

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 12 juin 2024 08:32

Laboratory Information

Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	Bovine spongiform encephalopathy
Address of laboratory:	Via Bologna 148 Turin Italy
Tel.:	+39-11 26 86 296
E-mail address:	cristina.casalone@izsto.it
Website:	www.izsplv.it
Name (including Title) of Head of Laboratory (Responsible Official):	Cristina Casalone
Name (including Title and Position) of WOAHO Reference Expert:	Cristina Casalone
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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
None		0	0
Direct diagnostic tests			
HerdChek BSE/Scrapie Ag, EIA		6155	0
Immunohistochemistry for pathological prion protein (IHC)		10	2
Histology		10	2
BSE Confirmatory IB (WBSE)		8	3

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
Sections on paraffin slide	IHC and histology	provided	0	75 sections	3	BELGIUM, LITHUANIA, POLAND,

Frozen nervous tissue C-BSE	Rapid test	provided	0	5ml	1	LITHUANIA,
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4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAHA 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 WOAHA 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 WOAHA Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOAHA MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
ROMANIA	2023-06-14	IHC -WBSE- Histology	0	1
SLOVENIA	2023-09-04	IHC -WBSE- Histology	0	1
SLOVENIA	2023-12-22	WBSE	0	1

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

Yes

NAME OF THE WOAHA MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
BELGIUM	Technical support on the immunohistochemistry diagnosis of BSE	Continuous exchange of technical information via e-mail and sending of new slides
LATVIA	Technical support on the immunohistochemistry diagnosis of BSE	Continuous exchange of technical information via e-mail and sending of new slides
POLAND	Technical support on the immunohistochemistry diagnosis of BSE	Continuous exchange of technical information via e-mail and sending of new slides
SLOVENIA	Technical support on the immunohistochemistry diagnosis of BSE	Continuous exchange of technical information via e-mail and sending of new slides

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
Enhancing Research for Africa Network	36 months	The main task of the ERFAN network aims at enhancing research collaborations and to push forward the activities of	5 Italians IIZZSS	ALGERIA BOTSWANA LIBYA MOROCCO MOZAMBIQUE SOUTH AFRICA SUDAN TUNISIA

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

No

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?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

Annually for each monitored TSEs (i.e. BSE, scrapie, and CWD) a national surveillance report is provided to Health ministry. Moreover, an annual report with the results of the National breeding plan is produced as well. Finally, annual surveillance data are provided to EFSA: summary data are accessible through the annual EU Summary Report on TSE (e.g. <https://www.efsa.europa.eu/en/efsajournal/pub/8384>) and a freely accessible dashboard (<https://www.efsa.europa.eu/en/microstrategy/tse>).

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:

1

• M. Mazza, L. Tran; D. Loprevite, M. C. Cavarretta, L. Dell'Atti, J. Våge, K. Madslie, T.T. Vuong; E. Bozzetta, S.L. Benestad. "Are rapid tests and confirmatory western blot used for cattle and small ruminants TSEs reliable tools for the diagnosis of Chronic Wasting Disease in Europe?" PLOS ONE, 2023 Aug 30; 18(8):e0286266.

b) International conferences:

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- Prion 2023 - 16-20 october 2023 – Faro – Portogallo
- 11th Iberian Prion Congress. 11-12 may – Barcellona
- 20th Annual Meeting of the TSE EURL 2-3 october-Roma
- ERFAN meeting nord africa. 3-5 october 2023-Tunisi
- ERFAN meeting sud africa 7-9 november 2023- Pretoria

c) National conferences:

1

- Sidilv 11-13 october 2023- Brescia

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

18

Articles published in national journals /books

- Martelli W.*, Trupia C., Ingravalle F.*, Ru G.* "Che fine ha fatto la mucca pazza?" E&P 2022, 46 (1-2) gennaio-aprile, p. 23-24, DOI: <https://doi.org/10.19191/EP22.1-2.P023.011> <https://epiprev.it/attualita/che-fine-ha-fatto-la-mucca-pazza>
- Casalone C., Iulini B., Vallino E. Revisione di un capitolo "Agenti infettivi non convenzionali: i prioni" Libro Poli nuova edizione 2023-2024

Training courses and conferences organised

- XXII Convegno degli Istituti Zooprofilattici Sperimentali sulle Encefalopatie Spongiformi Trasmissibili- Turin, 28 november 2023
- Training course "La sorveglianza delle Encefalopatie Spongiformi Trasmissibili: aggiornamenti e formazione sul prelievo del campione per una corretta diagnosi" - Turin, 28 march 2023
- Course "La sorveglianza delle Encefalopatie Spongiformi Trasmissibili: aggiornamenti e formazione sul prelievo del campione per una corretta diagnosi" 20 june 2023 online
- Training course ERFAN per i paesi del nord Africa "Surveillance and diagnosis of animal prion diseases" Torino , 12-14 june 2023

Scientific committees and working groups

- Participation in the update of the document "TSE - Guidelines for sampling the aboral portion of the brainstem (obex) for surveillance and laboratory analysis - Revision 1 year 2023 (Prot. 0024853-04/10/2023-DGSAF-MDS-P)
- Interdepartmental Centre for Advanced Studies in Neuroscience of the University of Turin (NIT).
- Governing Council of the Italian Society for Extracellular Vesicles (EVIIta).
- Working group to harmonise laboratory procedures in the field of biosafety

Speakers in international conference :

- 20th Meeting EURL TSE (02nd and 3rd October 2023 – Rome) "EURL TSE Work programme 2023 –2024: what done, what to do
- 20th Meeting EURL TSE (02nd and 3rd October 2023 – Rome) "Diagnosis of CWD in Europe: evaluation of the performance of rapid tests and confirmatory western blot method"
- 20th Meeting EURL TSE (02nd and 3rd October 2023 – Rome) Rapid Tests EQA (RB & RS): results of the 2022 round
- 20th Meeting EURL TSE (02nd and 3rd October 2023 – Rome) Confirmatory Immunoblotting (WB & WS): results of the 2023 round
- 20th Meeting EURL TSE (02nd and 3rd October 2023 – Rome) Rapid and confirmatory tests: issues & news
- 20th Meeting EURL TSE (02nd and 3rd October 2023 – Rome) PrP Immunoistochemistry Technical EQA
- 20th Meeting EURL TSE (02nd and 3rd October 2023 – Rome) Histopathology interpretation EQA
- ERFAN training course - Surveillance and diagnosis of animal prion diseases 12-14 June –Torino

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 0

b) Seminars : 0

c) Hands-on training courses: 6

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	CROATIA	3
C	ALGERIA	1
C	MOROCCO	1
C	TUNISIA	1

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025	pdf	pdf.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
HERDCHEK BSE/SCRAPIE ANTIGEN KIT TEST EIA IDEXX	ACCREDIA-ILAC MRA
BSE confirmatory immunoblot	ACCREDIA-ILAC MRA
Immunohistochemistry for pathological prion protein	ACCREDIA-ILAC MRA
Histology	ACCREDIA-ILAC MRA

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

Yes

Biosafety guidelines have been produced for personnel working within laboratories that handle prions

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 WOA?H?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
EURL TSE Meeting	2023-10-02	Rome	Speakers	Feedback on the Proficiency Testing EQA round
EURL TSE Meeting	2023-10-03	Rome	Speakers	Feedback on the Proficiency Testing EQA round
TSE-WG Meeting North Africa	2023-10-03	Tunisi	Speaker - working group coordinator 3-5 october	ERFAN Working group on TSE – North Africa
TSE-WG Meeting South Africa	2023-11-07	Pretoria	Speaker - working group coordinator 7-9 november	ERFAN Working group on TSE – South Africa

TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

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

No

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

No

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS/ ORGANISING WOA?H REF. LAB.
BSE Confirmatory Immunoblot	Participants	23	NRLs
TSE Histopathology and immunohistochemistry interpretation EQA	Participants	40	NRLs
PrP immunohistochemistry technical EQA	Participants	20	NRLs
BSE screening rapid test	Participants	27	NRLs

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

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOA?H Member Countries
Harmonising existing test methods (IDEXX HerdCheck BSE-scrapie Antigen Kit EIA for Italian network laboratories)	Organizer	11	Rapid test	ITALY,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

Our OIE Centre for BSE and scrapie collaborates with EURL TSE as part of the same Institution and also all staff, including myself, works for both centres. From 2019 we have

been providing diagnostic advice to European Nrls. From some years we have been working closely with countries in North Africa and South Africa

In the framework of cooperation with North African countries, six cases of prion disease in dromedary camels from Tunisia were confirmed in our laboratories.