

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-20 18:58:01

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Brucellosis (Brucella abortus, B. melitensis, B. suis)
Address of laboratory:	New Haw, Addlestone Surrey KT15 3NB Weybridge UNITED KINGDOM
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Website:	www.gov.uk/apha
Name (including Title) of Head of Laboratory (Responsible Official):	Chris Hadkiss, Chief Executive, APHA
Name (including Title and Position) of OIE Reference Expert:	Dr Adrian Whatmore Head of Bacteriology
Which of the following defines your laboratory? Check all that apply:	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
iELISA (Serum)	Yes	4558	185
cELISA	Yes	11721	518
CFT	Yes	565	111
RBT	Yes	5939	550
SAT	Yes	508	297
iELISA (Milk)	Yes	33575	
Direct diagnostic tests		Nationally	Internationally
Culture	Yes	2052	126
Real Time PCR	Yes	33	15
Bruceladder	Yes	6	0
SNP typing		7	0
MLST		7	0
MLVA		0	14

**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?

Yes

NOTE: Currently, there are 22 laboratories that produce Standard Reference Reagents officially recognised by the OIE for 19 diseases/pathogens. Please click the following link to the list of OIE-approved International Standard Sera:

<http://www.oie.int/en/our-scientific-expertise/veterinary-products/reference-reagents/>. If the reagent is not listed on this page, it is NOT considered OIE-approved. The next two questions allow you to indicate non-OIE-approved diagnostic reagents.

Disease	Test	Available from
Bovine brucellosis	Indirect and Competitive enzyme-linked immunosorbent assay; Complement fixation; Agglutination; Buffered Brucella antigen tests; Fluorescence polarisation assay	Dr Adrian Whatmore Animal and Plant Health Agency, Weybridge, New Haw, Addlestone, Surrey KT15 3NB, United Kingdom Tel: (44-1932) 35.76.10 Fax: (44-1932) 35.72.16 adrian.whatmore@apha.gov.uk
Brucella abortus	Complement fixation; Agglutination; Buffered Brucella antigen tests; Fluorescence polarisation assay; Indirect and Competitive enzyme-linked immunosorbent assay	Dr Adrian Whatmore (as above)
Ovine and caprine brucellosis (anti-Brucella melitensis [ISaBmS])	Indirect and Competitive enzyme-linked immunosorbent assay; Fluorescence polarisation assay; Buffered Brucella antigen tests	Dr Adrian Whatmore (as above)

Type of reagent available	Related diagnostic test	Produced/ Supply imported	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	Name of recipient OIE Member Countries
OIEISS	All serodiagnostic tests	Supply	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	GERMANY ITALY NICARAGUA
ISaBmS	All serodiagnostic tests	Supply	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	ITALY
OIE ELISA Standards	ELISAs	Supply	<input checked="" type="radio"/> <10mL <input type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	<input type="radio"/> <10mL <input checked="" type="radio"/> 10-100mL <input type="radio"/> 100-500mL <input type="radio"/> >500mL	BELGIUM ITALY NICARAGUA SWEDEN

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
Diagnostic kit	Milk iELISA	Produced	240 kits	45 kits	6	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Antigen	Milk Ring Test	Produced	1800 ml	40 ml	4	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Antigen	Serum Agglutination Test	Produced	200ml	7200 ml	8	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Antigen	Rose Bengal Test	Produced	2200 ml	700 ml	5	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Antigen	Complement Fixation Test	Produced	200ml	1000 ml	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Positive antiserum	various	Produced	96 ml	75 ml	18	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East

Diagnostic kit	cELISA	Produced	100 kits	48 kits	7	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Monospecific serum	Phenotypic Characterisation	Produced	4 ml	6 ml	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" 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?

