# WOAH Reference Laboratory Reports Activities 2022

## Activities in 2022

### This report has been submitted : 25 avril 2023 16:26

## *Laboratory Information*

| | |
|---|---|
| **Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:** | Ovine epididymitis (Brucella ovis) |
| **Address of laboratory:** | Department of Bacteriology, APHA, Woodham Lane, Addlestone, Surrey, UNITED KINGDOM |
| **Tel.:** | +44 1932 357610 |
| **E-mail address:** | adrian.whatmore@apha.gov.uk |
| **Website:** | https://www.gov.uk/government/organisations/animal-and-plant-health-agency |
| **Name (including Title) of Head of Laboratory (Responsible Official):** | Mr David Holdsworth |
| **Name (including Title and Position) of WOAH Reference Expert:** | Dr Adrian Whatmore |
| **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 WOAH Manual (Yes/No) | Total number of test performed last year | |
|---|---|---|---|
| Indirect diagnostic tests | | Nationally | Internationally |
| Complement fixation test (CFT) | Yes | 19 | 1119 |
| | | | |

| Direct diagnostic tests | | Nationally | Internationally |
|---|---|---|---|
| Bacterial culture | Yes | 685 | 0 |
| Generic molecular tests | Species confirmation | See abortus, melitensis, suis report | |

# TOR2: REFERENCE MATERIAL

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

Yes

| TYPE OF REAGENT AVAILABLE | RELATED DIAGNOSTIC TESTING | PRODUCED/ IMPORTED | QUANTITY SUPPLIED NATIONWIDE (ML, MG) | QUANTITY SUPPLIED AT INTERNATIONAL LEVEL (ML, MG) | NAME OF BENEFICIARY WOAH MEMBER COUNTRIES |
|---|---|---|---|---|---|
| | | none supplied this year | | | |

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?

No

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAH Members?

Not applicable

# 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 WOAH 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 WOAH Standards for the designated pathogen or disease?

No

# TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

No

# TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

| Title of the study | Duration | PURPOSE OF THE STUDY | PARTNERS (INSTITUTIONS) | WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY |
|---|---|---|---|---|
| | | See abortus, melitenis, suis report | See abortus, melitensis, suis report for research activities encompassing brucellosis. | |

# TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

No

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

No

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:

*3*

*Dadar, M., Alamian, S., Tadayon, K., Ashford R.T., Whatmore A.M. (2022) Molecular characterization of zoonotic Brucella species isolated from animal and human samples in Iran. Acta Tropica. 229, 106363 https://doi.org/10.1016/j.actatropica.2022.106363*

*Duncombe, L., Howells, L., Haughey, A., Taylor, A., Kaveh, D. Erdenlig, A., S., Hitchen, P., Haslam, S., Mandal, S.S., Ganesh, N.J., Bundle. D., and McGiven, J. (2022) The tip of Brucella O-polysaccharide is a potent epitope in response to brucellosis infection and enables short synthetic antigens to be superior diagnostic reagents. Microorganisms. 10: 708. https://doi.org/10.3390/microorganisms10040708*

*Touloudi, A., McGiven, J., Cawthraw, S., Valiakos, G., Kostoulas, P., Duncombe, L., et al. (2022) Development of a Multiplex Bead Assay to Detect Serological Responses to Brucella Species in Domestic Pigs and Wild Boar with the Potential to Overcome Cross-Reactivity with Yersinia enterocolitica O:9. Microorganisms, 10: 1362. https://doi.org/10.3390/microorganisms10071362*

b) International conferences:

*10*

*Brucellosis 2022 International Research Conference (Teramo, September 2022*

*McGiven, J. (Keynote presentation): The diagnosis of brucellosis*

*McGiven, J. (Oral Presentation): Brucella canis diagnosis (Satellite meeting 'Seminar on Brucella canis').*

*Howells, L. (Oral presentation): Investigation into the efficacy of rLPS based serodiagnostic antigens.*

*Ashford, R. et al. (Poster): Evaluation of DNA extraction methods for long-read whole genome sequencing of atypical Brucella sp. isolates*

*Dainty, A. et al. (Poster): The epidemiology of human brucellosis in the British Isles 2000-2020: an ongoing travel-related threat in a non-endemic region*

*Duncombe, L. et al. (Poster): Evaluating the OPS linkage composition for all biovar type strains of B. abortus, B. melitensis and B. suis and strains described by the WOAH for use in the production of vaccines and diagnostics*

*Haughey, A. et al. (Poster): Brucella canis in Great Britain: Cases, Case Definitions, Management and Control*

*Withall, J. et al. (Poster): The isolation of atypical Brucella species from captive Amazon milk frogs (Trachycephalus resinifictrix)*

*Maryam Dadar, Saeed Alamian, Roland T. Ashford and Adrian M. Whatmore. (Poster). Genetic diversity of Brucella spp. isolates in Iran: A multi-locus sequence typing analysis.*

*Gemma Smith, Georgina Angel, Nicholas Beeching, Mona Dave, Andrew Frost, Alessandro Gerada, John McGiven, Derren Ready, Katherine Russell, Bengu Said, Jennifer Taylor, Jane Williams, Stephen Wyllie, Fiona Neely, Andrew Taylor, Roland Ashford, Charles Beck. (Poster) First confirmed domestic transmission of Brucella canis between dogs in the UK: outbreak investigation and public health risk assessment.*

c) National conferences:

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

# TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

No

# TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

| Quality management system adopted | Certificate scan (PDF, JPG, PNG format) | |
|---|---|---|
| ISO 9001:2015 | | ISO9001 certificate 2020-2023.pdf |
| ISO17025:2017 | | 17025 certificate.pdf |

19. Is your quality management system accredited?

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

Yes

Dedicated high containment unit (ADCP3, SAPO3) for brucellosis work.

# TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?

No

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

No

# TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

No

24. Are you a member of a network of WOAH Reference Laboratories designated for the same pathogen?

No

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

No

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

Yes

| Purpose for inter-laboratory test comparisons1 | Role of your reference laboratory (organizer/participant) | No. participating laboratories | Region(s) of participating WOAH Member Countries |
|---|---|---|---|
| VETQAS PT0024 Brucella ovis CFT | Organiser and Participant | 2 | Europe |

# TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report: