

OIE Reference Laboratory Reports Activities

Activities in 2019

This report has been submitted : 2020-01-15 15:55:45

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Scrapie
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Name (including Title) of Head of Laboratory (Responsible Official):	Cristina Casalone
Name (including Title and Position) of OIE Reference Expert:	Cristina Casalone
Which of the following defines your laboratory? Check all that apply:	Governmental Other: Research

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
none	none	none	none
Direct diagnostic tests		Nationally	Internationally
IDEXX BSE-Scrapie Antigen Kit EIA	Yes	6085	none
Scrapie confirmatory immunoblotting	Yes	270	none
Immunohistochemistry for pathological prion protein	Yes	245	none
Histology	Yes	245	none
PrP genotyping	Yes	8087	none

**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?

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

No

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?

No

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

No

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
Enhancing research and development in Africa through OIE Reference Laboratories and Collaborating Centres, and Poles of Excellence, as resultant of OIE twinning Projects	2 years	To provide expertise in the TSE surveillance	IZSAM;IZSM;IZSPB; IZSSI.	ALGERIA BOTSWANA MOROCCO MOZAMBIQUE SOUTH AFRICA TUNISIA ZAMBIA ZIMBABWE

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:

The epidemiological unit collected Italian data and checked data quality (in term of the completeness and congruency of the data received) concerning the several TSE monitoring activities enforced on the national scale.

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:

We send our national data directly to the European Commission or indirectly trough EFSA.

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: 4

Favole A, Mazza M, Vallino Costassa E, D'Angelo A, Lombardi G, Marconi P, Crociara P, Berrone E, Gallo M, Palmitessa C, Orrù CD, Caughey B, Acutis PL, Caramelli M, Casalone C, Corona C. "Early and Pre-Clinical Detection of Prion Seeding Activity in Cerebrospinal Fluid of Goats using Real-Time Quaking-Induced Conversion Assay". Scientific Reports - DOI: 10.1038/s41598-019-42449-7.

Langeveld JPM, Pirisinu L, Jacobs JG, Mazza M, Lantier I, Simon S, Andréoletti O, Acin C, Esposito E, Fast C, Groschup M, Goldmann W, Spiropoulos J, Sklaviadis T, Lantier F, Ekateriniadou L, Papisavva-Stylianou P, van Keulen LJM, Acutis PL, Agrimi U, Bossers A, Nonno R. Four types of scrapie in goats differentiated from each other and bovine spongiform encephalopathy by biochemical methods. Vet Res (2019) 50:97; <https://doi.org/10.1186/s13567-019-0718-z>

Marion M Simmons, Leigh Thorne, Angel Ortiz-Pelaez, John Spiropoulos, Soteria Georgiadou, Penelope Papisavva-Stylianou, Olivier Andreoletti, Stephen AC Hawkins, Daniela Meloni, Claire Cassar "TSE in goats - is prp rapid test sensitivity affected by genotype?". Journal of Veterinary Diagnostic Investigation - in press

Zetterberg H, Bozzetta E, Favole A, Corona C, Cavarretta MC, Ingravalle F, Kaj Blennow, Maurizio Pocchiari, Daniela Meloni. Neurofilaments in blood is a new promising preclinical biomarker for the screening of natural scrapie in sheep. PLoS ONE, 2019, 14(12): e0226697. doi.org/10.1371/journal.pone.0226697

b) International conferences: 7

Prion 2019, Edmonton(Canada), May 21-24.

87th OIE General Session, Paris May 2019.

38th Annual Meeting of European Culture Collections Organization (ECCO), Torino, June 12-14 2019.

37th International Society for Animal Genetics Conference - Lleida SPA, July 7-12 2019.

18th Annual Meeting of the TSE NRLs - Torino, September 12-13 2019.

ECVPH Annual Conference 2019 - Edimburgo GBR, October 2-4.

VIII Iberian Congress on Prions, Castelo Branco (Portugal), October 24-25 2019.

c) National conferences: 5

Convegno dell'Associazione Italiana di Epidemiologia (AIE), Bologna, March 18-19 2019.