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
RWANDA	n/a	123	0

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
TANZANIA	Advice on cELISA/RBT	Electronic
MAURITANIA	Advice on RBT	Electronic
RWANDA	Advice on serology, molecular diagnostics and bacteriology	Electronic
TURKEY	Advice on molecular diagnostics	Electronic
AZERBAIJAN	Advice on cELISA & milk ELISA testing	Electronic (via consultant)

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
IDEMBRU	2.5 years	Produce a toolkit of immunological and molecular techniques to detect classical and emerging strains of Brucella sp	ANSES, France (lead) Multiple EU partners	FRANCE
Brucellosis in Kenya - understanding epidemiology and informing control at regional scales	1 year	Improve understanding of Brucellosis epidemiology and control strategies in three regions of Kenya	University of Nairobi Institute of Tropical and Infectious Diseases (UNITID); Kenya Medical Research Institute (KEMRI); University of Glasgow	KENYA
Establishment of a multisectoral strategy for the control of brucellosis in the main periurban dairy production zones of West & Central Africa.	5 years	Capacity building	Multiple in West Africa. Led by RVC London.	SENEGAL

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:
See publications.

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:
See publications below

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: 6

Foddai A, Floyd T, McGiven J, Grace K, Evans S. Evaluation of the English bovine brucellosis surveillance system considering probability of disease introduction and non-random sampling. *Prev Vet Med.* 2020 Mar;176:104927. doi: 10.1016/j.prevetmed.2020.104927.

Mangtani P, Berry I, Beauvais W, Holt HR, Kulashri A, Bharti S, Sagar V, Nguipdop-Djomo P, Bedi J, Kaur M, Guitian J, McGiven J, Kaur P, Singh Gill JP, Grover GS, Kumar R. The prevalence and risk factors for human Brucella species infection in a cross-sectional survey of a rural population in Punjab, India. *Trans R Soc Trop Med Hyg.* 2020 Apr 8;114(4):255-263. doi: 10.1093/trstmh/trz133.

Ashford RT, Muchowski J, Koylass M, Scholz HC, Whatmore AM. Application of Whole Genome Sequencing and Pan-Family Multi-Locus Sequence Analysis to Characterize Relationships Within the Family Brucellaceae. *Front Microbiol.* 2020 Jul 14;11:1329. doi: 10.3389/fmicb.2020.01329.

Edao BM, Ameni G, Assefa Z, Berg S, Whatmore AM, Wood JLN. Brucellosis in ruminants and pastoralists in Borena, Southern Ethiopia. *PLoS Negl Trop Dis.* 2020 Jul 24;14(7):e0008461. doi: 10.1371/journal.pntd.0008461.

Bodenham RF, Lukambagire AS, Ashford RT, Buza JJ, Cash-Goldwasser S, Crump JA, Kazwala RR, Maro VP, McGiven J, Mkenda N, Mmbaga BT, Rubach MP, Sakasaka P, Shirima GM, Swai ES, Thomas KM, Whatmore AM, Haydon DT, Halliday JEB. Prevalence and speciation of brucellosis in febrile patients from a pastoralist community of Tanzania. *Sci Rep.* 2020 Apr 27;10(1):7081. doi: 10.1038/s41598-020-62849-4.

Allen AR, Milne G, Drees K, Presho E, Graham J, McAdam P, Jones K, Wright L, Sukece R, Whatmore AM, Graham J, Foster JT. Genomic epizootiology of a Brucella abortus outbreak in Northern Ireland (1997-2012). *Infect Genet Evol.* 2020 Jul;81:104235. doi: 10.1016/j.meegid.2020.104235.

b) International conferences: 1
EU NRL Meeting, ANSES, Paris.

c) National conferences: 0

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?

No

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)
ISO9001:2015	ISO9001-2015_Certificate.pdf
ISO17025	17025 certificate.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
RBT	UKAS
CFT	UKAS
SAT	UKAS
cELISA	UKAS
iELISA	UKAS
Milk iELISA	UKAS
Phenotypic Characterisation	UKAS
Evaluation of Media	UKAS
Real Time PCR	UKAS

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?

No

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
IDEMBRU - European Joint Programme Project	Capacity building for atypical Brucella	FLI, ANSES, IZS

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
VETQAS PT0015 B. abortus CFT/SAT	34	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
VETQAS PT0016 B. abortus serum IELISA	32	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
VETQAS PT0018 B. abortus milk IELISA	18	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
VETQAS PT0019 B. abortus Milk Ring Test	5	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
VETQAS PT0020 B. abortus Rose Bengal Test	86	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
VETQAS PT0025 B. abortus - Stain and ID	12	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
VETQAS PT0187 Brucella PCR	17	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" 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:

