

WOAH Reference Laboratory Reports Activities 2025

This report has been submitted: 1 février 2026 09:13

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Ovine epididymitis
*Address of laboratory:	Via Campo Boario, 64100 Teramo Italy
*Tel:	+390-861 33 26 26 +393485213201
*E-mail address:	f.demassis@izs.it
Website:	www.izs.it
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr Nicola D'Alterio, DVM, Director General
*Name (including Title and Position) of WOAH Reference Expert:	Dr Fabrizio De Massis, DVM, Head of Branch Laboratory
*Which of the following defines your laboratory? Check all that apply:	Governmental Research agency

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			
B. ovis CFT	Yes	4	0
Direct diagnostic tests			
Primary Culture	Yes	1402	0
Real time PCR	Yes	3084	20

TOR2: REFERENCE MATERIAL

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

No

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

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAH Member Countries	Country of recipients
B. ovis antigen (CFT)	B. ovis CFT	Produced (0 ml) and Provided	33	1	2	ITALY, SPAIN,
B. ovis positive control serum (CFT)	B. ovis CFT	Produced (0 ml) and provided	12	0	1	ITALY,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHA Members?

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 WOAHA Standards for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
Detection of antibodies against Brucella ovis in ovine serum through Complement Fixation test (CFT) Revision of the Method: 2021	Revision of the Method: 2021
Production of B. ovis HSE antigen for CFT	Revision of the Method: 2025
Molecular typing of Brucella spp.	Revision of the Method: 2022
Brucella: species and biovar identification	Revision of the Method: 2023
Molecular typing of Brucella spp. and Brucella vaccine strains using PCR Bruce-Ladder	Revision of the Method: 2023
Detection of Brucella spp. through real-time PCR	Revision of the Method: 2024
Detection of Brucella spp. in organic material	Revision of the Method: 2024
Identification of Brucella abortus, melitensis, ovis, suis 1-4, canis, and ceti/pinnipedialis species through real-time PCR	Revision of the Method: 2023
Molecular characterization of Brucella spp. through MLVA	Revision of the Method: 2017
NGS data analysis for Brucella spp. genotyping	Revision of the Method: 2024

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

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

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHA Member Countries involved other than your country
EUOHZ Report	4 years 2025-2030	Provision of support to EFSA and to ECDC in the production of the EU One Health Zoonoses report and in related zoonoses online interactive data visualisation dashboards and zoonoses story maps	IZSAM (lead) + different experts coming from all EU Member States	

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

No

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 Reference Laboratory collaborates with the WOAHA CC for veterinary epidemiology, Teramo, in managing and updating the Information System on animal brucellosis, taking care, in particular, of the publication of a dashboard summarizing indicators on the progress of the national plans for the eradication of bovine, buffalo, sheep and goat brucellosis in non-officially free territories. Criteria for the calculation of main epidemiological indicators have been defined in order to highlight the dissemination or persistence of infection in specific geographic areas. The dashboard summaries are produced by integrating the laboratory data with the data generated

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by veterinary services activities.

As part of its institutional activities in collaboration with the national reference centers for brucellosis and epidemiology, the CRNB has provided technical support in the analysis and organization of the data and information necessary for the preparation of national plans for the eradication of bovine, buffalo, sheep and goats brucellosis in Italy, submitted to the European Commission for the approval of the financial contribution and the necessary changes due to the entry into force of Regulation (EU) 2016/429 (the so-called Animal Health Law - AHL).

The lab also contributed to the drafting of the EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control). 2024. The European Union One Health 2024 Zoonoses Report. EFSA Journal. Volume23, Issue12 December 2025. e9759 <https://doi.org/10.2903/j.efsa.2025.9759>

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:

