	1 vial (1 ml)	2	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
National ELISA standard serum (BRU POS SE 03 eq OIEELISAspSS)	ELISA kits batch control	Produced	-	5 vials (1 ml)	3	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
European standard serum for pig brucellosis (EUPBSS)	ELISA kit batch control	Produced	-	1 vial (1 ml)	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East

European standard serum for dog brucellosis (EUDogSS)	antigen batch control	Produced	-	1 vial (1 ml)	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
European standard serum for sheep & goat brucellosis	antigen batch control	Produced	-	2 vials (2 ml)	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
Brucella reference & field strains	Brucella conventional identification and typing	Provided	-	19 reference strains and 2 ILPT panels (containing 6 strains)	5	☐Africa ☒Americas ☐Asia and Pacific ☒Europe ☒Middle East
Phages	Brucella conventional identification and typing	Produced	-	8 vials (1 mL)	2	☒Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
Anti-A, anti-M monospecific, anti-R and negative sera	Brucella conventional identification and typing	Produced	4 vials (1 ml)	6 vials (1 mL)	2	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐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?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
DENMARK	January, February, March, April, June, July, September, October 2021	68 sera (bovine/ovine)	-
SWEDEN	November 2021	1 serum	-
BELGIUM	August 2021	4 sera	-
BELGIUM	August 2021	1 NGS dataset (MLVA and WGS)	-
SWITZERLAND	April 2021	1 strain	-

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
GUINEA	Reinforce the diagnosis competences for Brucellosis, Biosecurity and Quality management systems	OIE Twinning project between LCVD and ANSES
BULGARIA	One Health EJP SHORT-TERM MISSION APPLICATION	Short-term mission between ANSES and NDRVMI (1 week)
TURKEY	Interpretation of serological results in vaccinated animals	E-mail, phone call, whatsapp
BOSNIA AND HERZEGOVINA	Drafting the multi-annual program to control brucellosis in small Ruminants	One-site mission (1 week), on-line meetings, EU funded Twinning project
AZERBAIJAN	Quality and titer of vaccine batches	E-mail, phone call, whatsapp

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
Brucellosis in dogs	12 months	Improved detection and diagnosis of brucellosis in dogs	National Reference laboratories	AUSTRIA BOSNIA AND HERZEGOVINA BULGARIA CROATIA FRANCE HUNGARY NORWAY PORTUGAL RUSSIA SLOVENIA SWEDEN SWITZERLAND UKRAINE
Coordination & conception of IDEMBRU (EU joint project)	30 months (2020-2022	Identification of emerging Brucella species: new threats for human and animals	Members of the consortium of One Health EJP	BULGARIA FRANCE GERMANY ITALY PORTUGAL THE NETHERLANDS UNITED KINGDOM
Biosurveillance of Brucellosis in Azerbaijan, Georgia and Turkey	36 months (2021-2024)	A survey of brucellosis in the silk road area	NAU (USA), partners in Azerbaijan, Georgia and Turkey	AZERBAIJAN GEORGIA TURKEY UNITED STATES OF AMERICA

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:
https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2021.6971

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:
The European Union One Health 2020 Zoonoses Report https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2021.6971

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: 1
Freddi L, Djokic V, Petot-Bottin F, Girault G, Perrot L, Ferreira Vicente A, Ponsart C. 2021. The use of flocked swabs with a protective medium increases the recovery of
live Brucella spp. and DNA detection. Microbiol Spectr 9:e00728-21. https://doi.org/10.1128/ Spectrum.00728-21.

b) International conferences: 3
Djokic V, Michelet L, Girault G, Lecu A, Freddi L, Ferreira Vicente A, Perrot L, Laboutiere L, Boschiroli ML, Ponsart C, 2021. MOLECULAR DETECTION AND DIFFERENTIATION WITHIN BRUCELLACEAE FAMILY IN URBAN AND RURAL WILDLIFE. One Health EJP Annual Scientific Meeting 2021 9-11 June in Copenhagen, Denmark and online (poster).

Djokic V, Girault G, Freddi L, Perrot L, Laboutiere L, Ferreira Vicente A, Ribeiro M, Petot-Bottin F, Ponsart C, 2021. Brucella spp and Ochrobactrum spp DNA in French foxes, wild boars and deer. 73rd Annual Brucellosis Research Conference. December 4-5, 2021 (oral communication).

Ferreira Vicente A. Animal Health Law: focus on Brucellosis. Giornata di studio sulla Brucellosi, Webinar, 25 october 2021. (oral communication oral)

Ferreira Vicente A, Djokic V, Ribeiro M, Petot-Bottin F, Perrot L, Laboutiere L, Freddi L, Girault G, Ponsart C, 2021. Comparison of five serological methods in non-infected, suspect, exposed and brucellosis infected dogs: impacts on diagnostic strategies. 73rd Annual Brucellosis Research Conference. December 4-5, 2021 (oral communication).

c) National conferences: 1
GIRAULT G. L'apport de la biologie moléculaire pour le diagnostic et l'identification de la brucellose. RENCONTRES NATIONALES DE SANTE PUBLIQUE VETERINAIRE ET ENVIRONNEMENTALE, 30 septembre et 1er octobre 2021, TOURS (oral communication).

PONSART C. Brucella, un genre bactérien en évolution : nouvelles espèces, nouveaux réservoirs. RENCONTRES NATIONALES DE SANTE PUBLIQUE VETERINAIRE ET ENVIRONNEMENTALE, 30 septembre et 1er octobre 2021, TOURS (oral communication).

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: 0
b) Seminars: 10
c) Hands-on training courses: 1
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
c	One week training session on Brucellosis : Bacteriolgy and Molecular biology (Bulgaria) (October)	3
b	BioNumerics and Calculation Engine – Expert meeting (May, videoconference)	9
b	Bacteriology training (June, videoconference, 2 days)	16
b	Animal Health Law – Expert meeting (September, videoconference)	~25
b	BioNumerics and Calculation Engine – Expert meeting (October, videoconference)	11
b	Bioinformatics training (October, videoconference, 2 days)	10
b	Animal Health Law – Expert meeting (October, videoconference)	~25
b	Bacteriology and molecular analysis training (November, videoconference, 2 days)	~15
b	Animal Health Law – Expert meeting (November, videoconference)	~25
b	EURL Workshop for brucellosis at ANSES (December, videoconference)	70
b	MLVA training (December, videoconference, 4 days)	16

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	1-2246.pdf

16. 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 & ELISA kits	COFRAC (member of EA and ILAC)
Control of Brucella vaccines (in vitro batch control)	COFRAC (member of EA and ILAC)
PCR for Brucella detection in milk	COFRAC (member of EA and ILAC)

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?

Yes

Purpose of the proficiency tests: [1]	Role of your Reference Laboratory (organiser/ participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.
Brucellosis bovine milk	Organizer (Coordinator G. Girault)	30	FLI (DE), IZSAM (IT)

[1] *validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.*

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
EURL Workprogramme 2020-2022	Diagnostic tools and genotyping	FLI (DE), IZSAM (IT)
IDEMBRU, One Health EJP project	Emerging species of Brucella	APHA (UK), FLI (DE), IZSAM (IT)

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[1]	No. participating laboratories	Region(s) of participating OIE Member Countries
Brucellosis serology in milk - organiser	30	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
Brucellosis serology in serum – participant (Organiser = Siensano)	5	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
Brucellosis bacteriology proficicency test - organiser	2	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☒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: