

# WOAH Reference Laboratory Reports Activities 2023

## Activities in 2023

This report has been submitted : 11 juillet 2024 12:28

### Laboratory Information

<b>Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:</b>	Ovine Epydidimitis (Infection with Brucella ovis)
<b>Address of laboratory:</b>	Via Campo Boario 64100 Teramo
<b>Tel.:</b>	+39 0861 332626
<b>E-mail address:</b>	f.demassis@izs.it
<b>Website:</b>	www.izs.it
<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr Nicola D'Alterio, DVM, Director General
<b>Name (including Title and Position) of WOAHO Reference Expert:</b>	Dr Fabrizio De Massis, DVM, Head of Branch Laboratory
<b>Which of the following defines your laboratory? Check all that apply:</b>	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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
B. ovis CFT		16	0
Direct diagnostic tests			
Primary Culture		149	0
PCR		107	4
Real time PCR		120	4

### TOR2: REFERENCE MATERIAL

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

No

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

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOAHO MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
B. ovis antigen (CFT)	B. ovis CFT	Produced and provided (45 ml)	37	0	1	ITALY,
B. ovis positive control serum (CFT)	B. ovis CFT	Produced and provided (17,5 ml)	10	0	1	ITALY,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHP Members?

No

### TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

7. Did your laboratory validate diagnostic methods according to WOAHP 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 Brucella antibodies in bovine, buffalo, ovine-caprine, and swine serum through indirect ELISA	Revision of the Method
Molecular typing of Brucella spp.	Revision of the Method
Brucella: species and biovar identification	Revision of the Method
Molecular typing of Brucella spp. and Brucella vaccine strains using PCR Bruce-Ladder	Revision of the Method
Detection of Brucella spp. through real-time PCR	Revision of the Method

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

No

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

No

### TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

No

### TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAHP MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
IDEMBRU	3 years	Identification of potentially emerging Brucella species: new threats for human and animals. To produce a toolkit of immunological and molecular techniques to detect classical and emerging strains of Brucella spp.	ANSES (lead) + Members of the consortium of One Health EJP	BULGARIA FRANCE GERMANY PORTUGAL THE NETHERLANDS UNITED KINGDOM
EUOHZ Report	4 years 2021-2024	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 the EU Member States	AUSTRIA BELGIUM BULGARIA CYPRUS CZECH REPUBLIC DENMARK ESTONIA FINLAND FRANCE GREECE HUNGARY ICELAND IRELAND ITALY LATVIA ROMANIA SAN MARINO SLOVAKIA SLOVENIA SPAIN THE NETHERLANDS

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

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:

Contribution to EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control). 2022. The European Union One Health 2022 Zoonoses Report. EFSA Journal 2023; 21 (12): <https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2023.8442>

B. ovis infection is not a notifiable disease in most countries, Italy included.

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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- Lara Savini, Luca Candeloro, Paolo Calistri, Alessio Di Lorenzo, Margherita Perilli, Armando Giovannini and Fabrizio De Massis. 2023. Insights for brucellosis eradication in Italy through a model-based spread evaluation in grazing livestock - sicily case study. *Veterinaria Italiana*, 59(1) doi:10.12834/VetIt.2934.20799.1
- Moreno E., Middlebrook, E. A., Altamirano-Silva, P., Al Dahouk, S., Araj, G. F., Arce-Gorvel, V., Arenas-Gamboa, Á., Ariza, J., Barquero-Calvo, E., Battelli, G., Bertu, W. J., Blasco, J. M., Bosilkovski, M., Cadmus, S., Caswell, C. C., Celli, J., Chacón-Díaz, C., Chaves-Olarte, E., Comerci, D. J., Conde-Álvarez, R., Cook, E., Cravero, S., Dadar, M., De Boelle, X., De Massis, F., Díaz, R., Escobar, G. I., Fernández-Lago, L., Ficht, T. A., Foster, J. T., Garin-Bastuji, B., Godfroid, J., Gorvel, J., Güler, L., Erdenliğ-Gürbilek, S., Gusi, A. M., Guzmán-Verri, C., Hai, J., Hernández-Mora, G., Iriarte, M., Jacob, N. R., Keriel, A., Khames, M., Köhler, S., Letesson, J., Loperena-Barber, M., López-Goñi, I., McGiven, J., Melzer, F., Mora-Cartin, R., Moran-Gilad, J., Muñoz, P. M., Neubauer, H., O'Callaghan, D., Ocholi, R., Oñate, Á., Pandey, P., Pappas, G., Pembroke, J. T., Roop, M., Ruiz-Villalón, N., Ryan, M. P., Salcedo, S. P., Salvador-Bescós, M., Sangari, F. J., de Lima Santos, R., Seimenis, A., Splitter, G., Suárez-Esquivel, M., Tabbaa, D., Trangoni, M. D., Tsolis, R. M., Vizcaíno, N., Wareth, G., Welburn, S. C., Whatmore, A., Zúñiga-Ripa, A., & Moriyón, I. 2023. If you're not confused, you're not paying attention: *Ochrobactrum* is not *brucella*. *Journal of Clinical Microbiology*, 61(8), e0043823. doi:10.1128/jcm.00438-23
- Moriyón I., Blasco, J. M., Letesson, J. J., De Massis, F., & Moreno, E. 2023. Brucellosis and one health: Inherited and future challenges. *Microorganisms*, 11(8), 2070. doi:10.3390/microorganisms11082070

b) International conferences:

0

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 WOAHO Members?

Yes

a) Technical visit : 0

b) Seminars : 6

c) Hands-on training courses: 4

d) Internships (&gt; 1 month) 0

Type of technical training

Country of origin of the expert(s)

No. participants from the

provided (a, b, c or d)	provided with training	corresponding country
B	ITALY	74
C	ITALY	96
B	ITALY	200
B	FRANCE	1
B	FRANCE	30
B	ITALY	200
B	FRANCE	30
C	KAZAKHSTAN	2
C	ALGERIA	2
C	SOUTH AFRICA	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	File 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	ACCREDITIA (member of EA, IAF and ILAC)
Brucella spp. Isolation	ACCREDITIA (member of EA, IAF and ILAC)
Brucella spp. PCR	ACCREDITIA (member of EA, IAF and ILAC)
Brucella spp. Real time PCR	ACCREDITIA (member of EA, IAF and ILAC)
Identification and typing	ACCREDITIA (member of EA, IAF and ILAC)
PCR-RFLP	ACCREDITIA (member of EA, IAF and ILAC)
PCR Bruce ladder	ACCREDITIA (member of EA, IAF and ILAC)

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

Yes

## TOR9: SCIENTIFIC MEETINGS

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

No

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

No

## TOR10: NETWORK WITH WOAHA REFERENCE LABORATORIES

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

Yes

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

Not applicable (Only WOAHA Reference Laboratory designated for the disease)

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY	NO. PARTICIPANTS	PARTICIPATING WOAHA REF. LABS/ ORGANISING WOAHA REF. LAB.

	(ORGANISER/ PARTICIPANT)		
Brucella PCR methods	Participant	15	FLI (DE), IZSAM (IT)
EU Bovine Brucellosis Serum Proficiency Test 2023 organised by EU-RL ANSES. ILPT Brucellosis bacteriology _LNR proficiency testv	Participant	27	ANSES France EU RL for Brucellosis

26. Did your laboratory collaborate with other WOAHO 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 WOAHO REFERENCE LABORATORIES
IDEMBRU, One Health EJP project	Emerging species of Brucella	APHA (UK), FLI (DE), IZSAM (IT)
ERFAN. Enhancing Research and Development in Africa through WOAHO Reference Laboratories and Collaborating Centres, and Poles of Excellence, as resultant of WOAHO twinning Projects - ERFAN "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). Framework contract number: OC/EFSA/BIOCONTAM/2020/03. Codice interno IZSAM AFAATE1221	ERFAN is an WOAHO 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. The project aims to provide support in the preparation of the joint EFSA-ECDC annual report on zoonoses in the European Union, Brucella Included.	ERFAN is an WOAHO 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. The project aims to provide support in the preparation of the joint EFSA-ECDC annual report on zoonoses in the European Union, Brucella Included.

## TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHO Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons <sup>1</sup>	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAHO Member Countries
17th IZSAM National and international proficiency testing for brucellosis identification in animal specimens	Organiser	20	Isolation	

## TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

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