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1. Jeffrey T. Foster, Kevin G. Daly, Giuliano Garofolo, 2025 Chapter 1 - Historical context and background of brucellosis in the world, in: *Brucellosis: the silent threat for livestock and human health*. Editor(s): Maryam Dadar (Ed.), Brucellosis, Academic Press, 2026, Pages 3-10, ISBN: 978-0-443-30067-7, DOI: 10.1016/C2023-0-52191-3
2. De Massis F., 2025. Chapter 21 - Brucellosis control, eradication, and prevention in: *Brucellosis. The Silent Threat to Livestock and Human Health*, Maryam Dadar (Ed.), Academic Press, Elsevier, 281-298. ISBN: 978-0-443-30067-7. DOI: 10.1016/C2023-0-52191-3.
3. Abichu, G., De Massis, F., Rufael, T., Scacchia, M., Aliyi, A., Garofolo, G., & van Heerden, H. (2025). Seroprevalence, characterization, and risk factors of brucellosis in cattle, sheep, goats, and camels in the Oromia region, Borena Zone, Ethiopia. *Preventive Veterinary Medicine*, 106634. <https://doi.org/10.1016/j.pvetmed.2025.106634>

b) International conferences:

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4. Katuscia Zilli. *Genomic Analysis of Brucella ovis Strains Reveals Distinct Italian Diversity within a Global Context*. International research. International Research Congress Brucellosis 2025. San José, Costa Rica; 04-07 November, 2025; Oral.
5. Giuliano Garofolo. *Brucella Phylogeography Across Italy, the Mediterranean, and Europe*. International Research Congress Brucellosis 2025. San José, Costa Rica; 04-07 November, 2025. Oral.

c) National conferences:

0

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

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 1

b) Seminars : 6

c) Hands-on training courses: 3

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
A	ALGERIA	3
C	ALGERIA	4

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B	ITALY	300
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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	2027 Certificato Accredia ISO17025.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Complement Fixation test (CFT) for B. ovis	ACCREDIA (member of EA, IAF and ILAC)
Brucella spp. Isolation	ACCREDIA (member of EA, IAF and ILAC)
Brucella spp. PCR	ACCREDIA (member of EA, IAF and ILAC)
Brucella spp. Real time PCR	ACCREDIA (member of EA, IAF and ILAC)
Identification and typing	ACCREDIA (member of EA, IAF and ILAC)
PCR-RFLP	ACCREDIA (member of EA, IAF and ILAC)
PCR Bruce ladder	ACCREDIA (member of EA, IAF and ILAC)

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

Yes

We have a BSL-3 practices when handling products suspected or clinical specimens to prevent the risk of agent exposure or dissemination.

TOR9: SCIENTIFIC MEETINGS

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

No

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

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

Not applicable (only WOAHP Reference Laboratory designated for the disease)

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen during the past 2 years?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAHP Ref. Labs/ organising WOAHP Ref Lab
Interlaboratory test PCR HRM for Brucella sp. Identification – Validation of the method, organized by EU-RL ANSES	Participant	EU Countries	ANSES France EU RL for Brucellosis

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
ERFAN. Enhancing Research and Development in Africa through WOAHP Reference Laboratories and Collaborating Centres, and Poles of Excellence, as resultant of WOAHP twinning Projects - ERFAN	ERFAN is an WOAHP network to facilitate and strengthen collaboration among countries of the SADC Region and Arab Maghreb Union (UMA) as well as IZSAM in the Animal health and food security domains.	ERFAN is an WOAHP network to facilitate and strengthen collaboration among countries of the SADC Region and Arab Maghreb Union (UMA) as well as IZSAM in the Animal health and food security domains.

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<p>“Provision of support to EFSA and to ECDC in the production of the EU One Health Zoonoses report and in related zoonoses online interactive data visualisation dashboards and zoonoses story maps” (EUOHZ Report)</p>	<p>The project aims to provide support in the preparation of the joint EFSA-ECDC annual report on zoonoses in the European Union, Brucella Included.</p>	<p>The project aims to provide support in the preparation of the joint EFSA-ECDC annual report on zoonoses in the European Union, Brucella Included.</p>
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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 during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
IZSAM National and international proficiency testing for brucellosis identification in food	Organiser	7	Brucella spp. Isolation and Identification	ITALY,
National and international proficiency testing for brucellosis identification in animal specimens	Organiser	18	Brucella spp. Isolation and Identification	ITALY,
IZSAM National and international molecular identification	Organiser	9	molecular identification	ITALY,

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Revision of the ovine epididymitis chapter of the WOAHP terrestrial manual	Activity agree in 2025, to be started in 2026	.

29. Additional comments regarding your report:

Yes

Please see the report of activities regarding abortus, melitensis, suis in the related report.