18th National Congress of the Italian Society for Neuroscience - Perugia, September 26-29 2019.

19° Congresso Nazionale SIDiLV - Matera, October 23-25 2019.

Riunione annuale dell'Associazione Italiana di Epidemiologia - Catania, October 23-25 2019.

Primo Congresso Italiano sulle Vescicole Extracellulari della Società EVIta - Palermo, November 6-8 2019.

d) Other:

(Provide website address or link to appropriate information) 9

Partecipazione as speaker:

Diagnostics in Veterinary Fields: The role in health surveillance and disease identification. Wiesbaden, Germany, May 15-17 2019.

18th Annual Meeting of the TSE NRLs - Torino, September 12-13 2019.

Controllo delle encefalopatie spongiformi trasmissibili (TSE) in azienda 2019 - Brescia, July 9; Mantova, September 24; Milano, October 29.

International abstracts:

Rossi M, Bozzetta E, Casalone C, Corona C, Cavarretta MC, Zetterberg H, Blennow K, Meloni D. "Neurofilaments in blood: a new promising biomarker of scrapie". PRION 2019 - Edmonton CAN, May 21-24.

Favole A, Mazza M, Vallino Costassa E, D'Angelo A, Lombardi G, Palmitessa C, Dell'Atti L, Crociara P, Berrone E, Gallo M, Lo Faro M, Avanzato T, Acutis PL, Casalone C, Corona C. "RT-QuIC detection of pathological prion protein in subclinical goats following experimental oral transmission of L-type BSE". PRION 2019 - Edmonton CAN, May 21-24.

Pelaez AO, Rizzi V, Ru G, Ingravalle F, Van der Stede Y. "The European Union Summary Report on Surveillance for The Presence of Transmissible Spongiform Encephalopathies (TSE): the situation in 2017". PRION 2019 - Edmonton CAN, May 21-24.

H. Zetterberg, E. Bozzetta, C. Casalone, C. Corona, D. Loprevite, MG Perrotta, MC Cavarretta, K. Blennow, M. Pocchiari, D. Meloni. "Neurofilament in blood: a new promising biomarker of scrapie". 8th Iberian Congress on

Prions, October 24 e 25 , Castelo Branco, PORTUGAL.

Working Group:

EFSA cross cutting working Group on Uncertainty.

Working Group for the evaluation of an alternative method for production of biodiesel from processed fats derived from category 1, 2, 3 animals by products.

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)
ISO 17025	ACCREDIA_ILAC_MRA.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
IDEXX BSE-Scrapie Antigen Kit EIA	ACCREDIA-ILAC MRA
Scrapie confirmatory immunoblotting	ACCREDIA-ILAC MRA
Immunohistochemistry for pathological prion protein	ACCREDIA-ILAC MRA
Histology	ACCREDIA-ILAC MRA
PrP Genotyping	ACCREDIA-ILAC MRA

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?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Meeting of TSE NRLs	09/19	Torino, Italy	Speakers, TSE staff	The forthcoming 2019 rounds of EQAs: issue and news.
ERFAN Meeting in SADC Region	09/19	Windhoek, Namibia	Speakers	TSE Working Group to strenght expected activities in SADC Region.
North Africa ERFAN Second regional meeting	11/19	Tunisi	Speakers	TSE working Group to strenght expected activities in ERFAN

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?

Yes

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?

Yes

Purpose of the proficiency tests: ¹	Role of your Reference Laboratory (organiser/participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.
Scrapie Confirmatory Immunoblotting	Participant	23	Organising EURL TSE, IT
TSE Histopathology and immunohistochemistry interpretation EQA	Participant	44	Organising EURL TSE, IT
PrP immunohistochemistry technical EQA	Participant	20	Organising EURL TSE, IT
Verify EU approved rapid test diagnostic standards and methods	Participant	28	Organising EURL TSE, IT

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

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?

No

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
Harmonising existing test methods (IDEXX HerdCheck BSE-scrapie Antigen Kit EIA)	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

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: